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**SUSTAINABLE ECONOMIC DEVELOPMENT AND
THE LOCAL ECONOMY**

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Abstract:

Since the 1992 Rio Summit, pressure has been increasingly applied both globally and nationally for development to be sustainably accountable. As a result, current EU directives and international agreements are playing an increasing role in economic and social areas especially with reference to sustainable development. This new focus has been given substance in the UK through recent regional policy initiatives which aim to strengthen the essential foundations for economic growth – innovation, skills and the development of enterprise by exploiting the indigenous strengths of local economies.

Using recent empirical research, this paper systematically analyses the relationship between large scale speculative commercial development and the local economy. The outcome is the formulation of a working taxonomy based on a number of key impacts. The recommendations emanating from this paper with regard to assessing proposals for speculative commercial development against a sustainable agenda are relevant to practitioners throughout Europe.

1. INTRODUCTION

1.1 Growth and development are natural policy objectives of any administration, national, regional or local. However there has been a growing recognition that people value the environment and a healthy society as well as economic growth so sustainability is now a key developmental issue. Internationally the classic and most widely accepted definition of sustainability is the phrase contained in the Bruntland Report of 1987:

‘Development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Bruntland 1987).

This definition was further endorsed by the Earth Summit of 1992 a conference held by the United Nations on the environment and development (United Nations World Commission on Environment and Development) in Rio de Janeiro, often referred to as the Rio Summit. The outcome was Agenda 21 in which national governments committed themselves to an action plan of strategies for sustainable development and embedded in European and UK legislation (EU 1994: EU 1995: DETR 1998). In Britain this was translated into a government White Paper ‘Sustainable Development: The UK Strategy which set out the broad policy agenda for sustainability in Britain including global warming and the role of land use planning decisions (DoE 1994). The Government’s approach to sustainable development is stated as:

‘sustainable development does not mean having less economic development: on the contrary, a healthy economy is better able to generate the resources to meet peoples’ needs as new investment and environmental improvement often go hand in hand.....what it requires is that decisions throughout society are taken with proper regard to environmental impact’ (DoE 1994).

The need for global reductions in emissions in order to slow down global warming was further endorsed at the United Nations COP3 meeting in Kyoto in the form of a protocol agreed in December 1997.

The UK Government’s Planning Policy Guidance (PPG1) has established sustainable development at the heart of planning for development proposals and land use. It states, para 5, that:

‘A sustainable planning framework should:

- ?? Provide for the nation’s needs for commercial and industrial development, food production, minerals extraction, new home and other buildings while respecting environmental objectives
- ?? Use already developed areas in the most efficient way while making them more attractive places in which to live and work.
- ?? Conserve both the cultural heritage and the natural resources (including wildlife, landscape, water, soil and air quality taking particular care to safeguard designations of national and international importance: and
- ?? Shape new development patterns in a way which minimises the need to travel (DETR 1997)

So, sustainable development is concerned with those currently 'in charge' of the environment acting as custodians of the planet for future generations. There is, however, more to sustainable development than achieving environmental protection. It is also about creating jobs, achieving growth, increasing prosperity and tackling the issues of unemployment, poverty and social exclusion while at the same time achieving high standards of environmental protection. Therefore through the issue of sustainable development society has a stake in the whole concept of development and how it is achieved. However sustainability is also more than simply a set of policies. It is an approach that defines how society thinks about the world and it requires the public's involvement throughout the process to develop new ideas and to deliver policies.

'Sustainable development, sustainability and environmental stewardship are all terms that refer to the relationship between environmental protection and the economic development associated with industrial society' (Ratcliffe and Stubbs 1996: 142)

Local Authorities are now engaged in setting their own local Agenda 21, as per the Rio Summit, action plans which will incorporate the principles of sustainable development into working practices. For example, Policy LD1 in the 1995 Berkshire Structure Plan states that:

'In formulating policies in local plans and in considering development proposals, account will be taken of the extent to which development is sustainable in its location and form: helps to conserve natural resources, including land, water and fossil fuels: minimises the risk of pollution' (Berkshire County Council 1997:17)

In 1998 the UK Government issued a consultation paper on a revised strategy for sustainable development. The strategy is to provide a vision and a framework for regional administrations and clear policy guidance on achieving sustainable development. The four objectives set out in the document are as follows:

- ?? social progress which meets the needs of everyone
- ?? effective protection of the environment
- ?? prudent use of natural resources, and
- ?? maintenance of high and stable levels of economic growth and employment.(DETR 1998)

In June 1999 the Urban Task Force reported its findings. The report recognised that a renaissance of the cities will bring major economic and social benefits to all the regions and remove the need for low density, car-dependent development on rural land. (Urban Task Force Working Group 1999). The relationship between physical development and the creation of sustainable communities debate has however been largely devoid of explicit real estate content.

In August 1997 the Royal Institute of Chartered Surveyors (RICS) commissioned a survey from the Environment Resource and Information Centre at the University of Westminster, to examine the involvement of its members in sustainable development. The results showed that only about one third of RICS members surveyed were familiar with the term. This figure probably compares well with awareness amongst the general public but poorly with levels of awareness in some other professions such

as planning environmental health (Walker 1998). The majority, however, expected sustainable development to become a more important component of their work in the future. One of the key issues in the sustainable development debate is whether environmental and economic objectives can be reconciled. Nearly three quarters of the RICS members believe that these objectives are in competition. In the part of the survey concerning the private sector, it is interesting to note that 43% of the respondents felt that economic growth is critical to sustainable development. The majority believed that sustainable issues have a substantial relevance to the future of the profession. A view was expressed that in the short to medium term, developments which are not seen to be sustainable may well be down valued. Stockley Park's, a business park near Heathrow, Green Transport Plan was seen as an example of securing long term returns. So, concluded the paper, sustainable development should be viewed as a marketable development and a secure investment (Walker 1998: 21).

1.2 Aims of the paper.

Following the introduction of the concept of sustainability and its embedding in the European and UK legislature, this paper aims to:

- ?? Examine the concepts of sustainable economic development and the local economy.
- ?? Propose a procedure for assessing the relationship between an example of economic development, a business park, and its local economy.
- ?? Test the procedure using recent empirical research
- ?? Critically review the results of the exercise and evaluate the utility or otherwise of using such an exercise in the preparation of statutory development plans.

1.3 Structure of the paper.

The first part of the paper examines the concepts of sustainable economic development and the local economy. The second part describes a procedure for assessing the contribution made by a business park (the economic development) to its local economy using impact analysis. The procedure is then tested using recent empirical research based on a mature business park located in an area in the South East of England under pressure from development. Finally the procedure is critically evaluated and its future use is assessed.

1.4 The European context.

European consensus on sustainable development at the local level is being achieved through local agenda 21 that calls for the preparation and adoption of local sustainable development strategies. The European Sustainable Cities and Towns Campaign, set up following the European Conference on Sustainable Towns and Cities held at Aalborg, Denmark, in May 1994, seeks to achieve agreement within the communities of Europe on Local Agenda 21. Signatories have pledged to meet the mandate given by Agenda 21 to work with all sectors of the communities, citizens, and business interest groups in developing Local Agenda 21 plans.

The great majority of EU environmental laws are in the form of directives. These are 'binding as the results to be achieved upon each member state to which they are addressed'. This leaves the individual member states free to choose the manner in

which directives are translated into national law. This leaves much open to interpretation. For example, whereas the UK has taken the view that environmental problems should be defined in terms of their measurable impacts, other member states, such as Germany, have gone beyond this and have anticipated problems before the degree of environmental damage can be ascertained (Cullingworth and Nadin 1997).

