

Land Use Management Issues of the Urban Fringe in the UK

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It is difficult to define the urban fringe using a specific geographical designation in the physical planning system because the existence of the urban fringe is certainly not equal in all directions from the inner urban area to the rural area, and is often a discontinuous spatial phenomenon from the inner fringe to the urban shadow. Nevertheless, the urban fringe raises land use management issues which stem from its own peculiar set of land use characteristics. For example, in the UK, how the public can enjoy access to the countryside in the urban fringe while at the same time recognising and acknowledging the importance of landowners and farmers property rights? how can a poor quality environment and degraded landscape be improved aesthetically and physically to meet the multiple recreational needs of a diverse population when local authorities are confronted with limited ability to fund and acquire land for these purposes? The challenge of addressing these land use management issues necessitates approaches which build a coalition of interest groups and public and non-government organizations in the management processes in order to improve the physical, economic and social environments and facilitate the management mechanism.

Key words : Land Use Management, Green Belt, Property Rights, Urban Fringe

1. Introduction

The urban fringe is not a new phenomenon in the planning field. For example, 'fringe', 'countryside around towns', 'city's countryside', 'inner fringe', 'rural-urban fringe', 'peri-urban fringe' and 'exurban fringe' have all been terms employed to describe the urban fringe^{1~4}). Furthermore, numerous studies have documented the amount and rate of urban fringe land conversion and examined and explored the pattern and process of urbanisation into the urban fringe^{5~7}). However, the urban fringe concept is a comparatively untouched area of research, and land use management issues in the urban fringe have largely remained unconsidered because it is difficult to define the urban fringe using a specific geographical designation in the physical planning system and the urban fringe is the geographical manifestation of socio-economic and physical reflexive links between urban and rural areas.

Hence, this paper attempts to identify the land use management issues in the urban fringe by exploring various land use characteristics of the urban fringe in the UK. Four sections are included in this paper. After the introduction, the following section presents various definitions of the urban fringe from different perspectives. Section three analyses land use characteristics of the urban fringe and identifies land use management issues related to it in the UK. The final section provides a summary of the analyses.

2. Definitions of the Urban Fringe

The relationship between the urban area and the urban fringe has been illustrated from the point of view of economists, political philosophers, engineers and architects^{8,9}). For economists and political philosophers, the urban fringe has been considered the place for ensuring and maintaining efficient production of essential resources for towns, and providing a fair distribution of the facilities essential for the growth

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of towns. For example, Ebenezer Howard, famous for his development of the idea of the Social City, envisaged the urban fringe as a functional part of the social city, containing hospitals and sports facilities, and also acting as a provider of agricultural produce. Similarly, Firey¹⁰⁾ maintained that certain land uses such as cemeteries, auto-wrecking yards and stock yards were naturally attracted to the urban fringe because of their large spatial requirements and functions.

Conversely, for engineers and architects the urban fringe has played a more subservient role to the town and city in order to achieve utopian dreams of urban form as a town hinterland following the ideas of Osborn and More^{11,12)}. It has been regarded as a buffer zone in a physical land use planning system to prevent the pollution of residential neighbourhoods by dirty industry and to limit further urban development location through specific strategic regulation such as a green belt policy¹²⁾. Considerable geographical research has been directed at trying to map and understand the pattern and process of urbanisation between urban areas and the urban fringe^{5,6,13)}. Tang and Batey¹⁴⁾ focussed on the transformation of the urban fringe landscape associated with housing development around Liverpool in the UK, and Garreau¹⁵⁾ explored the changing form of urban sprawl based on farm land conversion to urbanisation.

Geographic delimitations of the urban fringe in the physical planning system have also been proposed: for example, the Greater London Regional Planning Committee (GLRPC) envisaged a 40 km radius of central London; Abercrombie¹⁶⁾ indicated a 8-15 km zone encircling London; Munton¹⁷⁾ proposed a zone of 10-16 km beyond the city; and Thomas¹⁸⁾ also suggested 16km. However, these statutory designations in accordance with so-called Green Belt designation may not equate to the geographical extent of the urban fringe all the time. The difficulty of, and inadequacy in defining the urban fringe with regard to a specific geographical designation in the physical planning system is best illustrated in Bryant et al.'s model²⁾, which shows a continuum between urban area and rural hinterland.

