

Dagmar Petříková

## REGENERATION OF BROWNFIELDS – CONCEPTUAL APPROACH

Mining and mining-related industries after exploitation are often the cause of occurrence of large brownfield areas. Regeneration process has been dominated by formal and traditional top-down sectoral planning. In contrast to this voluntary co-operation between municipalities at regional, cross-border and transnational level is an important component for regional (economic) development to be realised as a cross-sectoral issue which includes all relevant regional stakeholders.

### Introduction

Despite the fact that municipalities and local authorities are concerned also with wider issues associated with vacant or derelict land (like social and cultural issues – as shown by the results of the EU projects READY “Rehabilitation&Development of European Mining regions”, CABERNET “Concerted Action on Brownfield Economic Regeneration, LUDA “Improving of the Life in Large Urban Distressed Areas”, LEPOB “Life-Long Educational Project on Brownfields”), increasing urban growth and a lack of access to greenfield sites has acted as an economic stimulus for development of brownfields.

One of the key drivers of brownfield regeneration is the economic regeneration of an urban area and the potential profit to be made. When examining the effects of economic globalisation and the growing challenges of current European real estate markets, the role of redevelopment as a means for supporting economic development and competitiveness across Europe has become more prominent. This is particularly true in more traditional formerly industrial areas, where the economic possibilities associated with site redevelopment are increasingly acknowledged.

### Economic Viability and Regeneration

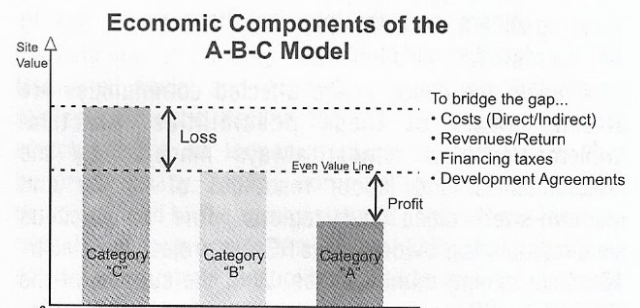
The economic viability of individual sites can be affected by many different factors which can alter quite considerably over time. The economic status of a site can be affected by:

- indirect as well as direct costs of the regeneration,
- predicted revenues / return from the site
- the type of financing and the associated financial risks
- national and local taxes and their perceived risk of fluctuations
- any development agreements between the land owner and / or the municipality and the developer

Using a conceptual A-B-C model to characterise different types of sites in terms of their economic viability and highlighting how status can change based on variation in location standing, site treatment costs and other economic conditions, can help policy makers identify strategies that can improve the economic viability and status of sites. Different types of regeneration projects,

representing their economic status, can be illustrated by the A-B-C model with the economic components, which highlights the funding drivers for regeneration. The conceptual model can be used to assist institutions that are responsible for regional development and investment by allowing them to characterise strategies for dealing with different types of land. By identifying the type of site and considering the factors that are affecting a site's category, i.e. if it is an A, B, or C site, both public and private bodies can examine intervention options and regeneration strategies.

Using this conceptual approach to examine the factors that affect re-categorisation of a site, for example from a B Site to an A site, can result in the development of site-specific strategies which can also be useful. A number of municipalities are currently using these categories to review their local strategies and to produce informal inventories of regional sites.



This model identifies three types of sites according to their economic status (due to the cost of regeneration, the value of the land, etc). Sites are classified as:

- **A Sites** – are highly economically viable and the development projects are driven by private funding
- **B Sites** – are on the borderline of profitability. These projects tend to be funded through public-private co-operation or partnerships
- **C Sites** – are not in a condition where regeneration can be profitable. Their regeneration relies on mainly public sector or municipality driven projects. Public funding or specific legislative instruments (e.g. tax incentives) are required to stimulate regeneration of these sites





## Economic conditions for regeneration

Whilst much land is being brought back into beneficial use solely by the market (i.e. Category A sites), in other cases, vacant and derelict land persists (i.e. Category B and C sites). These persistent sites can often be concentrated in areas of social deprivation, and so policies to deal with the backlog of vacant and derelict land is clearly a crucial component of urban regeneration – and the challenge is to accelerate the pace at which the market is able to absorb land.

Recent research has shown that industrial land continues to be abandoned and that despite over 20 years of regeneration effort, the extent of such land has not only failed to shrink but has probably grown.

### Encouraging Regeneration: Reducing limitations on Public-Private Partnerships

If the perceived value of a site is less than anticipated costs, the site will remain vacant or under-used for the foreseeable future (Category B and C sites). This can only change if there is some means of creating a surplus of value over cost. Policy initiatives can variously seek:

- to raise market values,
- to reduce anticipated costs, or
- a combination of the two.

Only modest adjustments to perceived costs and values are required for the market to redevelop Category B. In contrast, the market is highly unlikely to be able to respond with Category C sites, implying a more leading role for the public agencies (whether at national, regional or municipality level). Therefore, a proportion of sites (i.e. Category B) can be taken forward by the private sector if the public sector is able to assist with the costs (or values) at the margin, rather than requiring leading investment to be made by public agencies.