The fact that president Bush and therefore the considerable political weight of the USA have turned their backs on the Kyoto protocol makes the European action on sustainable development all the more important in the global scene (UN 1997).

2. THE CONCEPT OF SUSTAINABLE ECONOMIC DEVELOPMENT AND THE LOCAL ECONOMY.

2.1 Sustainable economic development.

The major conceptual problem with sustainable development is that it is not a concept that sits easily with economic development. The UK government has identified through White Papers and Planning Policy Guidance (PPGs) the role that planning should play in the delivery of sustainable development. However this is only the start of a long process to change public (including developers) perception of the whole sustainability subject area. So far the focus has been on the conservation of the built and natural environment, containment of urban growth, efficient land use, the protection of the ozone layer, conserving resources and forests and reducing pollution. Economic development has been perceived as a user of natural environmental resources, the expansion of urban type development onto greenfield sites and of causing damage to the ozone layer by consuming fossil fuels. In addition there is the pollution from vehicle emissions especially in the case of business park development on out of town sites close to major road intersections.

Taking this at face value the generalisation is that economic development is not sustainable. However to dismiss economic development on these grounds does not meet the requirements of the Brundtland definition of sustainable development viz. not compromising 'the ability of future generations to meet their own needs'. Every nation requires some degree of economic growth to merely progress to the next generation. There are also so formidable economic arguments that point to the differences between ideas of sustainability, optimality and ethical superiority. The fact that a particular type of development is unsustainable does not necessarily mean that it is undesirable or sub-optimal. According to Beckerman 'most definitions of sustainable development tend to incorporate some ethical injunction without, apparently, any recognition of the need to demonstrate why that particular ethical injunction is better than many others one could think up' (Beckerman 1995:126). So, although according to some interpretations economic development may appear unsustainable in the first instance, there may be other areas in which it scores highly and which can be considered sustainable in the broadest sense of the definition. One of those areas is the contribution made by economic development to its local economy.

2.2 Local economic development.

Successful local economies have been identified as those which are made up of communities of small firms who between them enter into a series of mutually beneficial arrangements sustained through overlapping sets of social and economic linkages (Jones 1998). Complementing these social and economic linkages is an intertwined network of intermediate agencies which may or may not be under the collective control of local businesses. These agencies deliver a range of services designed to satisfy the needs of the local business community based on a core of industrial specialisations. For example, in Oxfordshire, which is the location of the business park selected for the empirical research in the second part of this paper, these specialisations are motor sports, medical equipment, research, publishing, biotechnology, education and high tech engineering. Thus a district is shaped by the geographical proximity of various economic and social actors, the links that exist between businesses and between businesses and intermediate institutions. This description echoes Healey's theories of the institutional capacity of a place: 'an embodiment of the relational resources available in the social networks of a place' (Healey 1997: 140).

The current focus on networks, clusters and partnerships should not be allowed to diminish the importance of location in establishing local identity. Location, according to Jones, possesses an identity based on the characteristics businesses ascribe to it. This can be more elaborate than that implied by prestige (Jones 1998). A particular location may merely provide, at a particular time, operating conditions that suit a particular company. Existing firms may prosper and new firms may be attracted to locate in a place because there is something about that place that adds value to the firm's production function. The quality of the labour force, the attractions of the local environment and the accumulation of a rich knowledge base could produce this effect. A location therefore possesses both tangible and intangible assets so a local economy should not be dismissed as unimportant. According to Jones given the existence of local assets, there is definitely a geographical sense of place for businesses to identify with, develop and sustain on behalf of all local businesses and resident communities. The sum of these local assets matches Healey's institutional capacity of a place (Healey 1997).

The above ideas of locality and networks have their critics who argue that they are not based on actual business behaviour in the real world. Curran and Blackburn have identified a distinct lack of strong local networks among firms in the UK (Curran and Blackburn 1994). Among Curran's conclusions is the assertion that 'the notion of the local economy ceases to be of key relevance in discussing and analysing economic activities and especially the role of small business and its articulation with the wider economy' because of the lack of strong local networks (Curran and Blackburn 1994: 183).

To return to the specific question of local economic development. The ingredients for successful local economic development have been developed from work carried out by Healey, Curran and Blackburn, and Porter. (Porter 1990: Curran and Blackburn 1994: Healey 1997)

?? A balance of competition and collaboration between local businesses.

- ?? Land availability and skills training
- ?? Partnership/networking between businesses and between stakeholders
- ?? The local business community

Each of these ingredients will be addressed in turn.

Competition and Collaboration.

The ideology of competitiveness within local economic development reflects the wider dominance of global competitiveness as the context of all local economies. Competition is primarily the mechanism for distributing scarce resources. So within a local economy, competition exists for skilled labour, the most sought after locations and not least for clients and customers. Competition exists also between local economies as local economic development units bid against each other for a complex array of national and European funding. Success in this area is often seen as a key indicator of local economic success and adds to an area's image. For example

Business Link Heart of England and the Oxford Trust successfully bid recently for £600,000 grant from the European Commission to boost small innovative fast-track, high-tech companies (Business Link 2000). This places Oxfordshire, along with Cambridge, in the top innovation and technology regions of excellence league of 15 regions in France, Germany, Italy and Sweden.

Building on concept of competition is the idea of competitive advantage emanating from clusters of businesses and industries developed by Porter and recently adopted by the DTI in their proposals for innovative clusters in the UK (DTI 1999). Porter claims that national and regional competitive advantage develops from the interaction between business and is characterised by an emphasis on the importance of competitive rivalry and scale economies (Porter 1990). Demanding and sophisticated consumers drive up quality and efficiency and promote innovation and skill in the workforce. Buyers should be encouraged to be more challenging and demanding of their suppliers. This will increase innovation as suppliers try to gain the competitive advantage. Bradstock has detected a Darwinian thread to Porter's ideas – an intense struggle ensures the survival of the fittest and therefore the most successful businesses (Bradstock 1999).

Within the local economy, stakeholder involvement in its development is very important. Healey has emphasised collaboration between stakeholders in order to secure better planning of an area (Healey 1997). Collaboration in this context is between businesses to benefit the economic development of an area. As pressure grows on western governments to provide public services from diminishing sources of tax based revenue, necessity dictates that they must look to private organisations to share in the provision. Today that expectation has never been higher (Griffiths 1998). This expectation reflects the central theme of the EU structural policies, which emphasises the role of business as a partner in social and economic development. In the UK there has been an assumption on the part of central government that business will be keen to join the public sector in tackling social problems. An example is through the UK Government's flagship employment programme – Welfare to Work – which offers various training/work options to the young and long term unemployed in an effort to reduce dependency on welfare payments.

Land availability and training skills

It is part of any statutory development plan remit to ensure that sufficient land is available in appropriate locations to meet identified needs. In areas where development is restrained, as in Oxfordshire, this means that some demand will remain unsatisfied. In Oxfordshire the 'identified needs' are those of small businesses, existing firms and firms that have a need to be located in Oxfordshire (Oxfordshire County Council 1999). The County Council considers that during the current Plan period, 1996 – 2011, there will be little need to release major areas of land for employment generating development.

With regard to training skills, in some parts of Europe, a high skill programme is seen as the best route to competitiveness (Ferier 1994). The European model emphasises lifelong learning; improved mobility; better access to affordable housing; restructuring through reskilling; shifting taxation from labour to other resources; and providing stepping stones into work and developing intensive technologies (EC1994). The public sector is seen as a cornerstone in creating jobs and countering the insecurity of economic change (EC 1995). However in the UK, according to Wood, much of the local economic development is focused on European funding and more latterly on the exploitation of the notion of corporate responsibility in the local community (Wood et al 1998).

