The role of participatory e-Planning in the new English Local Planning System

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1. Introduction

This paper focuses on the role of e-Planning and stakeholder participation in the new local planning system in England. The Planning and Compulsory Purchase Act 2004 introduced a new kind of planning at the local level called the Local Development Framework (LDF), a flexible portfolio of different documents (see Figure 1 below). These are referred to as Local Development Documents that can be tailored to the needs of a particular geographical area and can be easily updated. The new LDF system began in September 2004 and replaces the previously rigid system where all planning issues had to be addressed as part of a single development plan that often took many years to agree or amend.

Over recent years a range of tools have been developed by central and local government departments and agencies to tackle the issue of e-Government delivery within the planning sector. The Office of the Deputy Prime Minister (ODPM) commissioned a planning website monitoring survey in 2004 and 2005 as part of the government's Planning Delivery Grant programme and recently there have been a number of papers examining local government service improvement and e-Government effectiveness (Beynon-Davies and Martin, 2004) but non have specifically addressed the e-Planning agenda. Research which has focussed specifically on e-Planning (Morphet, 2004) has only provided an over-view of the relationship between citizens and planning processes within a performance management regime. There is currently a scarcity of critical analysis of e-Planning development and implementation.

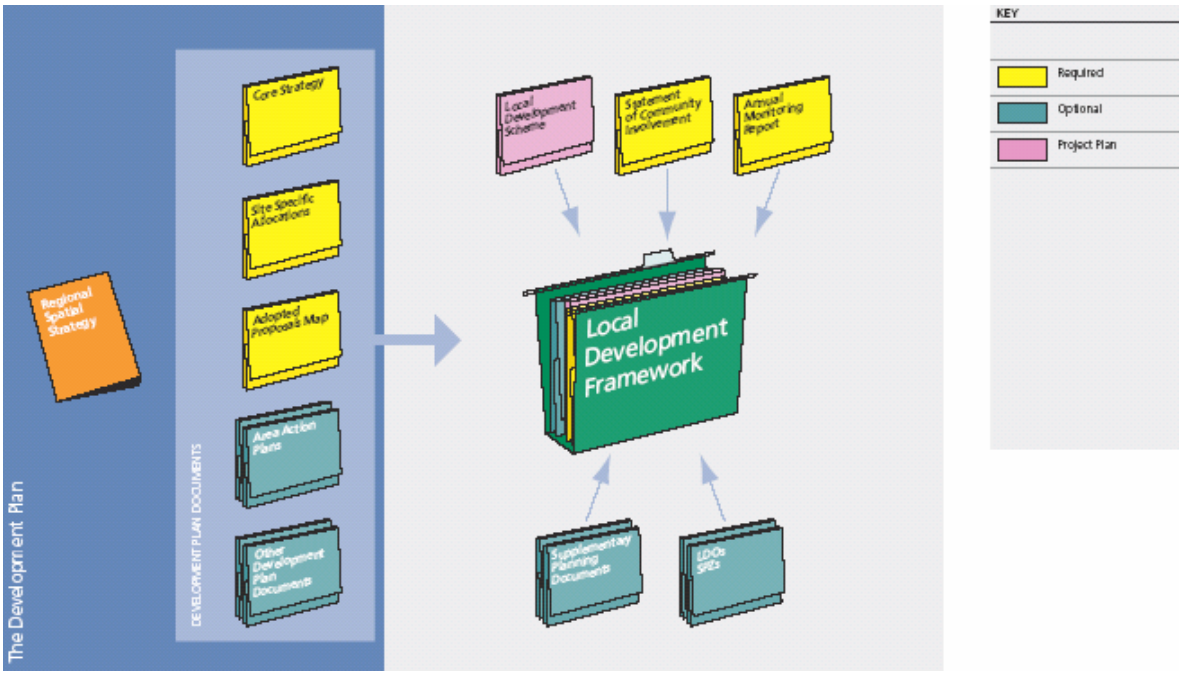
This paper will examine the tensions between government rhetoric suggesting that e-Planning can assist public participation through *"the potential use of geographical information systems for offering interactive access to information"* (ODPM, 2004a, p.138) while evidence from the current LDF plan making process does not appear to bear this out. This is despite the fact that government have been developing a system to allow more interactive participation *"which will allow representations to be made, stored and managed via the internet"* (ODPM, 2004b, p.72) with the intention that *"this service will enable the authority to manage the participation/consultation process from the initial stages in the preparation of a development plan document through to the examination"* (ibid.) in a public inquiry. Ahead of exploring the details of e-Planning the next section provides an overview of the new planning system. That is followed by a discussion on the role of e-Government in relation to LDFs and its influence on public participation. The

penultimate section of the paper examines how information and communication technology tools can be used to assist a collaborative approach to public participation in LDF preparation.

2. Overview of stakeholder participation in the local planning system

Following their 1997 election victory, the 1998 document, 'Modernising Planning' had examined the practice of planning but suggested only incremental changes, including improved stakeholder engagement in regional policy, more prescriptive central government guidance on large scale projects and faster development plan creation. Beyond this, there was much concern about projected housing needs and the requirement to utilise brownfield land more efficiently but the tools and procedures by which planning would meet those needs remained unchanged during the first term on the Labour administration (Allmendinger and Tewdwr-Jones, 2000).

