

Planning for a better future

Our planning manifesto for the government



Manifesto Background Paper 10

iDM: managing development in industry 4.0

As we enter Industry 4.0, the fourth stage of the industrial revolution, we embrace a connected world of big data and analytics driving like never before the world of work, rest and play. This paper looks at what might be around the corner in the context of the different forms of development we deal with and questions whether the way the planning system operates from a legislative point of view needs to change to be ready for the future.

Planning Officers Society

POS is the single credible voice for public sector planners, pursuing good quality and effective planning practice. The Society's aim is to ensure that planning makes a major contribution to achieving sustainable development in ways that are fair and equitable and achieve the social, economic and environmental aspirations of the community.

We operate in three main ways:

- As a support network for planners in the public sector
- As promoters of best practise in planning
- As a think tank and lobbying organisation for excellence in planning practice

Where we can, we will work across the sector to craft proposals that have widespread support from the people who operate the planning system at the coalface: landowners, developers, agents, legal, local authorities and politicians. We will be both radical and practical as we look for solutions to tangible problems that will make a real difference to crucial areas. Our objective is to improve the planning system to enable it to deliver its key aim of sustainable development. It is within this context that we have set out this advice to Government so we can plan together for a better future.

POS Manifesto

This started in early 2014 when we looked ahead to the national parliamentary elections in May 2015. The main parties were drafting their manifestos, so we thought about what we could do to help them. This resulted in Planning for a better future: Our planning manifesto for the next government. The time since then has seen an unprecedented amount of change to the planning system, so our initial planning manifesto for the next government has morphed into an on-going planning manifesto for government.

These are think pieces that tackle a topical area within planning practice and sets out our recommendations for improvement. They comprise a growing series of Manifesto Background Papers that look in detail at specific issues. Those that are still current are summarised in our main Planning Manifesto paper that sets out the current ask from POS to the government.

The views expressed in these documents reflect the initial view of POS. It is a consensus position. It should not be taken as a final position; rather an informed starting point to debate the issues. It is expected that the recommendations will evolve as the debate progresses.

Where we can, we will work across the sector to craft proposals that have widespread support from the people who operate the planning system at the coalface: land owners, developers, agents, legal, local authorities and politicians. We will be both radical and practical as we look for solutions to tangible problems that will make a real difference to crucial areas. Our objective is to improve the planning system to enable it to deliver its key aim of sustainable development.

Other titles in the series can be viewed from our website.

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Summary

As we enter Industry 4.0, the fourth stage of the industrial revolution, we embrace a connected world of big data and analytics driving like never before the world of work, rest and play. This paper looks at what might be around the corner in the context of the different forms of development we deal with and questions whether the way the planning system operates from a legislative point of view needs to change to be ready for the future. Our recommended changes are:

- To facilitate the operation of Design Codes for the construction of new buildings, expand the Permission in Principle regime to include all types and sizes of development and review the need for applications for outline planning permission to continue in their current form.
- To facilitate automated approaches to permitted development, allow local planning authority's residential extension guidelines (and other similar documents) to become a form a permitted development but not a rigid Development Order approach.
- To enable town centres in particular to be managed so their future is more secure, review the operation of the Use Classes Order from the perspective of seeing whether there are better ways to control the differences between use classes from an activity impact point of view. We propose testing whether a comprehensive licensing or permitting approach would be better given the way land use, particularly in town centres, is set to change and will need a nimbler regime than applications for planning permission to manage these areas.

