

**Sustainable Urban Brownfield Regeneration Development
(A case study of Bilston village)**

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Abstract

Bilston one of Britain`s oldest vibrant industrial area jointly owned by Wolverhampton City Council and Homes and Communities Agency, its strength and weaknesses to attract potential developers and investors, history and future. Will also look into literature review that pertains to urban villages and sustainable brownfield regeneration, The paper will seek to answer the question whether the adoption of an urban village concept is best to solve Brownfield's regeneration and other myths that are associated with sustainable development .In conclusion the paper will give some recommendations to urban village and Brownfield's regenerations in view of Bilston urban village.

Keywords: Brownfield, regeneration, sustainable

I. Introduction

The term Brownfield's has become a debatable word in the government and private sectors. The remediation of soil contamination has become big business and remediating the soil sustainably. Brownfields usually occur due to changes in the industry and the losures of major industries and developments elsewhere. Brownfields have been defined by Cabernet (2006) and politics .co. UK (accessed 2013) as sites that have been affected by former uses of the site or the surrounding land, are derelict, are mainly fully or partly developed urban areas and require intervention to bring them back to beneficial use and have real or perceived contamination problems. In this paper the terms Brownfield's and Brownfield's regenerations and urban village are going to be used several times as they have affected or have an impact on Bilston in the West Midlands. In general an urban village is a compact, walkable, mixed use neighborhoods and towns that are a pleasure to live in. (Hamid accessed 2013) The Coalition government and the former government, Labour (politics.co.uk accessed 2013) is trying to reduce the number of Brownfield's sites in the UK by converting them into housing sites but the recession has taken its toll and finances have been limited. Most of the brownfield are concentrated in the cities of which 50% of population in the developed world lives in the city hence housing problems. Most of the clean-up is European Union funded or government funded or Lottery funded. Bilston qualifies as a brownfield site in need of regeneration to an urban village and has a lot of potential given its geographical location and mining legacy. (Wernstedt et al 2004) There have been numerous non environmental challenges (Wernstedt et al 2004) to the proposal of an urban village such as recession and a private developer removing interest in the project.

Background

The Government commissioned the national regeneration agency English Partnership to work with various government departments and a variety of stakeholders to develop a National Brownfields Strategy for England. (Politics .co.uk accessed 2013) National Brownfields Forum was established to oversee the putting into place of the national Brownfields Strategy and feedback annually on its progress.

Its first meeting was in February 2009. Prior to all this the housing white paper of 1995 had set a target that 50% then 60% rising to 80% of new houses should be built on re used urban sites (Pacione 2004) it was due to the fact that there is an inexhaustible supply of brownfield sites in UK. The only reason that could allow government not to build on brownfield site is that is a very expensive cleanup process. Politics .co.uk (accessed 2013) states that the Coalition Government published a new draft National Planning Policy Framework (NPPF) on the 25th of July 2011 for consultation emphasizing on sustainable development. The NPPF sets out the way in which the planning system should assist in delivering sustainable development and one of the primary purposes of this SPD is to demonstrate how this will be achieved for Bilston. Achieving sustainable development is the cornerstone of the NPPF and the planning system is required to perform a role which includes economic, social and environmental considerations. Again, this SPD seeks to achieve outcomes across all these. (Robertson (2013), Wolverhampton .gov.uk (2006), Politics.co.uk (2013), Robertson (2013), Politics.co.uk (2013) states that the new simpler framework will streamline planning policy from 52 pages to 1000, aiming to improve clarity and unblock the system, environmentalists and conservation groups criticized the proposal that it emphasizing too much on sustainable growth and not much on brownfield development and green space protection. It is worth noting at this point also that in the UK urban villages are now viewed as good for brownfield sites.

