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Planning Through Zoning: a literature review

This research was commissioned by The Royal Town Planning Institute and conducted by Dr Andreas Schulze Bäing and Dr Brian Webb.

I. Introduction

One of the key features of the planning system in England is the use of discretionary development control for planning applications and permissions. This differs from the approach in many other countries where regulatory zoning plans are used as the principle means to control development. The recent months have seen a growing debate about the possibility of introducing zoning elements into the English planning system (Breach, 2020; Airey et al., 2020). The aim of this report is to review literature on the origins, use and strengths/weaknesses of zoning as a tool to plan for, regulate, and determine the use of an urban area. Part two discusses the origins and key features of zoning as a planning tool, with particular reference to Euclidian zoning, the legal status of zoning plans, and the link between zoning and upper-tier planning (local plan and other policies) using international examples. Part three then provides an overview of strengths and weaknesses of zoning while part four discusses hybrid approaches to planning combining regulatory and discretionary elements. The final part five then discusses the potential role of zoning in England, with reference to how it could be embedded in the current planning system. This part also discusses the proposals of the white paper Planning for the Future (MHCLG, 2020) and how the findings from this literature review could inform the current debate in England.

II. The origins and key feature of zoning as a planning tool

Most countries have developed some form of system, or systems, for regulating the development and use of land, allocating development rights, and anticipating and mitigating the environmental impacts of development. Yet the means used to undertake these tasks vary and are often contrasted as a spectrum between discretionary versus regulatory approaches (Newman and Thornley, 1996). Discretionary planning systems are typically characterized as being flexible, with policies formed around terms such as 'normally', 'may', 'ought to', and 'will consider'. This emphasises the role of the decision-maker in using their professional judgement to take account of all the various factors involved, including those which someone making the rules at the time could not have anticipated, in order to reach a decision. The regulatory approach is much more specific, using terms such as 'will/will not', 'should/should not', and 'can/cannot' (Tewdwr-Jones, 1999). Here the role of the decision-maker is more limited as they are determining whether what is proposed is allowed based on specific predefined rules/laws or not, with little room for professional judgement as to the suitability of the proposal to the specific context and circumstances.

The concept of discretion in a legal context has advantages and disadvantages, as:

“what is gained in uniformity may be lost in flexibility; rules to prevent the arbitrary may encourage the legalistic; case-by-case adjudication may prevent comprehensive planning; rules that may shield the bureaucrat from pressures and allow the efficient and speedy dispatch of cases, may offend the client who desires individually tailored justice” (Jowell, 1975, p. 30).

The distinction between the two approaches becomes more blurred during implementation. This is especially true of regulatory systems implemented through zoning where “rules of general application fit poorly to so variegated and unstable a resource” as land (Ryan, 2002, p. 338).

In contrast to the discretionary approach found in England, the majority of the countries around the world utilise some form of regulatory approach to development control. Zoning, as a form of implementation of a regulatory planning system, is highly variable in terms of structure and use. Different countries, and in some cases different towns and cities, have diverse forms of zoning codes and practices (Hirt, 2014). Typically, zoning regulates three aspects of built form (Kayden, 2004): function (ie. Use), shape (ie. How tall) and bulk (ie. Density). This is generally known as Euclidean zoning, in reference to the U.S. village of Euclid which was the subject of a landmark zoning case in 1926. It uses a series of texts and maps to set what development can occur and where at the start of the process. Maps specify which properties a zoning law applies to while the text tells you what you can do with that property. Decisions about whether a development is allowed depends on whether it fits with the criteria outlined in the zoning plan/ordinance. In this way it tells land owners what they can do with their property ‘as of right’ without the need for planning permission but also by extension what they cannot do.