1 Introduction

- 1.1 Industry 1.0 was the transition from hand production methods to machines through the use of water and then steam power up to the early 19th century. With Industry 2.0 the Victorians and Edwardians brought us the age of technology. Industry 3.0 saw the post WWII digital revolution. As we enter Industry 4.0, the fourth stage of the industrial revolution, we embrace a connected world of big data and analytics driving like never before the world of work. rest and play, or to use the etymology of planners, the B, C and A/D use classes. As a sector we are starting to experiment with PlanTech. The way we operate our services and use technology to design and communicate the impact of developments is changing at a rapid pace.
- 1.2 This paper looks at what might be around the corner in the context of the different forms of development we deal with and questions whether the way the planning system operates from a legislative point of view needs to change to be ready for the future. We suggest changes that should be made now, so that the planning system and the communities it serves are ready for a potentially new and better way of doing things. This paper divides development into its three main areas: erecting new buildings, extending existing buildings and changing the use of building or land and looks at the challenges each may face.

2 Erecting new buildings

- 2.1 Two main forces are at play here; off-site manufacture and design codes.

Off-site manufacture

- 2.2 Prefabricated manufacturing is set for a revolution. Its advantage has generally been a higher quality product because of the benefits of factory construction but it is very expensive to set up. Economies of scale only comes from very high production quantities which tended to restrict variety. However, with BIM design technology linked to computer-controlled machinery and in some cases 3D printing, the best of all worlds will be possible: high quality, low cost and greater degrees of variety. This makes it a far more attractive product for the building design and construction industry. It's set to boom.

Design codes

- 2.3 Two recent but contrasting publications are both pushing design codes as a means by which new development, particularly extensive areas of development such as housing estates or industrial parks, can be delivered more efficiently and more beautifully. The Policy Exchange publication, Rethinking the Planning System for the 21st century, sees rules-based development control as the way to control development in their binary zoning system. The Building Better, Building Beautiful Commissions (BBBBC) final report, Living with Beauty, promotes the use of form-based codes, amongst a myriad of other changes, to deliver a step change in the quality of development in the country. It is telling that two reports that come from such different perspectives both conclude with a design code-based model as part of their recommendations.

- 2.4 What is proposed in both approaches is a fast track way to produce quality development. Design Codes have a long, proven history as the majority of Georgian, Victorian, Edwardian and inter-war housing was built using approaches that were very similar to design codes.
- 2.5 What is being discussed is essentially a light touch approval process for the principle of the development followed by a fast track Technical Details Consent guided primarily by Design Codes. Early indications from the Secretary of State have been positive towards this approach.

The future

- 2.6 POS has advocated since 2015 (when we published our 4th Manifesto, Red line submissions: a proportionate approach) that what has since become Permission in Principle, should apply to all developments and not be restricted to 10 units or fewer. This as a model can enable a better approach than outline applications because it does not result in a planning permission with all the associated conditions. Without the need to examine the detailed matters raised by conditions at that stage, the process can be simpler, quicker and cheaper. We have also advocated it as a better model for deploying permitted development rights when those rights relate to relatively complex developments such as changes of use to residential. This enables appropriate standards and obligations to be delivered through the Technical Details Consent process.
- 2.7 By making these legislative changes government would pave the way for enabling design codes to be deployed within a 3D mapping environment, with all the elements of the Design Code fully coded and AI used to either create or test layouts. Whilst we may balk at automating such a process, it may well be a possibility that works as this technology advances. Our point is that we need to think through the possibilities that we may want or need to embrace in the future and start to put in place what you could call analogue versions of it now so the planning system and our communities are ready for the digital version as it becomes possible and acceptable in the near future.

3 Extending existing buildings

- 3.1 It is possible now to have a 3D fully-rendered GIS world that is accurate to 15cm, but they are likely to get even more accurate. You could offer a product where you can view your house in 3D and create extensions using CAD or BIM type software and be told when you have exceeded permitted development rights. When you have finished designing your extension you could have a definitive Certificate of Lawful Development produced on the press of a button. It could however go further. The local planning authority's residential extension guidelines could be loaded into such a system and after a similar design process where the software tells you when you have exceeded the permissible limits you can settle on your final design. If it comes within permitted development you get your certificate, if it meets the residential extension guidelines you get a planning permission and if it exceeds those parameters you can submit your application for planning permission. All by the press of a button after a self-service process.