Figure 1: The Local Development Framework



Source: ODPM, 2004b, p.2

That changed in December 2001 with the publication of the Planning Green Paper: *Planning: Delivering a Fundamental Change* (DTLR, 2001) and began a process of comprehensive reform, culminating in the Planning and Compulsory Purchase Act 2004, that would encompass all areas and all spatial scales of the British planning system. The justification given for this change was that the existing planning system was complex, remote, hard to understand, difficult to engage with (particularly for local communities), slow and unpredictable and *'not customer friendly'* (DTLR, 2001, 2.2-2.7). Enhancing stakeholder involvement and enhanced linkages with the parallel development of community strategies are at the heart of the reforms and the new LDF process. Planning Policy Statement 12

(PPS12) thus provides guidance on stakeholder engagement aspects of LDF preparation that is considerably more extensive than previously found in PPG12. PPS12 views engagement as *'essential to achieve local ownership and legitimacy for the policies that will shape the future distribution of land uses and development in an authority's area'* (ODPM, 2004b, p.8).

2.1 Statement of Community Involvement

Local planning authorities continue to involve stakeholders throughout the process of preparing local development documents and should tailor the techniques to engage the appropriate parts of the community at the various stages. New requirements for the preparation, and subsequent testing of soundness via the Planning Inspectorate, of a Statement of Community involvement (SCI) have been introduced as part of these new plan-preparation procedures (see Figure 2 below). Although there remains flexibility in terms of the precise techniques to be used in engaging stakeholders, local authorities are expected to have regard to six key principles set out in PPS12 (ODPM, 2004b, p.8) when organising involvement:

- community involvement that is appropriate to the level of planning - arrangements need to be built on a clear understanding of the needs of the community and to be fit for purpose;
- front loading of involvement - there should be opportunities for early community involvement and a sense of ownership of local policy decisions;
- using methods of involvement which are relevant to the communities concerned;
- clearly articulated opportunities for continuing involvement as part of a continuous programme, not a one-off event;
- transparency and accessibility; and
- planning for involvement - community involvement should be planned into the process for the preparation and revision of local development documents.

The standards to be achieved by the local authority in involving stakeholders is to be set out in the SCI, to be developed and published as part of the plan creation process. The statement is intended to be a clear public statement enabling the community to know how and when they will be involved in the preparation of local development documents and how they will be consulted on planning applications. Figure 2, taken from PPS12, outlines the detailed procedure for the creation of a Statement of Community Involvement.

The guidance expects stakeholders to be involved in drafting the SCI. Such community involvement at the draft stage allows them to influence the scope and form of community involvement that the Local Planning Authority (LPA) intends should take place when local development documents are prepared. The LPA should then publish the draft SCI and invite representations over a period of six weeks. Local planning authorities should then prepare the finalised SCI and submit it to independent examination. Once completed, the SCI becomes a binding commitment as to how the LPA intends to involve stakeholders in the development of subsequent documents (ODPM, 2004b). The SCI should explain how its vision of community involvement in the LDF process links with other community involvement initiatives, for example, the community strategy. It should identify the

community groups that need to be involved and the techniques required to effectively involve them both informally and formally. The SCI should also demonstrate how the process of involvement can be resourced and managed effectively, and how the results will feed into the preparation of local development documents. It should also set out the various points at which the LPA will involve the community in preparing local development documents (ODPM, 2004b).

Figure 2: the SCI preparation process

(ODPM, 2004b, p.17)

Given the recent nature of the reforms outlined above, other than occasional short articles in the Planning press or professional journals (e.g. Morris, 2006), there is as yet very little in the way of academic or research based sources relating to the encouragement of effective participation in the LDF process specifically. However, most of the previous research on participation in development plan preparation under the 'old' system (Bishop, 2001) remain equally applicable to the reformed system. Key points and principles of good participation include the following:

- **emphasis on overall process** – the plan of action should be made clear at the outset
- **inclusiveness** – try to involve everyone in the area including hard to reach groups
- **diversity of methods** – don't rely on one method and choose one suitable to the goals
- **integration into management** – participation should not be an aside, add-on or diversion, but a central part of how the plan is produced
- **define and manage the scope** – offering a blank sheet is almost insulting since, whatever one thinks, limits exist

- **links from other consultation** - avoid duplicating effort and therefore participant fatigue
- **link to democratic processes**- a process should develop collaboratively with the elected members
- **in-house support** – i.e. work aimed at explicitly informing and engaging all other authority departments
- **avoid 'decide-announce-defend'** – i.e. participation events where the decision is already determined and the response to calls for a different response is primarily defensive
- **consensus-based** – aim towards agreement and consensus, even if often unachievable in idealist terms
- **breadth and depth** – overall approach might draw from stakeholder work in depth, but should also be informed my the breadth of the wide community
- **information** – information should be commonly agreed amongst key consultees an made proactively to as many as possible.
- **appropriate resources** – the level of activity that follows should be consistent with the available resource and informal monitoring should be done to assess the value of the work undertaken
- **skills base** – make sure that the team has the necessary skills

The time taken by the participatory process can have a bearing on the level of involvement through both consultation fatigue and the sense that nothing is happening. The planning system since its origins in 1947 has continually suffered criticism over the length of its plan-preparations processes. This is also evident in other parts of the UK where different forms of forward planning (to that of the LDF) are emerging. For example, one of the findings of a major review of the local plan process in Scotland, published by Scottish Executive Social Research in 2005, suggests that the process *'is too long to allow people to feel any sense that their input had a meaningful impact.'* (PPS Local and Regional Ltd., 2005, p36). This report goes on to suggest that local plan preparation should become a two-stage process. Under this proposal, the first stage would involve looking at citizen's general aspirations and requirements for the future via Planning for Real®[1] type approaches followed by the second stage involving consultation on a draft plan or series of plans.