Since 1997 there has been an important shift in emphasis from unemployment to social exclusion in the UK. According to Levitas, this is more than new terminology and a willingness by government to borrow attractive looking policy ideas from the EU and reshape them towards inclusion solely through employment (Levitas 1999). It is about people who do not participate in many normal activities of their society. It is, therefore, a multi dimensional problem linked to unemployment, poverty, social inequality and powerlessness. Social exclusion is a post-modernist idea not easily associated with any primary cause, but more to the outcome of different economic and social processes operating over a range of spatial scales and over many years. If the jobs created under government schemes are low paid and insecure and often unrelated to the local economy. This will only increase socio-economic polarisation and exclusion particularly when combined with local labour market policies such as workfare.

Networks and Partnerships

The role of networks is a recurring theme in local economic development. Networks and networking is often put forward prescriptively as a critical business resource to be developed and nurtured as a way by which individual enterprises can capture competitive advantage (Aldrich and Elam 1997). The quality of networks among firms and various intermediate agencies appears frequently in economic geography as a basis for success at the regional level. However the role of networks features heavily in the role of innovation as a vital source of regional competitive advantage (Camegni and Salone 1993 1991: DTI 1999). The advantage of networks in the local economy is not a recently discovered phenomenon. In 1931 Marshall was describing the benefits to be observed from the propinquity of firms engaged in producing similar products, ease of recruitment of skilled labour and the rapid transmission of commercially

viable information. Latterly there has been a shift in emphasis to co-operation, rather than competition and to product differentiation rather than price. This inventory of specific assets above has been enlarged to include local and idiosyncratic knowledge (Jones 1998).

Networks arise from and are sustained by the relationships between individuals with regard to some shared concern, belief or value. They tend to be voluntary rather than formally constituted entities with indistinct boundaries but with certain dynamism because of the changing nature of the individual relationships. The very informality of networks opens up the possibility for individuals to be included or excluded at the whim of others. This possibility is a powerful tool in what is essentially a political relationship (Powell 1991). Tensions can arise when networks are set in a competitive environment, like the local economy, where participants have to consider their individual survival. This gives the local economy a sense of unease and is not necessarily the cosy image of everyone getting along just fine that is often portrayed by those who believe that networking holds the key to success.

Partnerships may arise out of the informal processes of networking but networks only supply the potential for this to happen. The difference between the two is that partnerships tend to have a formal basis such as a company structure, partnership board or memorandum of agreement. Partnerships therefore have clear boundaries and their operation is formalised through boards, minutes of meetings and agreements over members rights and obligations. Partnerships can also have linkages to a range of resources such as financial skills, information and political access. This offers the possibility of building commitment to objectives and releasing the means of achieving them thereby reducing the gap between intent and action. This makes the network/partnership scenario attractive to Government. So much so that sometimes partnerships are a prerequisite for entry into central government and European funding competitions. For example, the City Challenge and Single Regeneration Board programmes required that proposals were the product of a partnership and that the alliance would also take responsibility for managing the subsequent delivery of the agreed programme.

Partnerships may be imposed in some cases. An organisation may be left with no alternative but to join a partnership created by more powerful actors if it wants to maintain a position in the political arena. This is often the case when central government has set the context for the partnership but is not itself a partner open to influence. There are pressures too on those involved in partnerships. There are the pressures to work with people with different objectives, the need perhaps to resist the pressure to become more like the other partners and the pressure to extract gains which may be at odds with the interests of other parties (Mackintosh 1992: 218). However networks and partnerships may counter balance entrenched interests and the local political agenda by allowing local firms, single issue campaigners and community groups a direct voice (Jones 1998).

Businesses can expect to find several benefits from working within partnerships. It can help to clarify the respective roles of the different sectors such as private, public and non-profit making and share any political or financial risk that may be attached to business involvement. The advice and support of intermediary organisations can help to tailor the actions of a large enterprise to meet the particular needs or circumstances

of the community. Intermediate organisations (partnerships) can help to reduce the red tape and bureaucracy which are often the by-product of publicly funded economic development and employment programmes. By working with partners from other sectors, corporate contributions can be used to lever additional public resources, for example, matching corporate community investment with UK or European regeneration funding. Some authors express the opinion that commitment to partnerships may have more to do with a desire to access funding than a genuine belief that it represents a more effective means of delivering public policy (Peck and Ticknell 1994). Others argue that in recent years the ability to secure central government resources has been linked much more explicitly to the perceived quality of local partnerships and much less to indicators of local need. (Lowndes et al 1997).

It is important to remember that, as Powell points out, the existence of a network or a partnership does not guarantee the presence of networking as a distinct mode of social co-ordination or governance. (Powell 1991).

The Local Business Community

Finally in this examination of the local economy, a consideration of the local business community is necessary.

The stakeholder economy is one in which all have a common interest and in which the economic benefits are widely distributed and opportunity is available to all. (Guardian 1996). Alongside this overview is the stakeholder welfare system based on the concept of social inclusion and social cohesion. These two concepts are fundamentally linked by a belief that the system will only flourish in its aims of promoting security and opportunity across the lifecycle if it holds the commitment of the whole population, rich and poor (Innes and Wilkes 1996). This is nothing new. Inclusive practices like these have been practised for some time by organisations in the private sector such as The Body Shop. It was Hutton who introduced the stakeholder concept in his book 'The State We're in'. Hutton offers stakeholding as a central element of a proposed route out of what he perceives as the British malaise. This is based on his focus on short termism and perceived social irresponsibility of British capitalism and 'the semi feudal state which underpins the economic order' (Hutton 1995: 298). Hutton sees stakeholding as a means of creating a new financial architecture in which private decisions produce a less degenerate, in his opinion, capitalism. However the case for stakeholding goes much further than Hutton's application to finance.

Stakeholding is related to the local economy in which it is applicable at two organisational levels. First the stakeholding principle has been proposed as a guide for central government policy particularly in the areas of macro economic policy, education and the welfare state. All these areas set the broad parameters for local economic policy. Secondly, stakeholding can be a part of the micro concepts at the level of the individual firm so that businesses and working practices underpin the national partnerships implied by stakeholding (Innes and Wilkes 1996). For example Local Agenda 21 is intended to bring together local government, local communities and local businesses to formulate strategies for sustainable development within a framework set out by central government

With regard to stakeholding in the local economy, the UK central government objective is quite plain but rarely mentioned. It is to involve a wider range of parties in addressing the fundamental social questions of the day not least because the public sector is unable to invest the requisite resources (Griffiths 1998). Many UK companies have made attempts to integrate social responsibility with business operations. This has been achieved by addressing the needs of five key stakeholders whose support is perceived as critical to the success of the business. These are the company shareholders, the employees, the customers, the suppliers and the communities in which the company operates or 'door step philanthropy' as Griffiths describes it (Griffiths 1998). Companies appreciate the arguments for investing in their local communities as a well-resourced programme can deliver considerable commercial benefits. These include a higher skilled workforce, raised staff productivity, an expanded supplier/customer base as well as better press and publicity. However, as Griffiths concluded, any idea of the private sector being compelled to participate in social and economic development programmes is unrealistic. Companies already pay for social services and other public initiatives through the taxation system and a range of indirect even retrospective tax initiatives. If governments wants private enterprise to do more to tackle the causes and symptoms of social exclusion, then companies will have to receive a benefit in return. Governments will also have to address the very apparent contradiction between companies on the one hand supporting local employment initiatives designed to combat social exclusion whilst on the other lobbying government to introduce even more flexible working patterns.

