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Flexibility in Planning and the Consequences for Public-value Capturing in UK, Spain and the Netherlands

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Abstract *In the 1960s, flexibility was often seen in planning literature as a negative feature, whereas today it is perceived by planners and policy-makers as a positive asset to cope with the challenges of growing complexity, opportunism and diversity in cities. The discussion seems to rest between two approaches. While planning should be flexible to facilitate a non-linear and multi-layered decision-making system, implementation should not be too flexible as the public sector might lose the controlling power and the private sector might gain increasing influence in urban development. This paper uses empirical data from case-based research on British, Spanish and Dutch urban regeneration projects, and provides an analysis of the effects of an important feature of flexibility on public-value capturing. Public-value capturing is the level at which public bodies manage to make developers pay for public infrastructure—infrastructure provision, public roads and space, public facilities and buildings, affordable and social housing—and eventually capture part of the economic value increase. This important aspect of flexibility is the level of certainty about future development possibilities before negotiations between developers and local planning bodies take place.*

1. Introduction

What degree of flexibility is needed in planning? In this paper, we define flexibility as the room for change and alteration in zoning prescriptions during the planning process. Plans should provide a degree of certainty to safeguard public interests while also being flexible enough to ensure that the needs of actual development are met. This paper focusses on one specific aspect of flexibility: the level of certainty about the future development possibilities, related to the period in which public bodies and developers negotiate the terms

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within which urban development may take place. Certainty depends on whether legally binding land-use rules (e.g. land-use plans, planning permission) and indicative zoning plans (e.g. development plans) come into force before or after the negotiations As we will show in this paper, in "plan-led" systems (such as the Dutch planning system), zoning decisions are supposed to be legally binding before interested developers find out whether their intentions conform to the development terms. Thus, binding zoning plans are supposed to be approved in the early stages, creating large certainty about future development possibilities. On the other hand, in "development-led" systems (such as the British planning system), although there might be some indicative zoning plans in the early stages, legally binding land-use rules are supposed to be approved after the negotiations have ended successfully in a development agreement (Faludi, 1987, pp. 185–192). This means that plan-led systems, in theory, should provide more certainty, while development-led systems more flexibility.

This paper explores the effect of one of the many aspects of flexibility (i.e. certainty about future development possibilities) on public-value capturing. Public-value capturing may be considered one of the most important driving forces of public planning, as public bodies hope to recover the costs of public infrastructure with the increase in value. In urban development practice, public-value capturing in any of its possible variants usually takes place in the context of an agreement between public bodies (municipalities, public planning bodies, public development agencies, etc.), landowners and developers. Various concepts fall under the notion of public-value capturing, such as "cost recovery", "value capturing" and "capturing betterment". Cost recovery refers to the recovery of costs related to the realization of public infrastructure through contributions from private developers. They may contribute either by implementing this infrastructure directly, or by paying the public bodies to do so. Whether the developer or the municipality constructs the public infrastructure is not relevant. Relevant is that who actually profits, pays, in kind or in money. Value capturing is realized when public bodies that have invested in infrastructure, for instance, capture the increased land and property values which result from that investment. Capturing betterment refers to a public body capturing the increased value that results from modifying the binding rules and is irrespective of any costs that might have been made (Smith & Gihring, 2006, p. 752; Needham, 2007a, pp. 175–178; Krabben & Needham, 2008, p. 4). There is much discussion about which of these forms of public-value capturing is legitimate, and this discussion has crystallized differently in the planning systems of various countries (Muñoz Gielen, 2008a, 2008b, 2009b).

This paper aims to provide empirical evidence on this blurred and unclear balance between flexibility and certainty by studying cases of urban regeneration in England, the Netherlands and the Spanish region of Valencia. Previously, exploratory research has been done into six other Western European countries: France, Germany, Sweden, Italy, Belgium (Flanders) and Denmark. We provide an analysis of the effect of certainty/flexibility on future building possibilities, and on future contributions, in shaping developers' contributions to public infrastructure.

The paper consists of nine sections. The next, headed "Plan-led versus development-led planning systems" focuses on the categorization of planning systems with regard to the level of certainty and flexibility. Section 3, "Flexibility and certainty in planning: Where to draw the line?" sketches the concept of flexibility and certainty in planning literature, provides an academic discussion of planning practice and breaks down the discussion into concrete, measurable sub-variables. Section 4, "method and data"

summarizes the methodology applied to data gathering and analysis, including those strategies meant to strengthen the validity of the data and analysis. The following four sections (Sections 5–8), from the general "introduction to the studied cases" to the specific "effect of certainty on public-value capturing in urban regeneration" in the English, Spanish and Dutch cases, respectively, present the empirical data, including an assessment of the validity of the specific findings. Finally, the last section draws conclusions on possible implications of the findings for planning practice and for academic debate on flexibility and comparative research in planning law.