While differentiating zones in cities as part of urban planning has a history stretching as far back as ancient Greece (Mazza, 2009), modern zoning is said to originate in Germany. Reinhard Baumeister, a Professor at the University of Karlsruhe, published a book in 1876 called *Stadterweiterungen in Technischer, Baupolizeilicher und Wirthschaftlicher Beziehung* (Urban Expansion with Respect to Technology, Policing of Building and Economy). This discussed a range of urban problems and solutions. One solution was based on his observation that industries tend to naturally cluster together in cities and he argued that this clustering should be reinforced through zoning areas into three classes: industry and wholesaling plus the homes of workers; trades which require direct contact with the public plus the homes of workers; and homes whose owners have no trade and different occupations (Hirt, 2013). The second important development was the *Fluchtlinienplan* (building line plan), introduced with the *Preußisches Fluchtliniengesetz* from 1875 (Wilhelm, 2012). These plans would later also be used in the Japanese planning system (Sorensen, 2002). They do not regulate uses but rather the urban form using building lines to ensure coherent street layouts. These old building line plans are still in place in some German cities, particularly in the perimeter block areas developed since the late 19th century. The third important element related to zoning are the tools for land readjustment (*Baulandumlegung*). While these would not strictly be part of a zoning plan, these would ensure that the intentions and structure of the plan can be implemented and that the zoning plans would generate usable plots in areas of complex land ownership. Later land readjustment would influence a similar tool in the Japanese planning system (Sorensen, 2002).

Current planning practice for local authority districts or city regions in many European countries often uses a two-tiered set of local plans. A strategic land use plan for the whole area of a local authority, sometimes also called master plan (Silva 2015), sets the broad and long-term land use strategy, quite similar to the local plan or core strategy in England. But these plans do not necessarily have a direct legal consequence for individual land owners or developers in terms of land use rights or restrictions. So, for example, if a German *Flächennutzungsplan* (local plan) designates an area as suitable for mixed use or housing, this does not generate a direct development right for a land owner, as this designation only impacts other plans but not private individuals/property owners. Despite this, such a designation would typically impact the land value, as it makes development permission more likely to be granted. Similarly, in the Canadian province of Ontario, a local Official Plan sets out the strategic land uses but it is the zoning regulations that implement the

specific development rights. In the case of Germany, the second tier would be the local zoning plan known as the Bebauungsplan. This would regulate in detail which development and use would be permitted. Zoning plans in Germany can also show the location of public infrastructure and open space to be developed as part of a plan, often linked to a detailed masterplan, and they can even regulate design aspects such as the orientation of roofs.

Not all areas of a local authority in Germany are covered by a detailed local zoning plan. For example some historic urban areas, built before the current Bebauungsplan tool was introduced in the 1960s, do not have such a plan and permissions are granted on a case-by-case basis. So usually zoning plans are developed to provide regulation and steer development for areas that are to be developed in the short to medium term, while there are also cases where the introduction of a zoning plan aims to provide more control over the urban design of a historic urban area. A good overview in English showing the types of zoning plans in Germany is provided by the planning department of the city of Frankfurt (click on en on the site for the English version): https://www.stadtplanungsamt-frankfurt.de/types_of_legal_zoning_plan_5694.html (accessed 14/08/20). A more detailed glossary of the German planning system has been compiled by Pahl-Weber and Henckel (2008).

The Netherlands had a similar system to Germany, where the detailed zoning plan, the bestemmingsplan introduced in 1965, did not necessarily cover the whole territory of a local authority, and even if there was a zoning plan, the use of exemptions to grant permission was quite common (Needham, 2005; Buitelaar et al., 2011). This changed in 2008 with the introduction of the new spatial planning act, which made land use plans mandatory for the whole local authority (Buitelaar et al., 2011). A quick look at the digital planning portal of the Netherlands shows that zoning plans now exist across the territory of the Netherlands: <https://www.ruimtelijkeplannen.nl/viewer/view> (accessed 13/08/20).

While zoning in the US is often characterised by separation of uses, some zoning systems also allow flexibility of uses within a zone and mixed uses. For example, apart from the exclusively low-rise residential zone, many of the residential zoning categories in the Japanese zoning system also allow other service uses such as shops, offices or hotels (MLIT, 2003). Germany also allows in many zones some mix of uses (Hirt, 2007) and in 2017 introduced the new zoning category of “urbane Gebiete” allowing a mix of residential and commercial uses, to foster more housing development in high density urban areas (Bundesrat 2017, Bundesamt für Justiz, 2017).

III. Strengths and weaknesses of zoning

Perhaps the most often-argued strength of regulatory planning using zoning is that it creates certainty for developers and land owners (Booth, 1995). As zoning allows a minimum level of development as-of-right, developers know in advance what they can build before they purchase land resulting in some level of ‘assured value’. It is worth noting however that not all developers may want certainty, as some may want to explore opportunities not covered and foreseen in a zoning plan, which may allow them to maximise speculative profits. The importance of certainty in zoning regulations is also seen as beneficial to homeowners too. As zoning sets out what is allowed as-of-right, homeowners also know the limits of what might be allowed to be developed in their existing neighbourhood or one they are buying into (Fischel, 2004). As Boyer (1983) notes, this can be seen as an insurance policy that the value of their home is in some way protected from destabilizing and unwanted influences, and that amenities and views are potentially protected from change.