The benefits of partnerships working in urban regeneration include:

- access to wider sources of funds,
- greater leverage in the use of limited public funds, and
- encouraging the private sector to develop on land

These forms of public private partnership have attracted the attention of EU Competition Policy, and yet without some form of intervention, the sites will remain under- or unused for the foreseeable future. EU Competition Policy (Article 87 of EC Treaty) constrains the ability of Member States to develop certain policies that can be highly effective in achieving sustainable regeneration.

The principle of allowing partnerships to address the cost-value gap in the development of property on sites (even where local property market conditions make such activity non-viable) has not been recognised, other than to provide low cost housing. Without a viable use of land, site remediation by itself does little for local regeneration. A solution would be derogation from the provisions of Competition Policy for grant aid used to secure the re-use of non-viable land, irrespective of the land's location or the size of the enterprise receiving the grant. Such changes might need to be to a pre-agreed limit. With any such amendment, Member States could develop a broad range of policies to achieve sustainable urban regeneration. Without this, the ability to develop effective partnerships that can increase the pace and scale of re-use of land is limited. In terms of the alternative styles of intervention that could be considered as part of any policy review, there are essentially two forms of intervention: (1) market enhancements; and (2) market displacements.

(1) Market enhancements involve action by the public agencies to improve the working of the market by sharing, or modifying the costs and/or risks faced by the private sector or by taking steps to enhance the market values likely to be achieved. In these ways, market enhancements:

- encourage private sector involvement in sites that they would otherwise decline to invest in,
- stimulate, over time, adjustments to market perceptions of costs, risks and values, and
- over time, permit the public sector to withdraw from the market.

In other words, the objective of market enhancements is to achieve self-sustaining market activity without the need for continued public sector interventions.

(2) Market displacement, by contrast, involves the public agencies taking primary responsibility for dealing with problematic land. Inherently, the role of the private sector is reduced to that of a contractor to the public sector, rather than that of a risk-sharing partner. Such a relationship may well be justified by the particular circumstances, such as sites that have deep-seated problems.

If market displacement activity becomes the norm for all non-viable sites, private sector innovation and risk-taking cannot be rewarded and, over time, may well discourage market innovation and competition in the field of urban regeneration. In other words, market displacement activity can discourage the private sector from urban regeneration activity except in the most buoyant areas. Any site, perceived by the market as in any way non-viable, will become wholly the responsibility of the public sector.



To summarise, market enhancement activities offer the opportunity to foster market activity and to stimulate innovation and competition in urban regeneration. Market displacement activities, by contrast, will require the public sector to wholly fund the urban regeneration process other than in the most buoyant market areas.

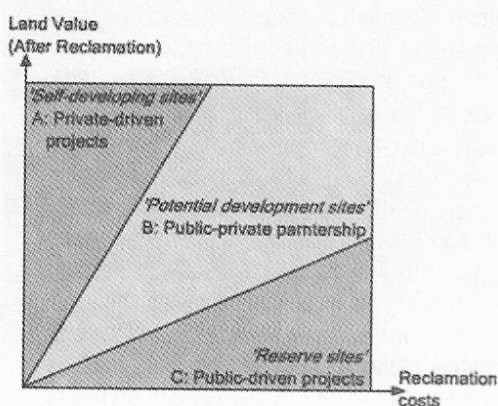


Fig. 2: The A-B-C Model (Source: CABERNET project, 2002)

### New funding approaches for C sites

C sites represent a significant problem as they can have a negative impact on the surrounding area and community, especially when concentrated within a given locality, increasing the difficulty of achieving effective urban regeneration.

C sites generally require substantial pre-investment from the public sector before they can be handed over to private developers or redeveloped using PPP approaches or put to soft end uses. These sites with their high reclamation / redevelopment costs and low market values, constitutes a specific challenge for many cities and regions.

Generally speaking, C sites result in large part, due to decreasing populations and declining economic growth in many European regions. One European study and pilot project in the former eastern German region of Saxony classified 66% of sites as category C. Investigations in the region of Thüringen indicated 44% of sites also fell into this category. Reasons for these high percentages include the vast areas of s, reported as 18.000 ha, caused by the rapid economic changes since 1990 and also the release of military land. Shrinking populations and the oversupply of land for housing and commercial use has led to depressed real estate markets and persisting sites. This in turn has lead to a low demand for land causing low land and property values. The situation is made worse when there are limited local public funds to regenerate sites due to economic decline of a region. These conditions lead to large, persistent areas of land that remains unused and derelict for substantial periods.