The key to understanding Bryant et al.'s

model is the recognition that the urban fringe is a zone of transition between rural and urban land use dominated by urban activity. What today may be urban fringe, may tomorrow be entering its final phases as an urban area. More importantly, as a zone of transition the land use characteristics of the urban fringe do not occur at the fringe of the inner city but at the edge of smaller towns around the inner city¹⁹⁾. Accordingly, it is difficult or inadequate to define the urban fringe using a specific geographical designation because the urban fringe is certainly not equal in all directions from the inner urban area, and is often a discontinuous spatial phenomenon from the inner fringe to the urban shadow. Furthermore, although the urban fringe and urban areas are integral parts of the same social and economic systems, the urban fringe is neither truly town nor truly country.

Since it is difficult or inadequate to define the urban fringe using a specific geographical designation, what therefore do we understand by the term urban fringe? What happens in the urban fringe? To answer these questions, the next section analyses the land use characteristics of the urban fringe and identifies land management issues related to it in the UK.

3. Land Use Characteristics of the Urban Fringe

3.1. Agriculture

Although the natural environment consists of many different ecosystems, agricultural land probably represents the most basic important land use within the urban fringe. For example, in the UK over 60% of all the land in Hertfordshire (62%), Buckinghamshire (66%), Essex (64%) and Kent (65%), the counties in the old metropolitan green belt, is agricultural land^{notes1)}. However, agricultural activities in the urban fringe can be distinguished from agricultural activities in more rural countryside areas.

One point of difference is the loss of farmland and increasing part-time farming in the urban fringe due to urbanisation. Urbanisation associated with a growing market of non-farm job opportunities has led to agricultural workers moving away from farm employment into urban

employment and an increasingly significant increase in part-time farmers. For example, the number of full-time farmers in the South-East region fell by 2,581 from 13,351 in 1987 to 10,770 in 1997. This represented a decline of almost 20% over the period 1987-1997. Likewise the number of part-time farmers increased by nearly 8% to 8,555 in this decade. During the same period there was also a 14.5% decline in full-time farmers in the East Midlands region and a 13% decline in Yorkshire and the Humber region. However, conversely, in the same period there was a 16% increase in part-time farmers in the East Midlands region and a 7% increase in Yorkshire and the Humber region^{20,21)}.

Part-time farmers play a role in enhancing the social and cultural life of the community. For example, the Arkleton Trust²²⁾ contended that part-time farming activities brought entrepreneurship and leadership to such areas and helped to diversify their economies. Barbic²³⁾ also claimed that part-time farming could act as a point of contact between farmers and urban workers, between the city and the rural countryside. Furthermore, when there has been concern about the environmental impacts associated with farm enlargement, and the environmental impacts become increasingly apparent, part-time farming is felt to be more compatible with the goal of preserving the rural environment. Munton et al.²⁴⁾ stated that the rural landscape would be better safeguarded by the presence of small part-time farms, than large highly productive and mechanised farms.

Notwithstanding, part-time farming has noticeably caused immobility in the land market because part-time farmers, expecting a high land value in the future, abandon their lands with a view to obtaining development permission more easily, knowing that urbanisation produces a demand for land for urban development of various kinds. Of note, abandoned farmlands can be considered to increase the demand for housing from incomers and to conflict with the restricted supply arising out of the implementation of stricter planning regulation added to previous regulations, such as Green Belt policy²⁵⁾. For example, in the mid-1980s southern England, particularly Kent and Essex, was faced with a rising demand for housing from in-

coming commuters. By placing strict controls upon rural development in the urban fringe, the planning permission system made a house in the urban fringe a most desirable commodity with a premium value. This accelerated the abandonment of agricultural land by some agricultural land holders who adopted a farming to quit attitude, producing a neglected landscape of overgrown fields, unmanaged hedges and woodland^{11,26)}. Hall and Ward²⁷⁾ pointed out that although its value would increase a hundredfold when anyone could obtain planning permission to develop it, agricultural land was at present not worth that much. Existing urban fringe properties thus become expensive and exclusive commodities, far beyond the reach of those on lower incomes.

Furthermore, there is no progressive regulation to encourage agricultural land holders to use and manage their land properly, rather the expectation of future speculative gain promotes the neglect of land because land speculation involving agricultural land is an activity open to anyone with sufficient capital and willingness to assume risk, especially part-time farmers in the hope that they will eventually receive planning permission for development on their abandoned farmland. Davidson and Wibberley²⁸⁾ indicated that once land is acquired for speculative purposes there is little incentive to farm well.

As a result, land speculation and agricultural land holders changed attitude to their stewardship of the land have led to abandoned farmland as a continuous phenomenon in the UK. Consequently, land use management issues arise, namely, how the attitude of private landowners, including agricultural land holders, can be changed from one of lack of care and attention to neglected landscape, overgrown fields, and unmanaged hedges and woodland to productive stewardship of the land and environmental concern.