Continuing in the same spirit, the report argues that there should be full and early reporting on the way in which local views have been incorporated into the revised plan. The difficult balancing act required between speed of process and full involvement is acknowledged:

> *'Consultation should be completed within a period short enough for those consulted to feel that the decisions emerging at the end remain relevant to the comments they made. However the period of time during which views are actively sought must be long enough to allow potential consultees to reach sensible conclusions.'* (PPS Local and Regional Ltd., 2005, p45)

[1] PfR is a whole process of community consultation. It begins with contacting the local community networks and reaches a conclusion with the formation of an Action Plan for taking forward the decisions made during the process.. It often makes use of large scale physical models. See http://www.nif.co.uk/ for further details.

The Report also recommends that better and more accessible information about how the planning process works should be provided.

2.2 Typologies of Participation

Leach and Wingfield (1999) categorise various methods of participation into four main types:

- essentially traditional – e.g. public meetings; consultation documents; question and answer sessions;
- customer oriented – e.g. opinion polls and questionnaires;
- new innovative methods that are designed to consult citizens on issues – e.g. interactive websites, citizens' panels, focus groups; and
- new innovative methods that encourage greater citizen deliberation over issues – e.g. citizens' juries, community plans, issue forums.

Petts and Leach (2001) take this further, identifying a wide range of potential participation methods in environmental decision-making, categorised into four different levels and three types of participation (Figure 3): **traditional (T); innovative consultative (IC); and innovative deliberative (ID)**. They also set out their own criteria in relation to the choice, design implementation and evaluation of public participation methods.

Figure 3: Typology of Potential Methods of Stakeholder Consultation

Level one: education and information provision ➢ leaflets/brochures (T) ➢ newsletters (T) ➢ unstaffed exhibits/displays (T) ➢ advertising (T) ➢ local newspapers (T) ➢ national newspapers (T) ➢ videos (IC) ➢ site visits (T)	Level two: information feedback ➢ staffed exhibits/displays (T) ➢ telephone help lines (T) ➢ **internet** (IC) ➢ **teleconferencing** (IC) ➢ public meetings (T) ➢ surveys, interviews and questionnaires (T) ➢ deliberative polls (IC)
Level three: involvement and consultation ➢ workshops (IC) ➢ focus groups/forums (IC) ➢ open-house (IC) ➢ **open-house (on the internet)** (IC)	Level four: extended involvement ➢ community advisory committees/liaison groups (ID) ➢ planning for real (ID) ➢ citizens' juries (ID) ➢ consensus conference visioning (ID) ➢ **visioning on the internet** (ID)

(Source: Petts and Leach, 2001)

The conclusion of the Petts and Leach's work (ibid) is that public meetings run on traditional lines will meet few of their criteria and that an integrated participation process combining traditional methods of information provision and consultation with extended participation, including community advisory committees or discussion meetings, would best do so. It is salutary, therefore, to learn that there is little evidence from current experience of participatory exercises in land-use and spatial planning that suggest much innovation is occurring. The TCPA study into stakeholder involvement in regional planning (Baker et al, 2003) discovered little in the way of innovative practice, certainly beyond the earliest (pre-submission) stages. Whatever method is chosen, Involve note that

> *'much current participatory practice still relies heavily upon the skills and commitment of the participants to ensure the process and outcomes are effective. Participation often involves the sorts of interactive meetings which can be alien and intimidating to people unaccustomed to such environments.'*
>
> Involve, 2005, p.25.

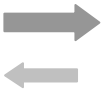
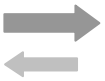
Petts and Leach's (2001) work referred to earlier also provides some suggestions of knowledge and practice gaps which still have relevance in the current LDF context. They consider there is a need to gain a greater understanding of:

- the public's criteria for effective participation;
- the reasons why the majority of the public do not participate;
- the impact of other sources of knowledge (including actions of activist groups operating outside the organised participatory process);
- the problems which can be created by multiple (unrelated) participatory activities by different organisations;
- the experience of proactively seeking to involve difficult to access groups;
- how to integrate assessment with participation processes;
- public participation fatigue and how to prevent it; and
- the effectiveness of the use of the **internet** for interactive participation.

Work by the OECD (2001) examined the types of public involvement in government decision-making which they defined on five levels of increasing interactions as outlined in Figure 4 below. In far too many cases citizens' interaction with public bodies tends to be focused on types 1 and 2 in the table. In a later section of the paper it is argues that e-Planning has the potential to move interaction into types 3, 4 and 5. Tools have been developed to provide opportunities for citizens to become fully engage in the LDF process under types 3-5.

Figure 4: OECD Government to Citizen interaction

1. Information and transaction Government → Citizens	government informs citizens (one way process)
2. Consultation Government ⇄ Citizens	government consults with citizens (citizen's responses generally predetermined by government via multiple-choice, closed –

	question options)
3. Deliberative Involvement Government  Citizens	government engages citizens in consultation process (citizens encouraged to deliberate over issues prior to final response)
4. Government – led active participation Government  Citizens	government instigates consultation and retains decision-making powers
5. Citizen-led active participation Government  Citizens	citizens are actively engaged in decision-making processes, alongside government; citizen decisions become binding; citizens share ownership and responsibility over outcomes

Adapted from OECD, 2001.