The problems associated with these sites particularly relate to:

- Market forces are not able to drive redevelopment of these sites
- Future uses are often limited to soft-end uses
- Reuse is only considered relevant if they are related to long-term options
- Many major public programmes focus on redevelopment to stimulate direct economic growth

One possible option or basic solution for these sites are soft-end uses, whether permanently (i.e. with a definitive loss of development opportunities), or as an interim use (i.e. affording the sites some form of reserve status). In response to this issue, at beginning of the 1990s, French regions of Lorraine and Nord-Pas de Calais have concentrated public funding on C-sites by bringing them into a reserve status. A new organisation in the UK, the Land Restoration Trust (LRT), has been set up to take responsibility, sites are deemed not suitable for hard-end use. The LRT is focusing on projects that draw in local organisations to create new 'green amenities' providing benefits both for people and for nature.

When examining the 'reserve status' approach, no final or binding decision is made regarding the future use of a site. It is perceived that the transition of a site from abandoned or derelict status to a reserve status can be realised fairly quickly, especially for sites already publicly-owned, and this approach can also be a cost-effective strategy. There is, therefore, a need to explore specific planning and technical approaches for transferring s from an unutilised form to a reserve status. Options of this nature can be developed and implemented by affected regions and municipalities as part of their spatial planning responsibilities.

Sites which could be definitively excluded from further developments for technical reasons, market conditions or planning goals could be reclaimed for soft end-uses as a way of managing the potential social costs of doing nothing. However, most of these sites will require long-term maintenance. Therefore, any short-term treatment will need to be linked to a maintenance strategy that will be managed by the public sector.

Sites with a future prospect of redevelopment could be transferred into reserve status. A number of initial planning, technical and financial concepts have been tested in different European regions. The main goal of any reserve status redevelopment should be the limitation of treatment costs in the first step of remediation, demolition and interim landscaping. Planning and technical goals can be defined as:



- Immediately overcoming the negative urban and landscape impacts
- Flexibility in plans relating to after use
- Encapsulation and interim security of soil contamination (still ensuring the application of the "polluter pays principle")
- Reduce impacts on protected green/natural sites
- Ensuring low maintenance cost for green areas and buildings with historical or urban value.

## Conclusions

Current European, national and regional funding schemes are still quite myopically focused on the redevelopment of sites for hard-end uses. Given the large areas of persistent sites in the traditional industrial regions of both Western and Eastern Europe and the increasing number of sites in the new member states and accession states, public funding of these persistent sites for hard-end uses is not a realistic option.

There are a limited number of existing funding programmes for C category sites, as many of these sites do not have a clear future development potential.

A significant proportion of land, specifically in areas with low market values, is not commercially viable to bring back into beneficial use. Without some form of public intervention these sites will remain unused, and potentially derelict, for the foreseeable future. The consequence is a blight on the surrounding areas and communities, and the loss of an opportunity to renew the community in a sustainable manner. There appears to be a strong case for the establishment of new form of programme to tackle these issues. Any specific approach could be applied either through existing programmes or via the establishment of a new funding programme aiming at reserved sites, which could specifically highlight a social advantage for town planning and municipal development.

A case might also be made that the EU should consider a specific funding scheme, through the Structural Funds programme (applying Objective 1 and 2 areas assessments), which recognises that the persistence of unused sites (hardcore sites) can have significant adverse effects on a region's and a municipalities' competitiveness.

A significant proportion of land is not commercially viable in the foreseeable future (C sites). Such persistently unused sites often have adverse effects on the sustainability including the competitiveness of European regions and cities. EU and state funding is necessary for, and should be used, to return non-viable sites to beneficial use (e.g. permanent or transitional low-intensity activities).

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## References:

- Camagni, R., Capella, R., Nijkamp, P.*, 1998: **Towards Sustainable City Policy: An Economy-environment Technology Nexus**. Ecological Economics, Vol. 24. 1/1998. pp.103-118.
- Castells, M.*, 2000: **Urban Sustainability in the Information Age**. City: Analysis of Urban Trends, Culture, Theory, Policy, Action. Vol. 4. 1/2000. pp.118-122.
- Finka, M.*, 2001: **Interdisciplinary Aspects of Spatial Quality Development in Settlement Systems**. Bratislava. FASTU ROAD, 165 p.
- Finka, M.*, 2003: **European Dimension of Sustainable Spatial Development**. In: *Životné prostredie*. Vol. 37. 3/2003. pp.132-135.
- Mueller, B., Finka, M., Lintz, G.*, eds., 2005: **Rise and Decline of Industry in Central and Eastern Europe**. A Comparative Study of Cities and Regions in Eleven Countries, Springer Berlin Heidelberg New York
- University of Nottingham*, 2006: **CABERNET Dissemination Report**, 78p. SCHOOL OF GEOGRAPHY, UK

## Homepages:

- Land Restoration Trust (Access 2003)  
[www.landrestorationtrust.org.uk](http://www.landrestorationtrust.org.uk)
- CABERNET: EC Brownfield Network (Access 2001)  
[www.cabernet.org.uk](http://www.cabernet.org.uk)
- SPECTRA Centre of Excellence (Access 2002)  
[www.spectra-perseus.org](http://www.spectra-perseus.org)