3.2. Mineral Extraction

The use of mineral products takes many forms, from the aggregates and limestone used in urban oriented-infrastructure construction and cement manufacture, to energy minerals such as coal and gas, and to minerals such as silica sand and anhydrite which are key constituents in a range of chemical and manufacturing pro-

cesses. Most of the profitable areas for extraction are located in the urban fringe because the primary criterion for locating mineral extraction activities here was the cheapness of meeting national and international supply. For example, with regard to energy materials there were 18 pits in Caerphilly County Borough (the former Borough of Islwyn) and 66 pits in the Rhondda Valley²⁹⁾ near Cardiff in the 1920s. Major sand and gravel deposits lie in the urban fringe around London, mainly in Hertfordshire, Essex and Buckinghamshire, and Cheshire, Lancashire and Merseyside around Manchester produce approximately 50% of England's silica sand production (around 1.6 million tonnes)³⁰⁾.

However, mineral sites raise important environmental issues as they create a poor quality environment and degraded landscape due to degraded land, or vacant land resulting from mineral extraction, necessitating subsequent site restoration. According to Bradshaw³¹⁾ and Harris et al.³²⁾, mineral extraction contributes to vacant land in the urban fringe as does abandoned farmland (See Table 1).

As Table 1 indicates, quarries tend to operate over long time scales and often the mine-

rals involved are of low value with insufficient overburden material to make good the original contours. Increasing awareness of environmental pollution and periodic collapses in market processes have led to the closure of mines and vacant land. Closed coal pits around Cardiff are good examples. Old industrial land becomes wasteland after closure due to a changing cultural and competitive economic environment. Closed steel industrial lands around Sheffield and the Effra site in London are further examples. Although the Effra site, previously occupied by Vauxhall Gas Works and since 1953 used for vehicle parking, is just under 3 hectares, it is contaminated with sulphate and sulphide and complex cyanides due to the nature of the previous use of the site³³⁾.

In addition, the inappropriate use of reclaimed landfill sites can cause or reveal problems such as little or no cover materials, toxic leachate and even the generation of landfill gas. For example, Merthyr Tydfil Magistrates Court witnessed a pollution case brought against the owners of one of Wales's largest landfill sites because it was claimed a public rugby ground had to be cordoned off after a brown smelly liquid from the Trecatti landfill site ran onto

Table 1. Seven Classifications of Land Usage Likely Leading to Vacant Land in the Urban Fringe

Classification	Description
Farmland	Bought for development and not yet used.
Quarries	Often the minerals involved are of low value, and there is insufficient overburden material to make good the original contours.
Strip or Open-cast Mines	Open-cast mining is really another form of quarrying, but in many cases carried out over a short time period. The principal mineral excavated in this way is coal, but many others such as bauxite and clay are mined in this fashion. Essentially a large area of soil is removed, followed by the subsoil and overburden, exposing the mineral layers.
Waste Tips (Landfill)	The land where materials such as colliery spoil and household refuse have been deposited on the nearest convenient site to the point of origin.
Old Industrial and Housing Land	Industrial change is an inevitable part of our society; housing also has to be renewed. The sites used were originally in the middle of cities but now even modern factories set up in the urban fringe are becoming obsolete and creating a waste land.
Uncontrolled Recreation Land	Many a pleasing, gently undulating landscape has been transformed into unstable mud runs by uncontrolled use of cross-county motorcycle, and damage to upland vegetation as on the Pennine Way.
Miscellaneous	Towns and cities have many operations to service them, for example, sewage works, railways and gasworks. Many become obsolete with new technology and changing usage thereby creating more waste land.

Source: Derived from Bradshaw, 1987; Harris et al., 1996

the field³⁴). Greegairs villagers in Scotland are battling to stop their homes being blighted by another giant refuse dump since chemicals have leached from existing landfill sites, dust and dirt from the mines cause health problems and increased lorry traffic on narrow roads is both dangerous and a source of environmental pollution³⁵).