Further work by the OECD (2003) focused upon the unprecedented degree of interactivity offered by ITCs which has the potential to expand the scope, breadth and depth of government consultations with citizens and other stakeholders during the policy making process. The main problems likely to be encountered include:

- **scale** – how can an individuals voice be heard, the main challenge is how to listen and respond appropriately to each contribution;
- **capacity** – how will citizens take on board potentially complex information and how will they distil this to form an opinion;
- **coherence** – an holistic view of the policy making cycle must be taken. The technology should support the process of informing, consulting, participating, analysing and providing feedback and evaluating. Inputs received at each stage of the policy making cycle must be made available appropriately at the other stages of the process;
- **evaluation** – with such rapid development of ITC tools it is necessary to keep a check on their benefits to stakeholders and government. Tools to assess what value added online engagement has, or has not brought about need to be developed and used;
- **commitment** – engaging citizens on-line raises many expectations that stakeholder views will be taken on board and used in the policy and decision making process. It is important that results from online participation can be shown to have been used within the process.

(Adapted from OECD, p. 17-18, 2003)

Stakeholder and community engagement has become a well-established and accepted component of the planning process and public policy more generally. Despite some continuing concerns over the potential for community participation and stakeholder involvement to cause delays in policy-development and decision-taking, such engagement

has become the norm and almost universally accepted as good practice. This shift has been reinforced by broader conceptual and ideological changes within the public policy arena as concepts of traditional 'government' have evolved into notions of 'governance' and 'third way' politics, has been embraced by the 'new' Labour Government from the late 1990s. The twin aims of enhanced participation and increased efficiency of service delivery lie at the heart of the Government's modernisation agenda of which e-Government and e-Planning philosophies are central features. Within the more theoretical debates of academic literature, notions of stakeholder theory, citizenship, community capacity building and, most directly associated with land use planning, *'collaborative planning in a stakeholder society'* (Healey, 1998, p.7) have become mainstream and are a significant influence on more recent policy-making processes and practice. The penultimate section of this paper will now go on to examine how information and communication technology (ICT) tools can be used to assist a collaborative approach to public participation in LDF preparation.

3. e-Government in the UK

It is recognised that there is burgeoning use of web-based approaches to stakeholder participation across the world. The use of ICT in participation tends to revolve around either the provision of information or consulting on policy development. In its round-up of the use of web-based approaches by Governments in OECD countries, OECD (2001) reported the use of ICT for feedback and consultation to be still in its infancy with only a few Governments beginning to experiment with on-line tools to actively engage citizens in policy-making. This is in contrast to a recent UK e-Government Bulletin (2005) citing the UK as a world leader in facilitating electronic participation amongst its citizens.

The European Union has made the development of a vibrant knowledge-based economy a key policy objective, and increasingly national and local governments worldwide are seeking to harness information and communication technologies to provide government services more effectively and for the benefit of their citizenry (Curwell et al, 2005). The potential exclusion of particular sectors of society from participating in web-based exercises due to a 'digital divide' in the population emerges in many studies. Delap (1998) discusses the possible exclusion of the poor, the elderly and the computer illiterate from participating in the Buckinghamshire electronic 'virtual' citizens' jury while experience from East Manchester (IntelCities, 2005) found that the provision of an EU funded wireless network and subsidised PCs helped raise Internet access above UK average levels. This was part of a wider research project aimed at identifying the 'implications for digital or electronic planning in terms of increasing the efficiency in e-urban planning and the need to develop digital methodologies for widening public participation' (Curwell et al, 2005, p.55).

In the United States the AmericaSpeaks (http://www.americaspeaks.org/) organisation, established just over 10 years, has recently embraced technology to engage citizens in large scale 'town meetings'. With a history of developing innovative deliberative tools they have become well known for conducting successful large scale public participation workshops, including the redevelopment of the World Trade Centre site in New York City with 4,300 participants. The tools they have developed give citizens an opportunity to have a strong voice in public decision making within the increasingly short timeframes required of decision makers. They have developed systems for interactive video-conferencing and on-line discussion forms for national as well as state-wide and local policy making. Many of the methods and tools they have developed could be applied to the LDF process.

3.1 e-Planning and Stakeholder Participation

The term e-Planning is no different to e-Government apart from it focuses specifically on the planning domain and on initiatives to help local authorities provide planning services online and make them accessible via the Internet through a web browser or e-mail. While the term e-Planning can encompass a broad range of functions here the focus is specifically on the use of e-Planning to assist and enhance participation in local planning. An understanding of some of the technology issues can be found in previous research by ODPM's New Horizons programme (James et al, 2004) although the high-speed at which the state of the art changes in this field of research, development and implementation means that many more innovative applications have been developed since that research was undertaken.

The UK government set a target for all planning authorities to ensure that 100% of their dealings with the public are capable of being undertaken electronically by the end of 2005. It has been the vision of the government, through ODPM to create

> *'A world class e-Planning Service* [that] *will deliver new, more efficient ways of enabling the community to engage in developing a shared vision for their local area, easier access to high quality, relevant, information and guidance and, streamlined processes for sharing and exchanging information amongst key players.'*
>
> (ODPM, 2004c, p.8)

Over recent years, a range of tools have been developed by central and local government departments and agencies (ODPM, 2004c) to tackle the issue of e-Government delivery within the planning sector and these are explained in more detail in section 4.