The future

- 3.2 To make this a reality we need to look now at how local residential extension guidelines can become a form of local permitted development. Local planning authorities have not gone down the Local Development Order route with these because of the complexity of drafting such a document – as government have found over the years with the national version. But a simple checking process for submitted schemes could be introduced that resulted in an approval where they comply with the local guidelines would be possible.
- 3.3 We do not consider that neighbour notification would be necessary in these cases because the residential extension guidelines would have been subject to public consultation and a development that complies with them is very unlikely to be refused. You could argue that seeking neighbours' views is falsely raising their expectations that an extension they object to but otherwise complies with the guidelines could be refused. However, we do consider that both for this procedure and for national permitted development there should be a requirement for the developer to notify immediate neighbours that they are going to carry out works and that those works are permitted. This avoids the anxiety that neighbours feel when works just start with no prior knowledge or information.
- 3.4 Such an approach could equally apply to all such areas of permitted development for other development types such as industrial areas. In fact, any area where the local planning authority consider that it can codify what is acceptable by way of extension could be automated in this way.

4 Changes of use

- 4.1 Government has been simplifying the UCO by making many changes of use between the use classes permitted development. They are currently contemplating combining the A classes into a single class. The reasons for this seem to be twofold. A political propensity to reduce controls and a concern over the state of the high-street coupled with a belief that less regulation will help.
- 4.2 Our observations are that those high streets and shopping centres that are doing well tend to be quite heavily managed. Not by the local Council, but by the main landowner, BIDS or other such associations. As retail is put under greater pressure the need for town centres to find a new role and reinvent themselves grows. What is not needed is a total absence of regulation that will inevitably result in a race to the bottom. Where coordinated management by landowners is not possible because of a myriad of ownerships, which is the vast majority of centres, the local Council must fill that void, or these town centres are likely to terminally decline.
- 4.3 Recent years have seen the shift to shopping on-line, but the future is likely to result in us not having to shop at all for most of our everyday things. With the Internet of Things our appliances and cupboards will be automatically refilling themselves without much if any intervention from us. The change in retailing has really only just started. The future is so uncertain that it is even more important that all town centres are carefully managed. Planning is concerned with Place Making but we need to think about who will be Place Managing; a quite different process.

Use Classes Order

- 4.4 The Town and Country Planning (Use Classes) Order 1987 came into force on 1 June 1987, replacing the previous 1972 and 1983 versions. It defines the possible uses of a site, with “site” meaning “the whole area of land within a single unit of occupation”. Although not all potential uses are covered, the clear majority of property in England will have had its permissible use defined by this Order. Those uses that are not assigned a Class under this legislation are known as *sui generis*, which means “of its own kind; in a class by itself; unique”.
- 4.5 The UCO has been remarkably resilient. It has changed over that time, but not fundamentally. The principle behind use classes is to identify and group together the most common land uses so that a statutory decision is made as to what activities are so similar that they can be grouped together and the need for planning permission to change between them never arises. The differences between the use classes are generally defined by some external impact that the group of uses have that is different to another group of uses. This could be the creation of more noise or fumes, significant public activity, increase traffic levels or heavy vehicles etc. The UCO groups these activities into common classes and that has enabled the planning system to control those externalities. It is time for a fundamental rethink?

The UCO in Industry 4.0

- 4.6 An increasingly digital world is fundamentally changing the way we work, trade and play. It is becoming increasingly difficult to assign use classes to what we do; places are used for a multitude of different purposes. For example, where is the UCO when a person designs and tests a product on a laptop in a café or the local touch-down community space, markets the product through sites such as eBay or Amazon, which you then purchase and collect from your local 3-D printer facility? More importantly, is there a land use planning problem in all that? Probably not, but the UCO needs to keep pace with an ever-changing world if it is to remain a useful land use planning tool. Many of us will remember the fuss that internet cafés caused!
- 4.7 Similarly, the traditional concept of the difference between industry and warehousing was that the former employs relatively high numbers of people and transport impacts are generally not too severe, and the latter employs relatively few people and are generally dominated by very large vehicles. Does that still apply to a dark factory operated by robots or an Amazon type warehouse?