Zoning should in theory also lead to quicker decision making about applications, as testing if a proposal is in line with a zoning plan can be easier compared to testing a proposal against a range of

policies and weighing them against other contextual material considerations. Developing within as-of-right envelopes also removes the legal requirement for public consultation in most cases. All of this does not however take into account the time it takes to first develop the zoning ordinances which can be a significant period, especially in existing built-up areas where different land owners and developers may individually lobby to maximise their benefits under any new zoning codes. For example, following amalgamation it took the City of Toronto eight years to consolidate its 43 existing zoning by-laws into 2,190 pages of text (Bednar et al., 2010). Furthermore, zoning plans usually have statutory force, so individual elements can be contested in courts of law potentially leading to further delays (Booth, 1995). In some countries this can also mean third party rights to contest decisions.

In the U.S. particularly, zoning has been criticised for its exclusionary impacts through the use of regulations designed to obstruct the ability of lower income groups to purchase properties by limiting multi-family housing, requiring large lot sizes, and lower densities leading to sprawl and neighbourhoods poorly accessible by public transport (Talen, 2013; Hirt, 2013). Blanket up-zoning, increasing higher densities in large areas in order to stimulate construction of new homes, is also associated with differential socio-economic outcomes as it tends to lead to the construction of high-end housing in existing desirable areas rather than a range of housing for different groups (Rodríguez-Pose and Stroper, 2020). Recent U.S. research notes that, at least over a short five-year period, up-zoning in Chicago saw little impact on the number of newly permitted developments however there was a rise in property prices – though research on the longer term impacts of up-zoning on new construction is lacking (Freemark, 2019).

The certainty of zoning can also be a weakness, as the static nature of the zoning can mean a lack of flexibility when facing unforeseen circumstances over time. Typically zoning plans are set up to regulate development over a number of years, and sudden change of circumstances or appearance of development opportunities not known when the zoning plan was created can require frequent amendments to zoning plans, or a move toward more flexible zoning approaches (Biggar and Siemiatycki, 2020; Talen et al., 2016) (see section iv for specific examples). This lack of flexibility means that zoning plans tend to be more suited to regulate development of new settlements or expansions, rather than for managing the complex processes of change in existing built-up areas (Mustafa et al., 2018). This is because zoning often represents and preserves the status quo, particularly if there is a lack of upper tier strategic planning to guide changes in zoning regulations.

Zoning systems also struggle to react to as well as foresee and plan for the 'best use' for land in advance given the dynamic nature of real estate markets and wider socio-economic factors that influence land prices over time (Munneke, 2005). For example, Japan's zoning orientated land-use planning system, which involves more limited categories of zoning and much less detailed regulation, has seen several revisions as it sought to use development to stimulate economic growth and deal with socio-demographic change, resulting in sprawl, lack of infrastructure, featureless public realm and streetscape, and the building of poor-quality housing as well as high unhealthy vacancy rates throughout the country (Zhang, 2009; Iwata and Oguchi, 2009; Sorensen, 2000; Edgington, 1999). Though it has also been argued that zoning which is less restrictive about use, density, and specific building rules may result in lower house prices than zoning which is more restrictive (Calder, 2017).

The need to manage changing circumstances and respond to development opportunities typically leads to requests for zoning amendments in existing built-up areas (Schleicher, 2013). A zoning amendment allows site specific alterations to what is allowed and is generally accompanied by plans for a specific development. It is during this process that zoning can closely resemble a discretionary