3. A PROCEDURE FOR ASSESSING THE RELATIONSHIP BETWEEN A BUSINESS PARK AND ITS LOCAL ECONOMY.

3.1 In order to test the relationship between business park development and its local economy, research was carried out using a case study to examine the extent to which a particular mature business park was contributing to its local economy, using a series of predetermined impacts and multiple sources of evidence. Oxfordshire was selected as the empirical location and Milton Park, a mature business park, was selected as the unit of economic development. The adopted procedure was to examine the extent to which Milton Park satisfies the economic objectives set out in the statutory planning document, the Structure Plan for Oxfordshire, and Oxfordshire's Economic Development Strategy. The UK Government has pledged, through planning guidance and EU directives, to ensure that, where possible, economic development is sustainable. The structure plan policies for economic development and the policies in the economic development strategy relate directly to the local economy. Ergo, if economic development, and for this empirical work therefore a business park, can satisfy the economic planning objectives, it must be contributing to sustainable economic development in the local economy.

3.2 The empirical location.

Oxfordshire was chosen as the area of study because Oxfordshire County Council operates a policy of restraint on development within the South East region of the UK which is one of the richest, most accessible and highly skilled areas in Europe. The

area does not benefit from any financial incentives from the UK Government or the European Union. The county has good road and rail communications connecting it with ports and airports as well as with the UK's two main industrial and population centres, London and Birmingham.

Oxfordshire has been described as an almost perfect city region consisting of Oxford and its hinterland. It is largely a self contained employment market with some 80% of the population working within the county boundary (Young 2000). The city of Oxford is very much the centre of activity for the county as well as being an internationally recognised centre for academic learning. Its industrial base is diverse high tech and innovative. Unlike Cambridge, Oxford has an industrial past dominated by the manufacture of motor vehicles but it hardly carries any of Breheny's 'industrial baggage' (Breheny 1999). The effects of past industrial development in an historic city resulted in strong opposition to new types of development that might result in further congestion (Lawton Smith 1990). Planning restrictions arising from the Structure Plan and SERPLAN made it difficult for new commercial ventures to find premises and housing in Oxford so economic development was dispersed to the county towns – Banbury, Bicester, Witney and Didcot as part of the Structure Plan Strategy (Oxfordshire County Council 1996). Development is also restrained in environmentally protected areas such as AONBs (Areas of Outstanding Natural Beauty) and land within the boundary of the Oxford Green Belt.

Oxfordshire is currently enjoying a time of economic prosperity measured by the following economic indicators:

- ?? an unemployment rate (claimant count) of just 1.2% (September 2000)
- ?? an above average level of GDP per head as shown in Table 1

Table 1. Gross Domestic Product per head (1996)

Oxfordshire	£11,753
South East	£11,455
UK	£10,711

Source: Oxfordshire County Council

- ?? an above average growth in the stock of businesses and survival rate of new start ups. Oxfordshire businesses are surviving longer than other businesses in the south east with a greater percentage of businesses remaining registered for VAT at 12, 24 and 36 months after registration.
- ?? the emergence and strengthening of unique clusters such motor sports, medical equipment, research, publishing, biotechnology and high technology engineering .

Source: Oxfordshire County Council.

According to the Economic Development Strategy for Oxfordshire, the county also has:

- ?? the highest concentration of research and development jobs in the UK outside London

- ?? the highest percentage of graduates in the workforce
- ?? the largest concentration of motorsport and performance car research, development, testing and manufacturing companies in the world – ‘motorsport valley’
- ?? the largest concentration of printing and publishing companies in the UK outside London, and the greatest concentration of medical publishers
- ?? world class universities. (Oxfordshire County Council 1999).

The County Council believes that much of this success is due to the fact that the Structure Plan has maintained a sustainable approach to development by striking the right balance between accommodating economic development and safeguarding environmental assets (Young 2000). The policy approach to economic development in the current Structure Plan supported by the Heart of England TEC, is to build steadily on Oxfordshire’s established strengths and to contribute to the diversity and long term stability of the local economy. Future economic growth is seen as primarily indigenous rather than large scale inward investment and coming from increased productivity in the higher value added sectors. The County Council and TEC’s fundamental aim is to be found in the Economic Development Strategy 1999/2000:

‘To encourage the development of a high wage, high skill, high value added economy which enhances and protects the quality of life of residents of Oxfordshire and enables them to fulfil their potential’

It is interesting to note that no reference is made to the knowledge intensive high value added activity being centred on indigenous growth or that this sort of activity naturally attracts external firms. Major companies can bring in much needed capital and international expertise. However they also compete for a limited pool of local expertise. A shortage of key technical and management skills is one of the most pressing problems found by local businesses and an influx of outside firms can crowd local facilities. In 1999 two thirds of companies in Oxfordshire looking for new staff had recruitment difficulties (Heart of England TEC 1999). The TEC’s survey also reported a trend towards strong demand for professional and technical workers and reduced demand for manual and unskilled workers. The largest job growth occurred in large companies. Business and financial services proved to be the buoyant sector in employment terms, while production and manufacturing industries are most likely to be reducing staff levels.

The march of high tech companies appears to be relentless. Oxfordshire is to become one of Europe’s first centres of excellence after winning a substantial grant from the European Commission to boost small innovative fast track high tech companies. This will put Oxfordshire in the top innovation and technology league of 15 regions in France, Germany, Italy and Sweden. (Business Link 2000) There is a danger that a selective immigration strategy which prioritises research and development and limits employment in manufacturing will also limit the range of multipliers arising from job generation in a range of skills in both manufacturing and services.

As far as premises for business are concerned, land for employment is available. County Council monitoring shows that, over the last few years, the pool of land available for building has consistently averaged about 350 hectares with 45% of this total in the four county towns (Young 2000). The County Council feels that in relation

to accommodating small and medium sized companies, the problem is more closely related to the provision of flexible leasing arrangements than lack of stock in terms of quality and size.

3.3 The business park – Milton Park.

Milton Park was selected because it satisfied the criteria set out by Arlington Securities plc as being prerequisite for business park development. Milton Park is located to the south of Oxford in the Vale of the White Horse District Council area. Adjacent to the A34 dual carriageway, the park has road access to the M4 and the south and the M40 and the north of England. Didcot Parkway station is two miles to the east with connections to London and the Heathrow link, the rail routes to the north via Oxford and Birmingham and the routes to the west via Swindon and Bristol. Heathrow Airport is approximately one hour's drive and access to Gatwick airport is via the M4/M25/M23. Local bus services and extensive cycle routes connect the park with its immediate locale and their use is actively encouraged for those working on the park.

The park itself covers nearly 250 acres and has been extensively landscaped to provide a corporate image. There are 142 companies on the park. It is a mixed development accommodating warehousing, storage and light industrial which have been located on the park since its inception, as well as the more high profile developments such as Parkgate a flagship office development at the entrance to the park. Milton Park is home to such cutting edge companies as Research Machines, the country's leading computer firm in the educational sector, Oxford Asymmetry International, Psion Industrial, Oxford Semiconductor and Bookham Technology. This concentration of science and knowledge based organisations makes Milton Park one of the largest concentrations of scientific, high tech and knowledge based businesses in the south east region representing approximately 20% of the park's built area and 28% of the employees. The park's success is partly based on its ability to offer start up units in its innovation centre and the option to develop existing sites to meet new demands in the expanding sectors of the economy. Business incubators involve the provision of small work units for nurturing companies in their early life. Milton Park Ltd., the park management, operates a supportive management service from its on site offices promoting a philosophy of partnership with occupiers which includes accommodating their expansion needs within the site.