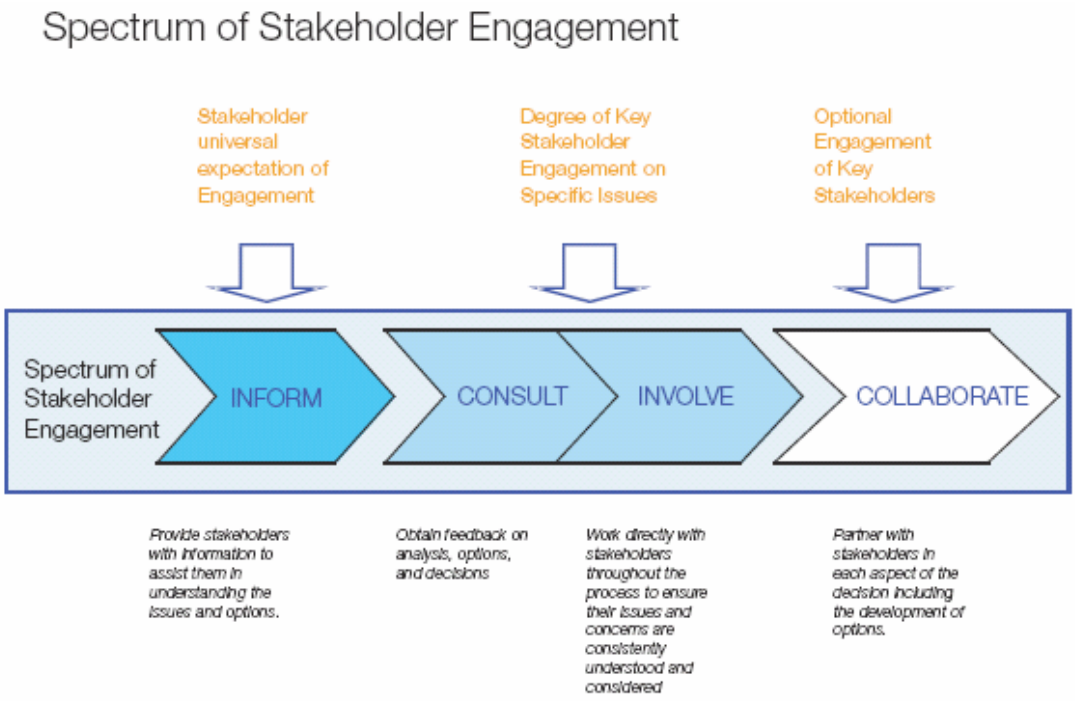
Much of the work that has been done so far has related to e-enabling many of the administrative process within planning. While this is a necessary task it has not yet led to a situation where e-Planning is being exploited to allow innovative use of participatory approaches to planning. While many individual local planning authorities are also developing specific projects and technologies to support their e-Planning efforts such as the well established Forth Valley GIS (http://www.forthvalleygis.gov.uk/) and the work by the London Borough of Wandsworth (http://www.wandsworth.gov.uk/planning/) there is still a lack of widespread use of innovative methods and techniques for stakeholder involvement.

More recently the ODPM commissioned a planning website monitoring survey in 2004 and a follow-up survey in 2005 which uses a range of indicators to measure current e-Planning successes know as the Pendleton scores (ODPM, 2005). While there is a plethora of research examining local government service improvement (Martin, 2005) and e-Government effectiveness (Beynon-Davies and Martin, 2004) non have specifically addressed the e-Planning agenda. Papers which have focussed specifically on e-Planning (Morphet, 2004) have only really provided an over-view of the relationship between citizens and the planning process within the government's performance management regime.

Although a stated aim of e-Planning is to find *'more efficient ways of enabling the community to engage in developing a shared vision for their local area'* (ODPM, 2004c, p.4), most effort so far has been in assisting local planning authorities to put documents on-line to enable greater access. The focus has been on streamlining the planning process and using e-Planning to obtain efficiency gains. The extent to which there has been a step change in the improvement of community engagement is less well understood. Indeed many of the methods and

techniques developed over recent years have not yet been taken on board by the planning community. In terms of e-Planning and stakeholder engagement although the e-Planning blueprint discusses a spectrum, much of what is actually taking place in terms of e-Planning practice is in the 'inform' and 'consult' category as shown in Figure 5. Methods for using e-Planning for truly collaborative engagement are still limited to a very limited number of examples. This is despite the fact that recent research has shown that collaborative approaches using e-Planning can be achieved (Kingston, 2002; Hudson-Smith et al, 2003).

Figure 5:



Source: ODPM 2004, p.24

Whilst public participation in planning has a long history, as explained in the previous sections, literature on e-Planning is less well developed. Much of the recent research in e-Participation, e-Democracy and what we now call e-Planning has attempted to map out the relationship between the citizen or stakeholder within a digital environment. A lot of the e-Planning research has focused on specific aspects of the planning process and attempted to mirror traditional participatory planning methods and investigate how ICT can enhance participatory processes. Research by Kingston et al (2000) investigated the potential of using the Planning for Real method within a digital environment by developing appropriate tools while other research has concentrated on developing the most appropriate technology for building control and 3-D virtual environments (Hudson-Smith et al, 2003).

Research efforts over the past 10 years has mainly focused on the development of a range of technical tools to help support and implement e-Planning and the use of technology to enhance participatory processes (Carver 2001, Craig 2002, Hudson-Smith et al 2003, Kingston et al, 2000 and Kingston 2002). These tools have mainly been GIS focused,

although more recently a growing number of these have focused on 3-D visualisations (Hudson-Smith, 2003). To date much of the research has focused on the technical development of e-Planning systems, such as PPGIS, virtual environments and back office integration, rather than on how local government is actually dealing with implementation. While many of the tools have been, or are in the process of being developed, the extent to which Planning Authorities are capable of implementing these tools is less clearly understood in the literature.

In terms of policy development, the literate focuses on the opportunities e-Planning provides in terms of efficiency gains and the ability to receive applications online, cutting down on paperwork and saving on resources (PARSOL, 2004). More importantly though the focus should be on its ability to be used as a driver for improving stakeholder engagement within planning. E-Planning technology has the ability to improve stakeholders involvement in planning to shift the emphasis away from information and transaction to a greater degree of citizen-led active participation as shown in Figure 4 above.