II. Literature e Review

The government `s aim is to ensure that as many as possible of the new houses needed are built in existing urban areas, however the number involved will inevitably mean an expansion of some existing towns and villages Doe (1996) cited by Pacione (2004) and politics .co.uk(accessed 2013) Urban villages are now viewed as appropriate for brownfields sites, infill sites as well as carefully chosen Greenfield Aldous (1994) cited by Pacione (2004). According to Pollard (2004) the concept of urban villages has been in the UK since 1980 brought together by the Prince of Wales` Urban Village Group. Like Hamid (accessed 2013) Pollard (2004) characterizes an urban village as one that includes the desire to create a mixed use neighborhoods unit that are well designed and sustainable and are able to generate community commitment, involvement and a sense of place Pacione (2004) states that the urban village concept has been adapted to fit with current policy agendas on sustainable urban development and they are appropriate for brownfield sites hence Bilston urban village. Urban village development is supported financially by English Partnerships disappointingly it is not referred to in the government sponsored Urban Task Force (1999) report or in the revised PPG3 housing (DETR, 2000a) cited by Pacione (2004). Franklin and Tait, 2002 cited by Pacione 2004 reflect that the concept is fluid, contested, contradictory and capable of multiple interpretations. According to the Wolverhampton City Council (WCC) (accessed 2013) proposals to develop an Urban

Village on a substantial area of brownfield land (40 ha) to the south of Bilston Town Centre are being pursued by the Council. This major initiative to secure reclamation and mixed use development has the potential to generate some homes and employment hence solution to the socio economic problem of Bilston. The specific objectives governing the urban village (WCC2006) and the town centre include strengthening the town explore the means of generating a wider range of local employment opportunities.(WCC2006) Current statistics (English Partnerships, 2003) show that the brownfields land total is at 66 000ha in England with some 16 500 ha comprising hard core sites. (Lecture notes accessed 2013) ODPM (2005b) cited by Dixon (2007) and Lecture notes (accessed 2013) says 60% target, provisional estimates suggested that 70% of new dwellings were built on previously developed land including conversions in 2003, compared to 56% in 1993. The location of brownfields sites in our cities make them pivotal in shaping our urban futures.(lecture notes 2013) Vanheusden (2007) and Thornton et al (2006) commented that brownfields do not only occur in UK or United States but in every industrialized country and region. The European Union (EU) is also dealing with the proper way to regulate these sites; presently governments at both the EU and national level are attempting to deal with the vast amount of brownfields sites created by a legacy of industrialization about enabling businesses to be efficient and competitive in design, development and construction process through provision of good transport, infrastructure and in supporting the local economic diversity and job opportunities .While environmental sustainability is the easiest element to define in site specific terms for brownfield site for example there are guides to environmentally sustainable development dealing with land remediation for contaminated brownfield , construction , sustainable urban design and planning and building use. There are also a number of sustainable development checklists for prescribing action at a site level like minimizing the use of resources, minimizing pollution and protecting biodiversity and natural environment (Robertson (2013), Dixon (2006), and Vanheusden (2007)) especially in Bilston finding ways of protecting the great crested newt and its habitat.

III. Methodology

Concept of urban development

According to the Wolverhampton City Council (WCC) (2006) proposals to develop an Urban Village on a substantial area of brownfield land to the south of Bilston Town Centre are being pursued by the Council and Arup. This major initiative to secure reclamation and mixed use development has the potential to generate plus 1300 new homes and 49,000 sq. m of employment space providing almost plus 2000 jobs together with the creation of new landscape and local linkages WCC (2006). The urban village will be close enough to the Town Centre for there to be close integration between the two, and with improved linkages to surrounding communities, for the additional catchments of residents and business employees to bring major commercial benefits to the Town Centre. WCC (2006) in the initial stages the development of the urban village consisted of Advantage West Midlands a private developer who had poured in money into the project. The private developer pulled out at the onset of the change of government in 2008, the coalition government cited that the developer was too costly and wasting taxpayers` money. The recession