3.4 Research procedure

There is a systematic procedure, impact assessment, for considering the possible effects of a proposed project on its environment before a decision is made on whether the project should be given approval to proceed. The evolution of this procedure has widened with development from the narrow approach of cost benefit analysis and planning balance sheets, to bio-physical environmental assessment, then with the addition of socio- economic assessment to a more total approach and finally to impact assessment which includes all that has gone before plus other approaches such as community impact assessment (Lichfield 1996). Impact assessment has become, through the requirement of providing environmental impact assessment statements to accompany large-scale development proposals, a recognised and accepted technique for assessing the effect (impact) of a proposal on its environs. The importance of

socio economic impacts has been enhanced by the Government's increased emphasis on the role of social inclusion, high and stable levels of economic growth and employment in achieving sustainable development. For the Local Authorities, impact assessment provides a systematic examination of the environmental implications of a proposed action and sometimes alternatives before a decision is taken. It helps to clarify some of the trade-offs associated with a development proposal, which should lead to more rational and structured decision making. It has the potential to be a basis for negotiation between the developer, public interest groups and the planning regulator/local authority which can lead to an outcome that achieves a balance between development and its environment.

This research focuses on the unrefined area of socio economic impacts. Bearing in mind the paramount need to achieve development that is sustainable, the survey has taken impact assessment as a technique and given it a sustainable base along the guidelines set out by the government (DETR 1999). Importantly for development to be economically sustainable there must be a relationship between a business park and its local economy. In doing so it is important to recognise that this research differs from conventional impact assessment in that it is not a quantitative exercise based on multiplier effects. The very nature of the impacts under scrutiny dictates a focus upon the direction and qualitative extent of the impact.

In order to meet these objectives, it was necessary to devise a series of aims and related indicators for the impact assessment. The validity and reliability of an indicator will depend on the adequacy with which the indicator measures its concept. The authority has been borrowed from the Oxfordshire Economic Partnership (OEP), Oxfordshire County Council, and the Heart of England TEC. The data can be found in the Economic Vision for Oxfordshire, Oxfordshire Structure Plan 2011 (Oxfordshire County Council 1996) and the Heart of England TEC Oxfordshire Business Survey 1998 (Heart of England TEC 1999). The aims of competitiveness, sustainable development and social inclusion have been adopted from OEP's Vision Statement and follow their logic. Four of the aims competitiveness, sustainable development, social inclusion and quality of life are central government objectives.

3.5 Data sources

Data was collected from both primary and secondary sources. The empirical research was backed up and supplemented by the perusal of planning history, interviews with business park providers, searches of historical sources including written material such as newspapers and promotional material. The primary source of information was a 100% questionnaire survey carried out on the businesses located at Milton Park in October 1999. The two major sources of secondary information were the Heart of England TEC Business Survey 1998/1999 and 1999/2000 and data from the annual Milton Park Census from 1995 to 1999 inclusive.

The Heart of England Business Survey was conducted on the behalf of the TEC and its partners during November/December 1999. Just over 1,000 employers with five or more employees excluding public sector organisations and charities were interviewed by telephone. The results were weighted to reflect the structure of Oxfordshire's local economy and are directly comparable with the results from the 1998 survey. The research was carried out by Prism Research Ltd, Telford, Shropshire.

The management, Milton Park Ltd, has carried out the Milton Park Census every year for the last ten years on 30th September. The Census is designed to reflect social and commercial trends, to provide insight into the make up of the community at Milton Park, to measure performance and to predict the requirement for new services. The Census is designed for internal consumption only although a summary of the results is available on request. The results from the Census provide an accurate data set to help measure past performance and to predict those services that will be required in the future. The results from each census are published in the form of a report and for this study data from the census was collected retrospectively back to 1995

3.6 The contribution made by Milton Park to its local economy. The results of the empirical research.

The results of the empirical work show the contributions made by Milton Park through the impacts of financial injections, job creation, competitiveness, social inclusion and sustainable development to the local economy. .

In order to assess Milton Park’s impact on the local economy in terms of injecting money into the economy questions were asked about each company’s expenditure locally, in Oxford and in the rest of Oxfordshire by post code. The results are shown in Table 2.

Table 2. Annual Expenditure

	Annual expenditure locally (OX11, OX12, OX13, OX14*)	Annual expenditure in Oxford (OX1, OX2, OX3, OX4)	Annual expenditure in the rest of Oxfordshire (OX5 – OX10)
Less than 10%	56.9%	49.0%	58.8%
10% - 25%	7.8%	19.6%	9.8%
26% - 50%	9.8%	9.8%	9.8%
51% - 75%	2.0%	0 %	2.0%
More than 75%	7.8%	2.0%	0%
Missing values	15.7%	19.6%	19.6%

* Milton Park is in postcode area OX14

As can be seen from Table 2 over half the companies spent less than 10% on goods and services anywhere in Oxfordshire.

The average weekly wages are well above the average for the South East and the country as a whole and, most importantly, above that for the local economy surrounding Milton Park as shown in Table 3.

Table 3. Average Earnings 1999.

	Average gross weekly full time earnings
Milton Park	£431.48 *
Oxfordshire	£410.10 **
South East	£423.20 **
UK	£400.10 **

Source: * Questionnaire Survey 1999

** New Earnings Survey 1999 Part E (Office for National Statistics)

Taking the average weekly wage, £431.48 (Survey 1999) and multiplying it up by the number of people employed on the park, 5120 (Census 1999) gives a weekly cash injection of just over £2.2m, annually £114.4m. The 1998 Milton Park Census found that only 15% of the workforce came from destinations outside Oxfordshire, so reducing the annual figure by that amount, gives approximately £972m annually available for spending in the local economy. Obviously the actual figure will not be as high as that but it does give a good indication of a strong investment effect coming from the workforce.

It is now time to consider Milton Park's relationship with its local economy from the point of view of satisfying the economic objectives contained in the Oxfordshire Structure Plan 2011 (Oxfordshire County Council 1996). The overall strategy aims to encourage the development of a high wage, high skill, high value added economy which enhances and protects the quality of life of residents and helps them to fulfil their potential (Oxfordshire County Council 1996). The results of the empirical work have shown that the workforce on the Park enjoy average gross weekly full time earnings higher than the rest of Oxfordshire, the South East and the UK as a whole as shown in Table 4.

Table 4. Average earnings (1999)

	Average gross weekly full time earnings
Milton Park	£431.48 *
Oxfordshire	£410.10 **
South East	£423.20 **
UK	£400.10 **

Source: * Questionnaire Survey 1999

** New Earnings Survey 1999 Part E (Office for National Statistics)

The results from the 1999 Census show that 90% of companies on the Park offer some form of training and that overall training provision has increased dramatically over the previous year as shown in Table 5.

Table 5: Companies on Milton Park offering training.

Training	1997 %	1998 %	1999 %
Companies offering training	73	65	90
Companies offering training leading to a Formal qualification	42	33	29

Source: Milton Park Census 1997 to 1999

The response rate to the question on education qualifications was disappointing as 55% of the respondents failed to answer the question. If this is taken into consideration and adjustment made then 40% of the workforce have been educated to degree level which is indicative of a highly skilled workforce. 37% of companies on the Park are in the knowledge based sector as shown in Table 6, and one of the objectives in the overall development strategy for the Park is to focus on emerging technologies (Milton Park 1996).