4. Participation using an e-Planning Toolkit

Within a UK context there are a growing number of national projects focused on e-Planning delivery including the Planning Portal, PARSOL (Planning and Regulatory Service On-line) and DPRAS (Development Plan Representations Administration System).

The PARSOL National Project has developed a range of standards, toolkits, specifications, schemas, systems and software to assist Local Authorities in building effective and transparent online planning and regulatory systems. The products have been developed by local authorities for local authorities with the main aim of benefiting both local authorities and citizens who will benefit directly from faster and more effective online services. The systems developed as part of this national service include expert web-based enquiry for questions like *"Do I need planning permission?"* [the UK equivalent of a building permit]; enforcement of potential infringements; fast-tracking of applications from accredited planning agents; monitoring of local, regional and national data to inform policy.

The LDF is the cornerstone of the land use planning process and an aim of DPRAS is to improve accessibility to that process by giving citizens wider and easier access to the development planning system. This now includes a database system for tracking correspondence, registering objections, producing standard letters, building a skeleton report and programming a public inquiry to examine the plan. DPRAS will allow this process to be done electronically, rather than by a mix of electronic and manual means as at present, and to common standards in each LPA. They will be able to analyse representations in a structured way, thus saving time. XML schemas have been developed which means that individual LPAs can easily use their own web site and internal IT systems to publish and consult on their draft development plans rather than developing bespoke systems. It will be accessible by local authorities and the public, allow detailed tracking of development plan information on SCIs and LDFs and enable the public to submit electronically their own representations and view representations made by other citizens, and receive a structured reply (e.g. a query as to whether they wish to proceed by written representations or appear at the public examination). This will be done through a Planning Portal whereby LPAs can publish a draft interactive plan using a GIS, with a direct link for citizens to make comments or representations. It is important that members of the public without direct access to

Internet based services are not disadvantaged. Where representations are made on paper these are scanned by the LPA and automatically transferred into the system for future reference.

The DPRAS systems has a number of benefits such as preventing LPAs from creating a diversity of approaches to developing and consulting on the LDFs and thereby reducing the overall cost of introducing the new system. There are also efficiency gains achieved from the faster preparation and adoption of plans and strategies by linking the on-line publication of draft plans and reports to representations made on them. The official documentation on DPRAS highlights specific benefits for LPAs:

- Minimise costs in implementing the new development plan system and meeting the timetable for the new plans/strategies;
- Facilitate the achievement of PSA6 targets;
- Help LPAs meet their IEG targets;
- Help LPAs share knowledge and benefit from good practice;
- Improve customer service by making the participation process more transparent.

While DPRAS is intended to deliver a number of benefits the government's case for investing in this type of infrastructure is based on the premise that this will save time, money and will be more reliable than more manual methods. Once again the focus here is on efficiency. The examination of the plan and its public inquiry are highly technical events requiring a good understanding of the planning process and its legalities. It is not particularly conducive to public participation for the lay person with the 'men is suits' atmosphere prevalent. While these services offer improvements in terms of efficiency it is not clear as to how they actually improve the level of participatory dialogue between citizens and the LPA within an environment which is more citizen-led. While some attempt has been made to make the LDF available through an interactive on-line GIS its ability to provide a participatory framework for this is rather limited and does not take advantage of more recent technological developments and research in this field.

4.1 Public Participation GIS

One of the major criticisms of GIS has always been its high cost and degree of technical expertise required to *drive* the software. Essentially GIS is an elitist technology giving ever increasing power to those how already hold it and equally depriving those communities who lack the financial clout and technical expertise to use it. This was essentially the claim made by Pickles (1995) who saw GIS as a tool for the rich and powerful which was used to help and assist in arguing particular social and environmental viewpoints to meet their needs. It was suggested that individuals or community organisations who may be against particular developments within their neighbourhood could not make adequate challenges within the political process when faced with overwhelming data and evidence from organisations which have access to such technology to assist their case. An alternative view to this is that GIS is seen as a powerful tool for empowering communities rather than an invasive technology that advantages some citizens and organizations while marginalizing others (Craig et al, 2002).

Most environmental decision-making problems are inherently spatial in nature and are regularly best represented using a GIS and this is indeed the case with LDFs. Some of the recent, and legitimate, attacks on GIS have been that they are complicated systems which require a high degree of knowledge to be able to use and understand them (Pickles, 1995). It has also been recognised as well that information systems can promote and support citizen participation, particularly in public planning (Lenk, 1999, p.88) and that GIS *'can be used effectively by the community involved'* (Ceccato & Snickers, 2000, p.925). Others though make different suggestions highlighting the polarisation of views which currently exist towards PPGIS. On the one hand proponents of the technology suggest concepts of freedom, empowerment, opportunity, communication and democracy (Craig, 1998), while those opposing it suggest it aims to deliver control, exploitation and is elitist (Clark, 1998; Pickles, 1995).

It could be argued that the more traditional methods of participation are also restricted because they are geographically and temporally constrained. They also, more often than not, tend to be dominated by forceful, influential actors causing the 'local' participants to become the marginalised, less vocal majority. Healey (1998) notes that in traditional local authority open meetings with large numbers of citizens and organisations attending the residents felt awed by the proceedings and kept silent. In other examples the residents were daunted by the *'men in suits'* who seemed to know everything and could talk well (Davoudi and Healey, 1995). As mentioned earlier a part of the LDF process includes a public inquiry – a process not particularly conducive for the lay person or community group.