also saw setbacks in the urban village development plans. To date the Wolverhampton City Council and Arup are jointly working to develop the Bilston Urban village which they jointly own with Homes and Communities Agency but with limited resources that have seen government spending on some major projects cut severely. politics.co.uk (accessed 2013) Wolverhampton City Council objective is to build over 1300 houses WCC (2006) Red Row Company a developer has built the Chestnut walk houses that overlook the brook. Red row prides itself as: Brownfields gained political significance after the Government in 1998 decided (politics.co.uk) to ensure 60% of all new developments were built on brownfield land (Pacione 2004). There are over 61 000 ha of brownfields land in UK of which 37 ha is in Bilston West Midlands (Entec (2001), Homes and community agency (2008-2013)) On planning the local authorities use brownfield development to help regenerate decaying inner urban areas. Robertson (2013) and Lucas (2013). This approach is preferable to developing on green space even though there is much controversy in terms of clearing the contaminated sites. Planning Policy Statement 3(PPS3) published in November 2003(politics.co.uk) states the Government's commitment to the 60 % now 80% target for new homes development on brownfields land, emphasizing that the local authorities should continue to give top priority to brownfield land in their planning and take strong action to bring more brownfield land back into use. The brownfield regeneration has economic, social and environmental benefits. The economic benefits of brownfield regeneration according to Dixon (2006) are there is creation and retention of employment opportunities, increased tax base, increased export potentials for clean-up technologies and increased competitiveness for cities. Dixon (2006) cites social benefits as improved quality of life in the neighborhoods, removal of threats to human health and safety and affordable housing. The economic benefits are listed as reduced urban sprawl pressures on Greenfield sites, restoration of environmental quality and improved air quality and reduced greenhouse gas emissions. (Dixon 2006).

History of Bilston

Bilston has been the location for a wide range of industrial activities since the late eighteenth century. Entec (2001). The industries included coal mining, iron foundries and steel works. The activities have left a number of abandoned mineshafts, quarries spoil heaps and problems from flooding and seepage. Entec (2001) Macadam and Bairner (2012) the site extends to some 37 hectares (91 acres) Wolverhampton .gov.uk (2013) of brownfield land and land ownership is divided between Wolverhampton City Council and the Homes and Communities Agency. The site has a small frontage to the Black Country Route at the north, where it is adjacent to (and forms part of) Bilston Town Centre. On the eastern boundary, Midland Metro line one runs between Wolverhampton and Birmingham Snow Hill, with an extension to Birmingham New Street currently being constructed. Wolverhampton.gov.uk (2013) the southern boundary has some limited canal frontage to the Bradley Arm of the Birmingham. Canal and some relationship to the Red row Homes development, although this is, in part, affected by a significant change in levels. The western boundary onto Broad Lanes/Coseley Road is somewhat fragmented by existing housing and other current and former land uses. Wolverhampton.gov.uk (2013) attached are map1 and 2. The Wolverhampton iron making industry goes back a hundred years and was a witness to major developments in the process such as the opening of the steel work namely Bilston Steel works and the

opening of the Birmingham to Wolverhampton canal in 1770 and industrial activity. The industry survived 200 years up to the closure of the Bilston steel work in 1979 causing a major blow to the economy of the area and increased unemployment Francis accessed (2013) Mining had a particularly important role to play in Bilston with proximity of coal at the surface enabling opencast mining to survive. In 1790 15 of the 21 blast furnaces within the Black country where in Bilston Iron works coal, and limestone were also thriving in the town and former the basis for prosperity in the area. (Young (2010), Francis (accessed 2013) After the world wars pictures of reconstruction were drawn and came with new housing estates. Bilston's economic circumstances worsened as the country's plight worsened. Bansby (2013) says at one point in time figures rose from 253 (1920) to 3 727 in December 1922 riots were the order of the days as many were unemployed and had nothing to do. The new road networks came to try and foster industrial and commercial development but still Bilston was is too slow.

Is Bilston an urban village?