Table 6. Companies by category.

Companies by category	
Production	11%
Storage	9%
Knowledge based industries	37%
Sales	19%
Other	24%

Source: Milton Park Census.

Oxfordshire County Council's overall strategy is further qualified by the need to support and improve competitiveness. On the Park there is a high percentage (82%) of companies with Internet access, a higher figure than for the county as a whole as shown in Tables 7 and 8.

Table 7: Use of the Internet.

Company Use of the Internet	Survey (1999)%	Census (1999)	HEBS (1999) %
Company web site	56	48	58
Companies using the internet	78	82	75
Company e-mail address	78	75	72
ISDN connections	54		41
Video conferencing facilities	12		10
An intranet facility connecting branches or departments of a company	33		38

The number of companies using the internet has almost doubled in the last two years as shown in the Table 8:

Table 8. Businesses on the Internet.

Year	%
1997	44
1998	62
1999	82

Source: Milton Park Census 1997 to 1999

Nearly one quarter of the companies are involved in cluster activities, the importance of which is further underlined by the DTI's Cluster Team (DTI 1999). In 1999 the DTI published a report on Biotechnology Clusters demonstrating the importance of clusters to economic growth. The critical factors for cluster development identified in the report are set out here in Table 9 so that they can be related to Milton Park.

Table 9: Critical factors for cluster development.

	Critical factors for cluster development
1	Strong science base
2	Entrepreneurial culture
3	Growing company base
4	Ability to attract key staff
5	Availability of finance
6	Premises and infrastructure
7	Business support services and large companies in related industries
8	Skilled workforce
9	Effective networks
10	Supportive policy environment

Source: Biotechnology Clusters (DTI 1999)

These factors are now related to Milton Park

1. Strong science base. According to the report, leading edge science, academic entrepreneurs and a critical mass of research activity provides the lifeblood of the biotechnology clusters. Milton Park is extremely well placed to tap into the all of the above in Oxford and in the research laboratories at Culham and Harwell.
2. Entrepreneurial culture. Milton Park is ideally placed to improve commercial awareness and entrepreneurship among university researchers through work experience programmes. In the summer of 2000 the South Oxfordshire Education Business Partnership, located on Milton Park, participated in Oxford University's Higher Education Summer School with tours of the park and visits to various companies (SOEBP 2000). Recently the park has hosted a study of environmental issues and waste management conducted by Oxford Brookes University students.

3. Growing company base. Of the 15 biotechnology companies on the Park, all except one fall within the SME category. The one exception is Oxford Asymmetry which employs 270 people and is one of the four largest employers on the Park. Clusters, according to that report need thriving start ups as well as more mature companies that can act as role models. Milton Park also has an innovation centre that is a genuine incubator designed to encourage small businesses to grow.
4. Ability to attract key staff. Biotechnology companies must be able to attract the best management and scientific staff. Oxfordshire has the highest concentration of scientific research and development anywhere in the UK outside London and yet over half the biotechnology companies on the Park have vacancies. Business parks are particularly attractive places to work because they 'provide efficient and flexible workplaces, attractive and accessible to skilled employees and of a quality consistent with corporate image' (Roger Tym 1992)
5. Availability of finance is not relevant to this study
6. Premises and infrastructure. Biotechnology companies require specialist premises with leasing arrangements that are flexible enough to meet their changing needs. Milton Park's development strategy states that Milton Park Ltd can offer property solutions that enable businesses to manage change efficiently reinforced by their willingness to take back old leases when companies relocate elsewhere on the Park. Flexibility of terms are offered to large numbers of small users by taking a portfolio approach to the aggregate stream of income which they generate.(Milton Park 1996)
7. Business support services and large companies in related industries. There are property advisors and a recruitment agency on the Park as well as companies in industries relating to biotechnology which are important drivers to cluster development.
8. Skilled workforce. As well as referring back to factor number 4 above, training courses in partnership with local educational establishments are invaluable for filling skills gaps. In Oxfordshire, Oxford Brookes University has set up a biotechnology degree course with input from local industry and support from the Heart of England TEC, Oxfordshire Biolink and the Oxford Trust.
9. Effective networks. Regional biotechnology associations that provide opportunities for companies, researchers and other interested parties to meet and exchange views and information are invaluable sources of support in the growth of clusters. Milton Park comes within the sphere of Oxfordshire Biolink which is mentioned above.
10. Supportive policy environment. According to the DTI, 'public policy cannot create clusters, they must be business driven' (DTI 1999). However, local authority policy and in particular planning policy can do much to assist the creation of the right environment for clusters to develop. If that environment is a business park setting and it would appear that a business park does in fact satisfy many of the critical factors for cluster development, then this must be addressed. The Census revealed that 80% of companies actively do business with other companies on the park. This backs up one of the most important factors identified in the DTI report which was that within clusters, like minded companies can 'spark off' each other.

There are 15 biotechnology companies on Milton Park employing just over 9% of the park's workforce and just over half of that biotech workforce is employed by one company. 71% of the biotech companies have their headquarters on the Park. Over

half the biotech companies have vacancies but the Census does not show whether these have arisen through expansion or through staff leaving to go elsewhere. As can be seen from the above analysis Milton Park is very able to satisfy most of the critical factors for cluster development set by the DTI and is providing the type of environment in which these new emerging companies can flourish. In doing so, Milton Park is satisfying one of Oxfordshire County Council's main objectives to develop a 'high skill, high value added economy' by building on the established strengths by 'harnessing the unique range of science, technology and knowledge based skills'. (Oxfordshire County Council 1996)

There is however a recruitment problem based on skill shortages indicating a tight labour market which is illustrated in Table 10.

Table 10: Skills and Labour Shortages

Category	Skills Shortage	Labour Shortage	Skills & Labour Shortage
IT	22%	0	28%
Other	5%	50%	28%
Pharmaceutical	11%	0	0
Production	0	12%	43%
Professional Services	44%	25%	0
Sales	16%	13%	0
Storage	0	0	0

Source: Milton Park Census 1999

The County Council promotes an environmentally based economic policy with key objectives such as the conservation of energy and land. Milton Park is contributing to this by concentrating development largely on a brownfield site. 75% of the site was originally brownfield land and Milton Park Ltd have been putting into effect a long term development strategy based on redevelopment (Lansdowne Estates 1996). The plan involves the development of vacant land within the park and the redevelopment of areas currently occupied by older existing buildings (brownfield land) in order to improve the diversity and quality of the property investment and to ensure the continual upgrading required to meet the changing needs of businesses. Investment by both the public and private sectors in the physical infrastructure, land buildings and plant machinery according to the local authority, is a fundamental precondition to the sustainable creation of jobs (Oxfordshire County Council 1999)

One of the key issues facing the County council is minimising the need to travel. The car is still the most popular form of transport for journeys to work on the park, as shown in Table 11, by a very wide margin but car usage has steadily declined from 88.4% in 1995 to 85% in 1999 which is encouraging for sustainable development. The number of people working on the Park, however, has risen during this period from 3850 in 1995 to 5120 in 1999 .So the actual number of people travelling to work at Milton Park has increased over a five year period by 22%.