It is suggested that the use of GIS and ICT, and in particular web based systems could help overcome some of the criticisms by creating a more level playing field on which to conduct public debate. The advent of these on-line technologies is beginning to have serious implications for the methods by which local government and democratic processes interact with citizens and how they participate in decision-making processes across the whole spectrum of public service delivery. There are several examples of how new forms of participation are beginning to evolve. Ghose (2001, p.142) identifies that *'a number of programs have been developed to provide access to data and GIS analysis to citizens in local communities'*. Some of the tangible benefits of these new systems include:

- the systems are accessible from any place, any time, anywhere, and theoretically for any period;
- the concept of '24-7' access to systems and services;
- they are cost effective;
- opinions can be expressed freely and without fear;
- hierarchical information about the decision problem can be presented;
- this can increase in complexity depending on the citizens' interest;
- information can be processed and responses provided with a quicker turn-around.

Ongoing research (Kingston et al, 2000 and Carver et al, 2001) to develop both the software (technical development) and the processes and methods by which the public interact with spatial data (process) has begun to develop a better understanding of how PPGIS can assist the local planning process. An early example of this was a project in 1998

to develop software which would provide some basic GIS functionality over the Web in a local public participation planning process. This led to the development of the Slaithwaite Planning for Real system (http://www.ppgis.man.ac.uk/projects/slaithwaite) which allowed citizens to view spatial data on-line, pan, zoom-in and out and query the data for attribute information. The second stage was to allow citizens to make comments on the spatial data and locations they had identified in relation to particular topics (e.g. housing, transport, environment, shops etc.). These comments were stored in a database containing a six figure grid reference, topic type, citizen comment and profile information collated. This file could then be recreated in ArcView (or any other proprietary GIS) to give a spatial representation of comments by theme. While by today's standards this was a fairly rudimentary systems many lessons were learnt about using PPGIS in local planning (Kingston et al 2002).

The potential role of PPGIS within e-Planning should be to help minimise conflict and arrive at decisions that are acceptable to the majority of stakeholders through consensus building approaches based on awareness of the spatial implications of a decision problem. An important aspect is the provision of better data and information for public consumption to assist them in forming a considered opinion in a decision making problem whereby *'GIS-based decision tools should provide the means by which stakeholders can explore a decision problem using existing information, experiment with possible solutions, view other people's ideas, formulate their own views, and share these with the wider community.'* (Carver, 2001, p.64). It is argued that the increased use of e-Planning offers opportunities for citizen empowerment through greater involvement and openness and accountability on behalf of decision makers. With this in mind recent research has been focusing on what type of system should be developed and how could it enhance participation in the LDF process.

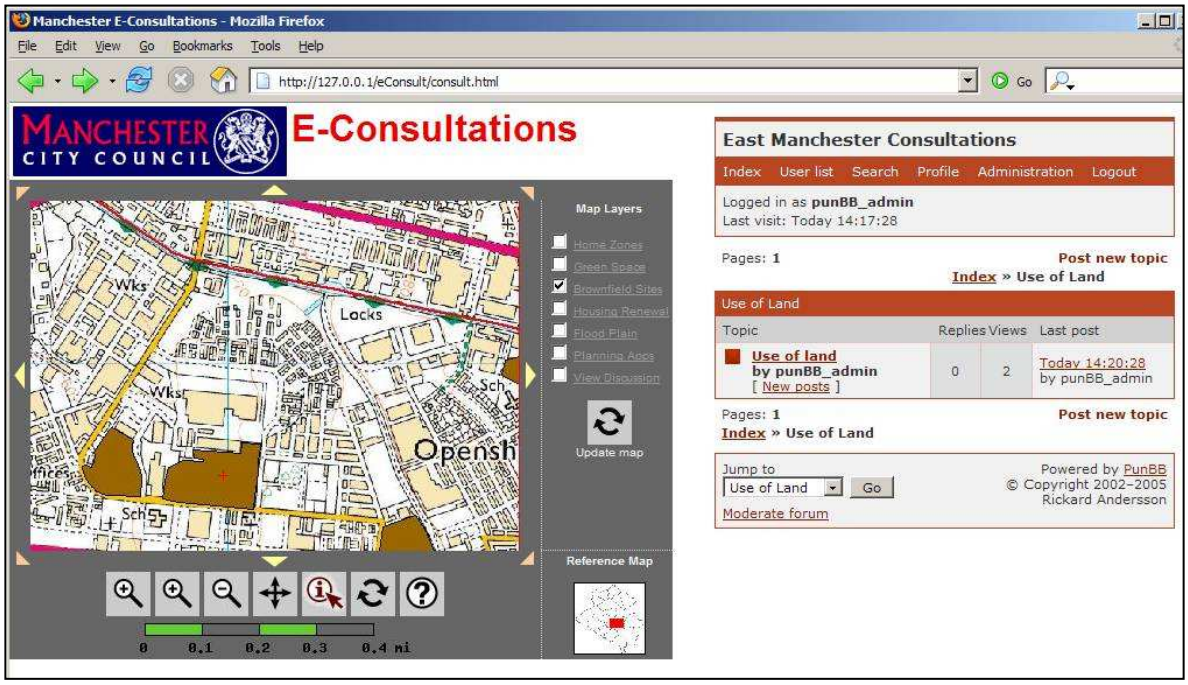
4.2 A Spatially Enabled Deliberative Participation Tool

The e-Participation system explained here is aimed at supporting and improving open and transparent dialogue which has a spatial planning focus. The system allows citizens to discuss new proposals or identify issues relating to space and place within their community. The e-Participation system can fulfil the tasks set out by the processes categorised as providing 'Citizen-led Active Participation' in Figure 4 earlier. While this tool can be used to facilitate all the different types of public participation processes, ideally it should be used to assist citizen-led active participation in the LDF spatial policy-making process. In this scenario, citizens start discussions and debate issues and thereby, in a sense, create their own geo-referenced community database.