Given all the background information that the former and the present government are committed to the development of urban village and the sustainable urban regeneration one can arrive at the conclusion that Bilston, this former vibrant industrial area will develop into an Urban village despite the non-environmental challenges such as finances. (Hamid (2013), Politics.co.uk (accessed 2013), Wernstedt(2004), Pacione(2004), Entec(2001), Wolverhampton.gov.uk(accessed 2013)) Most brownfields sites can be found in the mining areas according to Wernstedt et al (2004), Young (2010), Francis (accessed 2013), Entec(2001), Pacione (2004). Bilston Urban village is situated in the former mining area. Bilston brownfield consists of colliery spoils and waste from iron production which are potential harmful elements. Entec (2001). The advantages of brownfields though derelict areas have good roads. Bilston has a good network of roads and also a very good network of tram way that connects it to other major areas such as Wolverhampton and Birmingham.

According to Lucas (2021) there is potential for a pedestrian crossing that will link the town centre to the urban village. The planning for this pedestrian walk way is already in place and ready for implementation. The characteristics of an urban village as postulated by Hamid (accessed 2021), Murdoch University (2008), and Urban village (accessed 2021) all suit Bilston as an urban village and even the objectives given by the Wolverhampton City council (2006) all link to Bilston as an urban village. Some of the objectives by the council are to change the perception of the environment and image of Bilston, improve linkage (streets) and promoting a safer place for all. Meanwhile some of the characteristics of an urban village are that everything is within walking and cycling distance, it is pedestrian orientated, has got mixed uses, has recreational facilities. According to WCC (2012) the world class facilities are now open the recreational facility the Bert Williams leisure centre and the state of the art SWB Academy the objectives and the characteristic are blending well towards a sustainable regeneration. This sustainable suburb is like the one in Vauban Freiburg Germany (see fig 1 and 2) where the slogan is



Figure 1 and 2 represent the two urban villages developed in Christie walk in Australia and Vauban Freiburg Germany Courtesy of <http://www.thenatureofcities.com/wp-content/uploads/2012/10/CWgreen-pathway-560x420.jpg> and <http://efcollegebreak.typepad.com/college-student-travel/2009/05/>

In so doing there is good health and less impact on the heavily laden National Health Services but this sort of project requires money. Eisen (1999) urban village concept is an answer to brownfield regeneration in that it will combat re-pollution of the area of Bilston. Bringing another industry is not a real solution neither is it sustainable in the sense that it is only creating another contamination of the land that is going to need remediation probably in the near future. Green cities like the Christie walk of Adelaide of Australia (see fig 1 and 2) will bring in lots of recreational facilities for the people and integration and harmony among the people. An urban village concept with a green city will solve brownfield regeneration.

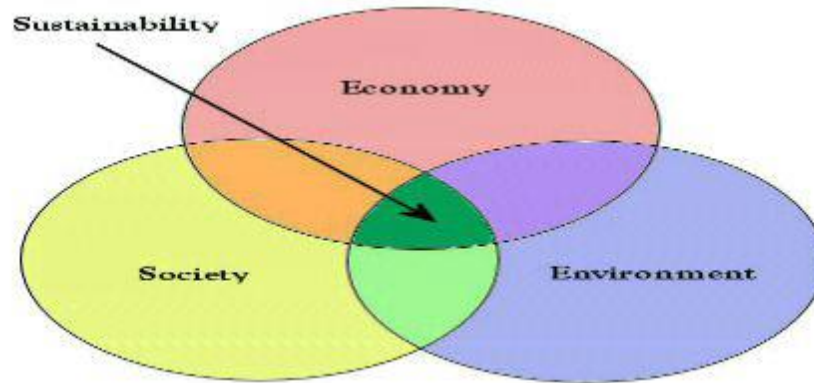


Fig 3 courtesy of <http://ee80s.pbworks.com/f/Sustainability%20venn%20diagram.jpg>