approach, as decisions are typically made through the consideration of a range of factors as part of both an administrative and political decision-making process (Biggar and Siemiatycki, 2020). Given that a zoning amendment alters the 'as-of-right' zoning (granting new rights to land owners as well as potentially impacting the broader public), a range of public engagement approaches typically exist in order to provide a transparent and accountable process by which amendments are undertaken, though it should be noted that many of these approaches are often criticised for not being collaborative enough (Innes and Booher, 2004). If appropriate rules and guidelines for such amendments are not in place it risks negotiations occurring behind closed doors or favouring particular stakeholders leading to a lack of transparency and accountability. As Ryan (2002, p. 337) notes "unfair or inefficient outcomes may result from imbalances in power or skill that either distort the dealings of participating parties or result in failures to consider the interests of affected nonparticipants". Even in the Netherlands with its tradition of regulatory planning through a local zoning plan (the *bestimmingsplan*) frequent changes to this plan are common, making the system in practice quite discretionary, with frequent use of a "development-led 'postage stamp plan'" (Buitelaar et al., 2011, p. 938) where zoning plans are amended in response to development proposals. This shows some similarity to the project-based binding land use plan in Germany described in the following section iv, though seems to be less formalised. One dilemma is here that a *bestemmingsplan* is both meant to provide a regulation protecting existing land use rights, and also provide a forward-looking concept and strategy for land use planning. New ideas in the Netherlands such as "uitnodigingsplanologie" or "planning-by-invitation" might change the traditional regulatory system further (Korthals Altes, 2016). This might provide a compromise between formal regulation and informal discretion.

To sum up, once zoning has been established for a long time the desire to maintain certainty for most properties, an often-identified advantage of zoning, can result in piecemeal 'planning by amendment' for specific properties. It is therefore difficult to align and integrate higher-level strategic objectives into zoning over long periods of time given the need to balance the status quo with planning for future development (Mäntysalo et al, 2011; Korthals Altes, 2016). This also makes it challenging to use zoning plans to provide a coherent, long term strategic view of future development designed to address wider concerns such as sustainability, especially for a larger spatial scale such as city-regions (Rantanen and Rajaniemi, 2020).

IV. Hybrid approaches combining regulatory and discretionary planning

While a regulatory zoning approach forms the general foundation for planning systems in a wide number of countries many have also developed and integrated more discretionary aspects into their planning systems to provide additional flexibility. Such a mix of regulatory and discretionary approaches is often described as a hybrid system. One example of this is Hong Kong. Here the government is the landlord of the territory granting leases for development, so early planning focused on the orderly issue of such leases. As shown by Booth (1995) Hong Kong's Outline Zoning Plans and Development Permission Area Plans are hybrid, in that applications for some of the zones and uses identified would always be permitted and other uses/zones would require planning permission from the Hong Kong Town Planning Board (2018).

Singapore uses a different hybrid approach. It uses two-tiers of plans, the concept plan for a broader strategy and a master plan for detailed land use specifications on a site-by-site basis (Ng, 1999). Both

regulate this through a zoning process which includes some discretionary so-called 'white' zones (Singapore Urban Development Authority 2019) for some areas. These were introduced in 1995 to give more flexibility for developers to suggest a range of uses (Yuen 2009). These plans can be termed Singapore's regulatory mode, prepared in advance of development. However, additionally in Singapore, all development proposals require approval through a UK-style 'planning permission system', including planning appeals. This part of the system is discretionary, in that in Singapore a planning permission can overrule the zoning for a site, and once granted, the zoning on the master plan is revised retrospectively.

As discussed earlier in some countries detailed zoning plans do not cover all urban areas. One example is Germany, where areas built before the introduction of detailed zoning plans in the 1960s are not all regulated by detailed zoning. Unless a local authority retrospectively introduces a zoning plan to regulate development in those areas, planning decisions are made based on discretionary assessments based on paragraph 34 of the federal building code. In this assessment developments can get permission if they blend into the immediate environment in terms of the type and scale of use of buildings, the coverage type and the plot area to be built on, and if provision of local public infrastructure has been secured (Federal Ministry for Transport, Construction and Housing, 2000). In addition to the traditional zoning plan, providing a legal planning framework to establish serviced building plots for the large number of self-builders, and small developers, the German system also allows a project-based binding land use plan, usually for projects/areas developed by a single developer. In this case the developer agrees to develop the masterplan/urban design concept and covers the cost for planning and infrastructure provision. In this approach the role of the developer becomes more similar to the approach in England, where the initiative and spatial concept are determined by the private sector developer instead of the private sector adhering to an urban design concept and zoning plan conceptualised by the public sector.