However, the existing amount of vacant land offers an important resource in terms of creating new environments, especially for recreational purposes. For example, the Taff Bargoed project supports the transformation of three former colliery sites into a leisure, recreation and nature conservation park, including the development of a major Recreation Centre which incorporates the new Welsh International Climbing Wall^{36,37}). Nevertheless, not all mineral extraction areas have an after-care scheme in the form of a reclamation programme. Conditions for after-care schemes are negotiated subsequent to a permission rather than concluded with a specific after-use in mind¹¹). Noticeably, many mineral extraction areas which received planning permission before the Town and Country Planning Act 1947 did not contain conditions preventing the land from becoming derelict when the existing use ceased. There was also no comprehensive legislation aimed at preventing vacant land and little attention was given to sites where pollution or damage was of historic origin, until the advent of the Environmental Act 1995, which is not yet fully in force in the UK. Likewise, with regard to vacant land there is a lack of consensus of approach at international, European and national levels of government³³).

Moreover, although reclamation programmes maintain a positive continuous negotiation with property developers, financiers, landowners and local people, there is no substitute for local experience in respect of judging the impact of vacant land on a locality, what local demands are in terms of usage of new land, for example, for development, and what needs for new amenities should be satisfied. Furthermore, a lack of financial resources for restoration and improvement and accurate data on what proportion of the urban fringe suffers from damage and dereliction hinders the achievement of

positive management improvements.

3.3. Recreation

The urban fringe has an important role to play in providing recreational activities and opportunities. For example, Gold³⁸) found open space in the urban fringe provided a place where people could experience freedom, diversity, self-expression, challenge or enrichment in his research on the relationship between outdoor recreation and open space and human biological and psychological needs. Abercrombie¹⁶) stated that the urban fringe served the purpose of not only providing a variety of outdoor pursuits but also was a means of linking the city with the countryside so that all sections of the population could benefit. Similarly, Bryant et al.²) indicated that recreation in the urban fringe embraced a considerably wide range of outdoor activities which took place in a wide variety of environments and social settings. In addition, the wide spectrum of activities and environments offered a never-ending source of inspiration and pleasure for people of all ages on account of the huge variety of recreational opportunities provided, ranging from peaceful walks and picnics to challenging pursuits like mountaineering and organised space extensive sports³⁹).

Why, however, has the urban fringe come to play such a significant role in recreational activities and opportunities? First, the upswing in urban fringe recreation has been viewed as resulting partially from a failure to meet changing demands for recreation within cities. Rather than recognising and meeting the multiplicity of recreational demands, local authorities have often adopted a standard approach to recreational provision based on the National Playing Fields Association (NPPA) standard with its heavy emphasis on organised sport in the urban area. In addition, the Sports Council (the former Advisory Sports Council) has contributed substantially to local authorities sports facilities⁴⁰). However, in many cases, the NPFAs minimum standard of provision has not been met in inner cities because of local authorities limited ability to fund and acquire land for these purposes.

Second, while demand for outdoor recreation has been expanding apace, the modern environ-

mental movement has also been gaining momentum because the capacity of certain popular sites in the rural countryside to sustain increasing numbers of visitors is limited and wildlife and physical resources are being damaged as a result⁴¹⁾. Of note, the main way in which the former Countryside Commission (now the Countryside Agency^{notes2)}) came to influence outdoor recreation demand outside the national parks was through a spatial policy of provision focused on particular sites in the urban fringe. The Countryside Park, Picnic Sites and to a lesser extent the Regional Park became the main instruments. Particularly, Countryside Parks make it easier for town-dwellers to enjoy the open countryside, without having to travel far and adding to existing congestion on the roads. Moreover, they ease the pressures in more remote and solitary places, and reduce the risk of aesthetic and physical damage to the rural countryside. However, although Countryside Parks have been designed to deflect recreational pressure away from National Parks by providing alternative attractions these sites are used less because people do not know where they are and they are less attractive than the wider countryside.

However, public informal recreational activities also have major impacts on the activities of agricultural communities in the urban fringe^{42~46)}. For example, Sheep worried by marauding dogs, crops trampled underfoot, farm vehicles and equipment damaged or stolen, field boundaries torn down, arsonists setting fire to woodland and buildings, poaching, burnt-out cars abandoned by joy-riders, fly-tipping and illegal traveller camps are just some of the pressures on the urban fringe, which make efficient economic land use and rural life in general difficult - and sometimes impossible - to sustain⁴⁷⁾. These acts do not mean that the public in general like sneaking around committing acts which break the law. Anybody setting foot on land where no legal right of way exists and where no special provision provides for access is a law-breaker. So why, do conflicts between farmers and the public continue to occur in the urban fringe?