With regard to the more sustainable forms of transport there has been a 3.5% increase in journey to work travel modes other than by car. Bicycle usage has increased from 2.74% to 3.1% so there has been a (small) shift in the right direction. In spite of Park management's efforts to increase the attractiveness of travel by bus by encouraging new services, the numbers travelling by bus remains small. In 1999 7% of people travelled to work at Milton Park by car and only 7% by bus (Census 1999). These figures are compared with figures from Stockley Park near Heathrow and Edinburgh Park in Scotland in Table 13.

Table 12. Mode of transport for journey to work.

Mode of transport	1995	1996	1997	1998	1999
Car	88.4%	87.32%	86.78%	86.03%	85%
Motorcycle	2.28%	3.91%	2.31%	1.52%	4%
Bus	5.08%	6.48%	6.91%	8.82%	7%
Train	0.01%	0.17%	0.72%	0.74%	0.3%
Cycle	4.40%	2.90%	2.95%	2.74%	3%
Walk	0.73%	0.22%	0.32%	0.15%	0.6%

Source: Milton Park Census 1995 – 1999

Table 13. Travel to work by car and bus. A comparison between three businesses parks (1999).

Business Park	% travel to work by car	% travel to work by bus
<u>Milton Park</u>	<u>85</u>	<u>7</u>
<u>Stockley Park</u>	<u>80*</u>	<u>7*</u>
<u>Edinburgh Park</u>	<u>67*</u>	<u>18*</u>

* Estates Gazette 1999

Patterns are similar at Milton Park and Stockley Park with an appreciable increase in the numbers travelling by bus and a corresponding decrease in those travelling by car at Edinburgh Park. As far as reducing traffic levels is concerned, only 9% of companies currently operate car sharing schemes (Census 1999) but 60% of respondents, accounting for some 3500 employees, said they would encourage such schemes.

Milton Park Ltd is currently looking at further options such as:

?? introducing an internet or intranet based car sharing scheme

- ?? improved cycle and walking routes
- ?? improvements to bus services and bus stops. In 1999 a new bus service connecting Milton Park with Oxford, Didcot Station and several nearby villages was introduced.
- ?? appointment of a travel co-ordinator to focus awareness on transport issues and to ensure information on various options is available
- ?? pool bikes and travel around the Park
- ?? bike maintenance facility on-site
- ?? encouraging internet shopping. The convenience store in the newly opened Piazza precinct operates an internet shopping service.
- ?? Discounted travel tickets and discounts with local shops.
- ?? A park and ride scheme.

Respondents were asked which measures from a range of options does their company use to actively discourage car usage and the results from the Survey are set out in Table 14.

Table 14 Sustainable development

Sustainable development measures	YES %	NO %	Don't Know %
Limited car parking spaces	9	89	2
Subsidised bus fares	2	96	2
Subsidised train fares	2	95	2
Charging for car parking spaces	2	96	2
Subsidised season tickets for buses	2	96	2
Subsidised season tickets for trains	2	96	2
Provision of lockable cycle racks	14	84	2
Motorbike parking	27	69	4
Car sharing scheme	13	84	2
Other (please specify)	9	87	4

Source: Survey 1999

Overall, from the point of increasing environmental awareness in the interests of sustainable development, the results are disappointing. Motorbike parking, car sharing schemes and lockable cycle racks are of limited significance in spite of the claims in the Census that 60% respondents would encourage car-sharing schemes. Respondents who claimed to be taking other measures not described in the question failed to specify the nature of these measures. The Oxford Economic Partnership has stressed the need to reduce the number of journeys to work by car. It can be concluded from the above that very few companies on Milton Park are actively engaged in reducing car usage. In fact several respondents were keen to point out, without being asked, that car usage is essential to the efficient operation of their companies.

A green commuter plan sets out to develop alternatives to car travel and new ways of travel to work without affecting the efficient operation of the company. Only 2% (1 respondent) claimed to have a green commuter plan and that particular respondent

replied negatively to all the sustainable development issues set out above. (Survey 1999). From this it is concluded although there may be an acceptable level of awareness of the need to reduce car travel, practically no business is actively pursuing it.

Companies were asked, with regard to environmental awareness, whether they had a formal written statement, an environmental content in other policy statements or just an informal environmental awareness and the results are set out in the Table 15.

In their survey in 1998 The Heart of England TEC asked about environmental issues and whether companies' concerns about these issues were set out in a formal written statements, as environmental content in other policy statements or just took the form of a general environmental awareness. In 1999 these questions were omitted and no questions at all were asked about environmental awareness so the comparative information used in Table 15 relates to the 1998 survey. The reason for the omission has been difficult to establish but it would appear that, with a limit to the length of the questionnaire due to cost, it was felt that environmental matters were marginal to the TEC's overall remit. This is in spite of the TEC having signed up to sustainable development through membership of the Oxfordshire Economic Partnership.

Table 15: Environmental Awareness

	YES %	NO %	HEBS % YES (1998)
A formally written company environmental policy statement	18	75	22
An environmental content in other policy statements	14	75	19
Informal environmental awareness	53	35	59
Other (please specify)	27	73	

Source: Survey 1999 and Heart of England Business Survey

As can be seen from Table 8.25, a slim majority of companies claim to take account of environmental issues informally. Only 18% claim to have a formally written company environmental policy statement which compares unfavourably with the rest of Oxfordshire. Formal written statements are quite recent with 4 being prepared in 1996, 1 in 1997, 2 in 1998 and one in 1999.

The development plan system cannot deliver sustainability on its own. There has to be a process to change the public and the developer's perceptions of the whole sustainability approach. This will have to include the wider issues of improving public transport networks and limiting car use by more acceptable means than purely raising the price.

One of the recent government targets on the sustainability agenda has been to change travel to work behaviour, in short to reduce dependency on the private car for journeys to work. The principal tool in achieving this aim is the Green Travel Plan

(GTP) or green commuter plans or, the developers preferred title, traffic management plans. A GTP is:

‘a package of measures tailored to the needs of individual sites and aimed at promoting greener, cleaner travel choices and reducing reliance on the car’ (DETR 1999)

The problem is that in the Great Britain a very high proportion of the workforce travels to work by car. Around 71% of the workforce normally uses a car to get to work compared with only 68% in 1993 (HMSO 1998). The use of public transport for journeys to work is depressingly low. Nationally, only 13% use public transport and this figure is inflated by the high proportion of the workforce in Greater London (41%) that use public transport (Haddock and Hyner 2000). In the West Midlands, outside the West Midlands County, where out of town office parks make up a large proportion of the office stock, the percentage of people travelling to work by car is significantly higher (79%) and the impact on public transport correspondingly lower (3%) (Haddock and Hyner 2000). Faced with explaining the increasing cost of congestion and possible grid lock in the South East of England, the UK government is looking at ways of reducing car usage. Charging for access to the roads and the reduction of and/or charging for workplace car parking are being considered. However both these tactics would be likely to have an adverse effect on a high proportion of the electorate.

Policy with regard to GTPs is to be found in a number of different government instruments. The main areas of recent policy development which impact on the area of GTPs include:

- ?? Transport White Paper ‘A new deal for transport: Better for Everyone (1998)
- ?? Revision of PPG13: Transport – Public Consultation Draft (October 1999)
- ?? Local transport Plans
- ?? Regional Development Strategies; and
- ?? Revisions to unitary development Strategies.

In spite of all the documentation, the current status of GTPs remains voluntary. Despite all these policies, companies on business parks are still eager to obtain more car parking, some even going as far as to lease off site parking (Strohm1999). It would appear that most of the benefits claimed by DETR in its resource pack are insufficient to justify the cost to that organisation and many of the benefits are non specific in that they benefit society as a whole rather than the implementing organisation (DETR 1999). The ideal therefore for any one organisation would be if everyone but themselves introduces GTPs. They would then get the benefits from lower congestion and better air quality but none of the costs. If society is to benefit from GTPs then it would seem logical that government should take the lead in their promotion.