Particularly in the North American context zoning is often associated with low density urban expansion or urban sprawl. In a bid to manage the impacts of zoning on sprawl, form-based zoning codes (FBCs) have increasingly become popular (Talen, 2013). Emerging in the 1980s in the U.S., they are a regulation that "fosters predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code." (Form-Based Codes Institute, para. 1, n.d.). Form-based codes are typically comprised of five elements¹. The first is a regulating plan that notes locations where different building form standards apply. The second is public realm standards that identify the public features of a place such as the sidewalk widths, street trees, furniture, and on-street parking. The third are building standards that specify what the private elements that define and influence the public realm should look like. The fourth is the administrative rules that are to be followed when processing and reviewing an application, such as evaluation criteria. The final element is a glossary of terms that details exactly what is meant within the other documents to ensure clarity. The codes tend to be quite specific and are often limited to a defined area in a city or town but do allow for the inclusion of more sustainability criteria than traditional zoning (Talen, 2013; Garde and Kim, 2017). The detailed level of regulation is similar to the one found in some German zoning plans discussed earlier. Criticism of design codes comes from some developers who argue they are too restrictive, residents who are concerned they promote density increases, and architects and planners who believe they limit design innovation. There are also concerns about the creation of objective criteria to judge developments, and reservations that they

¹ See Chapter 4 of the City of Benicia Downtown Mixed Used Master Plan for an example:
<https://formbasedcodes.org/content/uploads/2014/02/benicia-downtown-mixed-use-master-plan.pdf>

promote a mis-guided belief that they can counteract poor design skills (Talen, 2013; Carmona, et al. 2006).

V. The potential role of zoning in England

The planning system in England is known as a discretionary system, with the planning application and permission system at the core of its development control system. But while many regulatory systems have introduced more discretionary approaches as discussed in section iv, over recent years the system in England has arguably become more regulatory (Allmendinger, 2006). In 1991 the role of the local plan was strengthened (MacGregor, 1995) and the 2004 reforms introduced new tools such as detailed area action plans to guide developments in key areas. Supplementary Planning Documents provide more detailed guidance in specific areas, including site-specific policies. And although not formally part of the planning system, Strategic Housing Land Availability Assessments identify potential sites for future housing development. The new Housing & Economic Land Availability Assessments now also include locations for employment uses. Even though they do not automatically grant permission like a zoning ordinance, they contain similar information, for example about the capacity/density of housing on a specific site. More recently since 2017, the new brownfield registers can provide, in part 2 for certain sites, a permission in principle (Gallent et al., 2019).

The white paper “Planning for the Future” (MHCLG, 2020) published as part of a consultation on planning reform in August 2020 proposes three broad zones in a new local plan, differentiating areas for growth, renewal, and protection. The growth areas would grant developments rights equivalent to the current outline planning permission, while renewal areas would provide rights which seem similar to permission in principle. The consultation document also refers to the option of merging growth and renewal areas into one category where a permission in principle would exist.

The white paper does not explicitly mention zoning or zones, but it is clear that the aim of the growth and renewal areas is to create more certainty for developers and land owners. Compared to the zoning practice in many other countries discussed earlier in this review, the approach proposed in the white paper does seem to be very different. Only three broad areas are proposed, while most zoning systems would have a much more detailed definition of the land uses and accepted built form in the respective zones. It is worth noting that the white paper does not mention the term zoning, but it does mention the option to create sub-areas within growth areas specifically for custom and self-built homes. This seems to be a parallel to the German system and may provide readily prepared plots for self-builders. These sub-areas might show a more detailed level of regulation not yet outlined in the white paper. Overall though, it remains to be seen to which extent and how proposals would still be checked and assessed in a detailed planning application within the growth areas and how the concerns of existing land owners and neighbours might be addressed. The white paper refers to a “fast track for beauty”. This seems to mainly apply to architectural features, and it is not yet clear how this would ensure assessing and controlling urban design quality, unless there is a further layer of detailed zones provided using for example building lines and detailed prescriptions of building extent/height and open space/public realm provision. This could perhaps be similar to form-based zoning as noted in section iv of this document. It is therefore unclear if the three broad categories can provide certainty for developers and land owners as that would be one of the advantages of a regulatory zoning approach. The other important aspect to consider is the time-horizon of a plan. Local plans which would define the proposed three “zones” usually give strategic guidance for a period of 15 years. But using zones granting direct “outline permission” might require frequent amendments to this new local plan, and the initial development of such a plan might take a

long time. Such frequent changes might undermine the intention to provide certainty for developers and land owners.

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