The e-Participation tool uses the same base technology as the other systems developed for reporting environmental problems in cities (Kingston et al, 2005). The system is based on the OGC compliant Web Map Server (WMS) technology and supports a range of spatial data formats including ESRI Shape files, MapInfo and various raster data formats such as geoTIFF. It also has functions for the inclusion of further geospatial layers to show relevant spatial policy data and information. It makes use of CGI executable files for the processing and management of citizen comments and feedback using the PERL scripting language and PHP. The system also incorporates a geo-referenced discussion forum written in PHP and uses a mySQL database to store citizen discussions as shown in Figure 6. Citizens can navigate the map by zooming and panning into an appropriate location or searching by street name or postal code. They can also turn relevant map layers on or off and query these for relevant attribute information from the LDF i.e. the proposed policy. Citizens can then

overlay proposed policies and make informed comments and judgements. A discussion can be started by switching to the appropriate mode and clicking on an appropriate location. The citizen then activates the discussion forum by creating a topic and initiating a discussion based on either a particular location or policy. Other citizens can search the map for discussions based on a specific topic, keyword or click on point locations on the map to view previous citizens comments and make appropriate comments themselves. The PPGIS can then develop into a deliberative discussion about particular planning policy proposals.

Figure 6: PPGIS with geo-referenced threaded discussion list



It is anticipated that planning officials would initiate discussions on specific issues at specific time intervals as and when the policy process dictates in parallel with community-led initiatives. The discussion forum can syndicate the latest discussions to other web sites/pages to highlight the latest activity. There are still a number of key operational issues to be overcome during the coming months, such as:

- should a moderator be present for discussions;
- what spatial data layers should be/not be included;
- an evaluation system to provide questionnaires and interactive weighting and priority setting for citizens to give feedback on plans and programmes;
- a layer for information providing access to photos, text, 3D VRML, etc;
- facility for citizens to link to their own text and graphics allowing them to provide their own material; and
- should citizens be able to upload their own spatial data rather than just comments and ideas.

The system uses an open source system architecture using OGC compliant WMS technology, mySQL for storing enquiries in a database, PHP for the discussion forum and PERL for processing the enquiries. They also meet the UK's electronic Government Interoperability Framework standards (e-GIF, 2006) which is a requirement for public sector websites in the UK and Europe. While the systems developed here are focused on Manchester, they are scalable and can be expanded to include the whole of the Manchester Metropolitan district and the wider city-region. Indeed the system can work in any place by changing the spatial data to the appropriate location. A task for the future is to attempt to integrate this system within DPRAS to provide a more participatory approach to developing LDF policy.

5. Discussion and Conclusions

While e-Planning has huge potential to improve public participatory processes it is not yet being realised within the vast majority of LPAs in England. Indeed the focus so far has been all about publishing and disseminating the plans, albeit with the ability to make on-line comments but not about deliberative participation. Many of the e-Planning tools developed so far are merely replicating old participatory practices in digital form with the main focus on making efficiency gains in terms of time and money.

So why is this the case…? One issue is the disconnection between LPA managers and city officials and the IT consultants who invariably 'sell' the e-Planning toolkit products. Management commitment is essential to the successful delivery of e-Planning services in the same way that a similar case was argued in the early 1990s with regards GIS adoption. While it is vital that planning managers recognise that preparing for e-Planning is not a 'techie' job, actually convincing colleagues that this is the case can be a difficult challenge to address. The focus needs to be on how e-Planning can lead to improvements for citizens who engage with the planning process as much as how it can lead to improve working methods and practices.

The companies selling their ICT tools do not necessarily have a vested interest in making sure the LPA goes beyond meeting the basic requirements of legislation and planning guidance. For example, in the UK e-Planning targets involve whether planning applications can be made on-line or can the LDF policies and associated maps be viewed on-line. In total there are 21 e-Planning indicators but they do not focus on innovative participatory methods which e-Planning can potentially offer through the PPGIS methods outlined earlier. The 2005 monitoring survey of LPA websites (ODPM, 2005) found that information about the planning application consultation process was generally poor, often not providing clear guidance on the process or presenting contradictory or out of date information on making representations. There was a lack of clear instructions explaining how to make representations about draft plans, the time scale for submitting representations and receiving a responses.

A further issues relates to costs and implementation of e-Planning services. It is not the most straight forward of tasks to simply e-enable planning services quickly. One does not wish to be entirely negative and there are a number of LPAs which are beginning to push the boundaries by developing some innovative approaches. These include GIS based interfaces to the LDF with the option to make on-line comments. The current weakness here though is that comments are hidden from other members of the public which limits the ability to

generated a deliberative on-line environment and once again the adoption of PPGIS methodologies could help improve the situation here. PARSOL and DPRAS are making efforts to standardise approaches to e-Planning and their next step should be to investigate the potential to integrate deliberative and collaborative approaches to public participation into current e-Planning processes.

Finally, the importance of managing expectations is a key issue which must be addressed in any participatory process. It should always be made clear that not all issues emerging from consultation can and will be acted upon. In fact it is indefensible that the LPA should be required to act on every single viewpoint given. For a start, the views of parties may conflict with each other and the LPA will have other considerations to bear in mind based on professional judgement of planning officers. There is a need to be honest with the public about these limitations at the start of any consultation. The next step for the not too distant future is the evaluation of public participation to consider what added value e-Planning has offered if any, to the process. One of the most significant issues to bear in mind is that it is the outcome of participation that is important for all concerned and not to become captivated by the technology and its ever so often 'wow' factor.

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