When Vanheusden (2007) lamented that not all brownfield redevelopment is sustainable it was due to the fact that there is little consideration given to sustainability of the methods used to regenerate brownfields sites. It is disappointing to note that successful proposals use unsustainable methods something obviously shameful in an era when all policy is driven by sustainable development principles. Politics like in the other countries is a problem especially when governments change. Projects are derailed or forgotten when power changes hands due to the fact that each government implements its own policies. When the Coalition came into power some advance programmes for regeneration were hampered not to mention phased out. As if it was not enough recession got the better of the country retarding progress of major regeneration projects. Bilston urban village has seen it all. Recently they had a visit from a Labour MP who promised to bring back the developer Advantage West Midlands to finish off the urban village regeneration. One is forced to ask questions that in the middle of a major recession where is this politician going to get the finances and amidst the Coalition government budget spending cuts and closures of libraries ,redundancies, is this not a way of getting votes since its towards elections? Express and star (2012).Bilston urban village will not have the issue that corporations and developers will make deals with local politicians that effectively shut out public input.

IV. Recommendations

Manufacturing Industries in Bilston urban village are not ideal since there is the idea of creating a problem of land re-polluting another brownfield site that will need remediation again in the near future. Bilston urban village will need a lot green environment, walk ways for pedestrians, a museum showing probably the mining history of the area with a good coffee shop and beautiful sitting area for people to sit in and relax and have a chat and also outside sitting area for when the weather is conducive and enjoying the green spaces. Create more green than more roads to help with pollution like the Christie walk Australia and Vauban in German. Cars pollute the air, the soil, the water and they are noisy and also cause a lot of traffic jam but the green give fresh clean air that is good for health and its good habitat for biodiversity. On the point of biodiversity the brownfield site can be important for biodiversity, often supporting important populations of rare and endangered invertebrates, wildlife such as birds, reptiles, plants and lichen. Some scholars are arguing that it is better to leave these brownfields as they are as they have become habitats for

various biodiversity. In many built up areas, brownfield sites are the only natural green space available (Macadam and Bairner 2012). The provisions of Sustainable Drainage Systems, which are not simply application to sites at risk from flooding are good to implement (Lecture notes on Sustainable Drainage systems 2013) the Environmental Agency has highlighted the need to strike an appropriate balance between brownfield reuse and sustainable development. This is of paramount concern in high flood risk areas, as increased flooding is expected to be one of the major consequences of climate change in the future. This means that we need to consider sustainable development in a more local sensitive way to reflect the needs and character of each site and its surrounding environment .It is also important to ensure that there is a mixture of housing types to meet with the local demand and needs. Meyer and Lyons cited by Wernstedt (2004) comment that many experienced brownfield specialty firms shun municipal ownership of land because of competitive bidding requirements, loss of privacy regarding redevelopment plans and delays caused by public notification requirement. The Municipal need to have less protocol so they can attract more developers and investors, many developers are not patient. There is also need to strongly discourage Greenfield development by imposing heavy taxes on its development. The Red row (accessed 2013) one of the developers stipulates in their policy that they pride themselves in building.

V. Conclusion

The redevelopment of brownfield site is a major challenge for policy makers now and in the near future. Much as UK needs houses the issue needs to be dealt with carefully and sustainably. Urban regeneration makes the ideal thing for the delivery of sustainable goal. The biggest challenge of urban regeneration is to make cities beautiful places to live in. Sustainable regeneration is like a long lasting local benefit. The problem of brownfield regeneration is not an easy issue with ecologists lobbying for biodiversity on brownfields site and developers and councils looking at houses and socio economic problems solved. Bilston has gone through several difficult times, two major wars, industrial closures, unemployment, and high mortality rates due to diseases and now the recession has not dealt it good at all. It has seen development of roads, canals and, light railway systems the tram. Bilston is currently being ushered into yet another era of urban village regeneration, given the sustainable nature of brownfield regeneration this could be development at last amidst recession. Urban village development could be the answer to Bilston `s legacy of brownfields. Bilston could see itself responding to Ebenezer Howard `s plight for green cities in his three magnets. Economically it might succeed with restaurants, hotels, and leisure centers, the academy and having an urban village as well will integrate. Socially this could mean ethnic diversity for Bilston urban village and better health for the residents.

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