- 4.8 It is generally accepted that there is a considerable amount of overlap and duplication between planning and licensing. A planning permission, given when the building or use first comes into being and expected to last its whole life, is probably not the best way to control the externalities of land use activity over time. It is often the case that some situations (eg letting a pub open till late) is as much to do with how good the publican is, as to the characteristics of the area. The current trend to control takeaways in the context of childhood obesity through new planning policy initiatives, whilst a valiant attempt by some local planning authorities, is far from ideal. This policy can do nothing to deal with existing establishments. But just as importantly, what would a local planning authority with such a policy do if someone like Jamie Oliver created a chain of clearly healthy take-aways targeted at children that was universally praised? The policy suggests that they must be refused, but an approval means we are now controlling the menus in take-aways; is that what planning is for? Licensing such outlets from a food quality point of view is a more direct and potentially more effective approach.
- 4.9 What is and what is not acceptable in these contexts changes over time with differences in public attitudes generally, changes to an area such as a town centre and advances in technology. These externalities need to be controlled by a system that is designed to be flexible and nimble. Planning permissions are probably not the right approach. The current licensing system falls short, but a new comprehensive regime based on a licensing approach of a permit for specified activities or impacts could be the answer.
- 4.10 The intention is that this would result in no greater a level of control than there is now. There should in fact be a reduction, as planning and licensing would be combined so that there is a single efficient system with none of the overlaps that currently exist. The controls that are identified as being necessary can be operated more effectively as they can be fine-tuned to target an area's needs and take into account empirical evidence. With the advent of Smart Cities and Big Data, Councils will have a new set of tools to guide the way they can manage town centres. Our suggested new approach would benefit from this in a way that the current planning system cannot. A new licencing/permitting system can be adjusted in response to real-time data and enable the management of spaces to be informed by what people actually want (based on their activities) rather than what we think they want based on past trends.
- 4.11 Finally, this new regime should increase the capacity of planning departments and scarce qualified planning officers to tackle the more important strategic and place making demands that they face by freeing them up from dealing with managing the externalities of different land uses.

The future

- 4.12 The essential thesis behind this recommendation is, if you look at all the externalities that we seek to control when giving planning permission for uses within the UCO and you looked at how the differences between classes could be controlled in a revamped licencing/permitting regime, you could radically reduce the number of different uses that needs to be defined in the UCO. This has the potential to make the planning system simpler and the control of externalities more responsive. The new licencing/permitting regime would need to be guided by policy, but that policy could change as either areas change, society's attitudes generally changes or technology changes. It can also take into account the operator, as licensing currently does, but planning cannot.
- 4.13 The obvious question is, are these wide-ranging changes worth all the potential effort and upheaval? The outcome of this approach should be that all the existing safeguards are in place, but they are achieved through the most appropriate regulatory regime. Planning sets the broad land use and place making framework and the new licencing/permitting regime controls the detailed activity and its potential externalities. Targeted licencing/permitting has the potential to respond in a better and more responsive way to the ever-changing world that we live in. The planning system would be simpler, and the licencing/permitting regime would develop a new, more comprehensive role in managing our town centres and other important activities that have the potential to cause nuisance or harm. Importantly, all the controls would be exercised through the local democratic institution; the local council. POS thinks that it would be worth the effort.

5 Conclusions

- 5.1 The future will bring about significant changes in land use as society grows into a totally connected world where there is access to unlimited data that we will increasingly rely on technology to sort, understand and consume. We will all have to change, and planning needs to prepare for this new landscape. This paper scratches the surface of three key areas and sets out changes to planning that we need to make now to be ready for the future.