Coalter et al.⁴⁰⁾ contended that county authorities have never regarded recreational provision and access to the farmed and settled coun-

tryside as a priority in their structure plans, preferring a discretionary approach. Bonyhady⁴⁸⁾ argued that de facto access rights are likely a means of ameliorating the public's lack of expressed rights because the public's access rights in common law are clearly only few. However, underlying the causes of conflict between farmers and the public in the urban fringe are differences in attitude to property rights. Landowners, particularly farmers, are understandably anxious to retain their property rights because their ownership of their land is, in their view, validated by the amount of labour entailed in maintaining its productivity, often throughout many generations. They are often unable to separate their land from the meaning they attach to their lives²⁶⁾. Moreover, in the UK, private property rights are free standing of any outside interference and thus owners are free to engage in any activities they choose on their land. As a result, landowners can use reasonable force to eject trespassers who decline to leave, sue them for damages and even secure court injunctions against persistent transgressors, which then expose the latter to the risk of imprisonment. The importance landowners attach to their property rights is illustrated in the following two examples. At a farm near Liverpool a video camera has been installed to protect buildings and land and, at another, security guards are employed at harvest time to prevent theft and sabotage of machinery⁴⁹⁾.

In contrast, the public view land primarily as an amenity to be protected for its recreational or inherent value, a beautiful place to be rightfully enjoyed by all citizens. Their idea of the countryside is fairly modern, unashamedly urban and stems from an urban romanticism about the countryside. It is different from the practical concept of land and the way in which a person, who has been attached to it for the whole of his/her life, looks upon it, namely, as a source of income and nuisance⁵⁰⁾. Nevertheless, as consumers if not producers of its goods and services, the public's legal rights to a social interest in the land, including access to open countryside, is dependent on the changing character of the socio-political system which regulates this⁵¹⁾. Moreover, any claim for

public access to private land is construed by landowners as an encroachment on their libertarian freedom, only to be secured in the UK under a voluntary arrangement of public access to it and compensation for any loss this access may give rise to. As a result, there is a fundamental land use management dilemma in respect of how the public can, on the one hand, enjoy access to the countryside in the urban fringe while at the same time recognising and acknowledging the importance of landowners and farmers property rights.

4. Conclusions

It is almost impossible to define the urban fringe spatially in any physical planning system. The existence of the urban fringe is certainly not equal in all directions from the inner urban area, and is often a discontinuous spatial phenomenon from the inner fringe to the urban shadow. Nevertheless, the best approach to understanding the urban fringe is the geographical manifestation of socio-economic and physical reflexive links between urban and rural areas. Furthermore, the urban fringe should be recognised as a particular and unique area with its own peculiar set of land use characteristics.

First, agriculture lies at the centre of the urban fringe by means of a well-tended agricultural landscape. Significantly, part-time farmers play a role in enhancing the social and cultural life of the community, and part-time farming is also felt to be compatible with the goal of preserving the rural environment. Second, most of the profitable areas for mineral extraction are located in the urban fringe and mineral extraction creates employment and is vital to the prosperity of a region. Finally, the urban fringe has an important role to play in providing recreational activities and opportunities. Recreation in the urban fringe can provide a never-ending source of inspiration and pleasure for people of all ages through the huge variety of recreational opportunities it offers.

Notwithstanding, the urban fringe also raises land use management issues which stem from its own peculiar set of land use characteristics. The primary land use management issue is how the public can enjoy access to the countryside in the urban fringe while at the same

time recognising and acknowledging the importance of landowners and farmers property rights? Second, how can a poor quality environment and degraded landscape as a result of mineral extraction and lack of comprehensive legislation be improved aesthetically and physically as well as integrated into the surrounding urban fringe to meet the multiple recreational needs of a diverse population when local authorities are confronted with limited ability to fund and acquire land for these purposes? A final issue is how can the attitude of private landowners be changed from lack of care and attention to neglected landscape, overgrown fields, and unmanaged hedges and woodland to productive stewardship of the land and environmental concern as well as consideration of the multiple recreational needs of local people?

Consequently, the challenge of addressing land use management issues necessitates approaches which build a coalition of interest groups and public and non-government organisations in the management processes in order to improve the physical, economic and social environments and facilitate the management mechanism.

Notes 1) Without doubt agriculture remains easily the single large user of land in the urban fringe, but establishing the exact proportion of land in agricultural use presents difficulties in the absence of statistical sources for the urban fringe itself. As a result, these calculations are based on the Digest of Agricultural Census Statistics⁵²⁾.

Notes 2) On 25 November 1998 it was announced that the body to be formed from the merger of the Countryside Commission with the Rural Development Commission was to be called the Countryside Agency. The new agency began its life in April 1999⁵³⁾.

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