With regard to development sites, the County Council would seek to provide local jobs well related to housing and local services and to public transport. Milton Park is not located in the preferred main towns and hinterlands. However efforts have been made, and continue to be made by Milton Park Ltd to encourage the use of public transport and they have been actively involved in improving the delivery of that

service. 41% of the workforce travel less than five miles to work at Milton Park and only 14% travel over fifteen miles which shows that the journey to work pattern is very local as shown in Table 16.

Table 16. Distance travelled to work

Distance travelled	% Workforce Census (1999)
0 – 3 miles	20%
3 – 5 miles	21%
5 – 10 miles	26%
10 – 15 miles	19%
15 + miles	14%

This pattern has been maintained over a number of years. Milton Park Ltd has been proactive in providing for the expansion and relocation of firms already on the Park and those located locally. ‘A demonstrable need to be in a particular area’ is a difficult concept to translate into a measurable impact but suffice it to note that many of the knowledge based companies on the Park are feeding off the intellectual and science base in Oxfordshire. The majority of the companies based on the Park (74%) fall within the SME category employing between five and two hundred people which satisfies the provision for the creation of small and medium sized enterprises objective.

Overall, Milton Park has responded well to the challenge of meeting the planning economic objectives.

4. CONCLUSION

The importance of planning for sustainable economic development can not be over stated. The empirical research carried out for this paper has shown that it is possible to identify key elements in certain types of development, such as business parks, that are sustainable and which satisfy local economic planning objectives. It is in the area of transport that difficulties arise but this is a national problem related to government’s apparent inability to deliver acceptable alternatives through the public transport system.

With more collaboration between developers and planners it may be possible to build consensus into planning for economic development when both parties can recognise their contributions to sustainable development.

REFERENCES.

- Aldrich, H. and Elam, A. (1997) A guide to surfing the social networks in S Birley and D Muzyka (eds) *Mastering Enterprise*. London. Pitman.
- Beckerman, W., (1995) *Small is Stupid: blowing the Whistle on the Greens*. London: Duckworth.
- Berkshire County Council (1997) *Berkshire Structure Plan*. Reading, Berkshire County Council
- Bradstock, P. (1999) How clusters can lead to healthy competition in *In Business* (Oxford Times supplement) September/October 1999 Oxford. Oxford times
- Breheny, M (1999) *The People; Where will they work?* London TCPA
- Brundtland Report (1987) *Our Common Future: Report of the 1987 World Commission on Environment and Development*.
- Business Link (2000) County is European Centre of Excellence in *Business Link* Oxford June/July 2000
- Camagni R and Salone C, (1993) *Network Urban Structures in Northern Italy: elements for a theoretical framework*. Urban studies, Vol 30 (6) P1053-1064.
- Cullingworth J B and Nadin V, (1997) *Town and Country Planning in the UK* London Routledge
- Curran, J. and Blackburn, R. (1994) *Small Firms and Local Economic Networks: the death of the local economy?* London. Paul Chapman.
- DETR (1997) *PPG1 General Policy and Principles 1992 (revised 1997)* London. HMSO
- DETR (1998). *Modernising Planning*. A Policy Statement by the Minister for the Regions, Regeneration and Planning. London DETR.
- DETR (1999) *Examination of the Operation and Effectiveness of the Structure Planning Process. Summary Report* London DETR
- DoE, (1994a) *Sustainable Development: The UK Strategy*. London HMSO
- DTI (1999) *Biotechnology Clusters* London DTI
- European Commission (1994) *European Social Policy, a way forward for the Union*. White paper Comm (94) 333.
- European Commission (1995) *European Strategy for Encouraging Local Development and Employment Strategies* Comm (95) 273 Final.

- Ferner, A (1994) The state as an employer in R Hyman and A Ferner (eds) *New frontiers in European Industrial Relations* Oxford Blackwell
- Griffiths, J (1998) New Neighbours,. A critique of business involvements in local economic development. *Local Economy* May 1998.
- Guardian (1996) Tony Blair's speech to the Keidanren, Tokyo in *The Guardian* 5 January 1996.
- Haddock M and Hyner K (2000), *Changes in Planning and transport Policy and the need for Green Travel/Commuter Plans in the public and private sector* Paper presented to the RICS 'Cutting Edge' Conference London..
- Healey, P. (1997) *Collaborative Planning: Shaping Places in Fragmented Societies*, Basingstoke: Macmillan.
- Heart of England TEC (1999) see Prism (1999)
- Heart of England TEC (2000) see Prism (2000)
- Hutton, W. (1995) *The State We're In* London Jonathan Cape
- Jones, A (1998) Local Economics and Business Networks revisited: a case study of business and professional services in London. *Local Economy* vol 13 no. 3 p151 – 165
- Levitas, R. (1999) *The Inclusive Society? Social Exclusion and New Labour* London Macmillan
- Lichfield, N (1996) *Community Impact Evaluation* London. UCL Press
- Lowndes V, Nanton. P, McCabe. A, Skelcher, C. (1997) Networks, Partnerships and Urban Regeneration. *Local Economy* Feb. 1997 p333-342
- MacKintosh. M, (1992) Partnership: Issues of policy and negotiation. *Local Economy* vol7 no. 3 p210 – 224.
- Milton Park Ltd. (1996) Development Strategy for Milton Park. Milton Park. Milton Park Ltd.
- Milton Park Ltd. (1996) *Park life – News and Views from Milton Park*. Milton park. Milton Park Ltd.
- Milton Park Ltd (1998) *Milton Park Census* Milton Park: Milton Park Ltd.
- Milton Park Ltd (1999) *Milton Park Census* Milton Park: Milton Park Ltd.

Oxfordshire County Council (1996) *Oxfordshire Structure Plan 2011*. Deposit draft. Oxford. Oxfordshire County Council Environmental Services.

Oxfordshire County Council (1999) *Economic Development Strategy 1999/2000*
Oxford Oxfordshire County Council

Oxfordshire Economic Partnership (1999) *An Economic Vision for Oxfordshire*
Oxford.

Peck, J and Tickell, A (1994) Too many partners...the future of regeneration partnerships in *Local Economy* vol 9 no.3 p251-265.

Powell, W. (1991) Neither Market or Hierarchy Network Forms of Organization in G Thompson, F J Levacic and J Mitchel (eds) *Markets, Hierarchy and Networks: the co-ordination of social life* London. Sage

Porter, M. (1990) *The Competitive Advantage of Nations* London Macmillan

Prism Research Ltd (1999) *Oxfordshire Business Survey 1998* Telford Prism Research

Prism Research Ltd (2000) *Oxfordshire Business Survey 1999* Telford Prism Research

Ratcliffe, J. and Stubbs, M., (1996) *Urban Planning and Real Estate Development*
London. UCL Press

Tym, R., (1992) *Conley Redevelopment – Economic effects* London. Roger Tym and Partners

Urban Task Force (1999) *Towards an Urban Renaissance: Final report of the Urban Task Force*. London. E&FN Spon.

Walker H (1998) *Property Professionals and Sustainable Development* Paper presented to the RICS 'Cutting Edge' Conference, Leicester.

Young D (2000) *Talk to OEP Conference on Economic Futures*. Abingdon Heart of England TEC