2. Plan-led Versus Development-led Planning Systems

The planning literature categorizes planning systems using two approaches. The first classifies planning systems according to a wide set of criteria, such as the distribution of powers relevant to planning among levels of government, or the maturity of a system. The second classifies planning systems depending on the legal and administrative systems in which they operate, making a distinction between plan-led and development-led planning systems, also known as the Continental and British systems, respectively (Nadin & Stead, 2008, pp. 38–40). This article uses the second form of categorization, complemented by Faludi's (1987) analytical distinction between theory A and theory B, because it serves the data gathering possibilities better. The resulting categorization is meant as analytical tool to define the independent variable, and is not aimed at showing all the nuances of the studied planning systems.

Development-led systems are similar to what Faludi defines as *proto-planning theory A*, characteristic of the British system. Plan-led systems are similar to *proto-planning theory B*, which supposedly characterizes the planning in most other countries (Faludi, 1987, pp. 185–192). In development-led systems, the public authority decides building applications on their merits. The zoning plan merely gives an idea of the thinking of the local authority, and it can be departed from without complicated procedures. Faludi calls this the "indicative theory of zoning" (Figure 1). In plan-led systems, the zoning

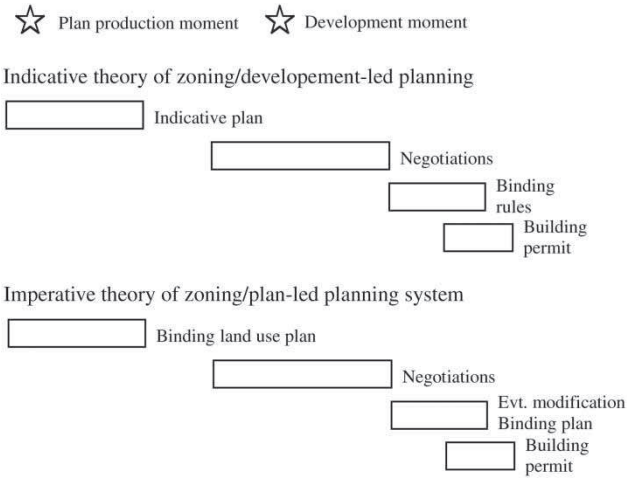

Figure 1. Categorization of "development-led" and "plan-led" planning systems

plan is more important. The local authority fixes the land-use regulations in a land-use plan, which becomes legally binding. This statutory fixation of land use is supposed to occur at the "plan production moment"; while in development-led systems at or shortly before the "development moment". In other words, in plan-led systems the land-use regulations are supposed to become legally binding before interested developers discover whether their intentions conform to these regulations. The land-use plan is supposed to state all the development conditions, thus to create a large level of certainty about future development possibilities. Once a developer submits a building application, the local authorities check whether it fits with the land-use plan. If it does not fit, the application should be rejected. Summarizing, plan-led systems differ from development-led systems in two aspects: (1) plan-led systems have a legally binding zoning plan and (2) this zoning plan is supposed to acquire legal status at an early stage, at the "plan production moment".

The differences between the British and the Continental systems seem to be the consequence of historical differences between the respective judicial systems. Two longstanding traditions in the UK are important to understand the British peculiarity: the heavy reliance on judge-made law in British Common Law, and the legislative tradition of procedural fairness (Booth, 2003, p. 4). The Rule of Law, central to the Continental, plan-led system, is held in high regard by liberal thinkers (Faludi, 1987, p. 187). Its origins can be found in the struggle of the bourgeoisie against the arbitrary powers of king and administration (Van Gunsteren, 1976, pp. 81–83). In the nineteenth century, liberal states worked towards streamlining and unifying their fragmented law, transforming into states with a constitution, and separation of powers and basic human rights. Legislation acquired a central role, with an administrative authority based exclusively on enacted law, judicial review by independent courts and the equality of citizens before the law. In planning systems, the land-use plans acquired a statutory character, as pieces of legislation on the level of local allocation of land use. On considering building applications, the public administration is supposed to check only whether or not the application matches the zoning map. In theory, there is no room for discretional considerations.

Our findings suggest that many Western European countries, which theoretically have plan-led planning systems, show characteristics more similar to development-led planning. Of the nine countries studied, only Spain, Italy, France and Belgium (Flanders) seem in practice to follow the plan-led system. As a rule, these countries have generally binding land-use rules approved in early stages, at the "plan production moment", before the "development moment" approaches (Figure 2). However, in Italy, France and Flanders, the legal certainty that could be created by these early zoning plans is in practice not as strong as might be expected. In the Netherlands, Germany, Sweden, and Denmark, supposedly followers of the "plan-led" system, the actual use of binding land-use plans seems to be different from how it should be in theory. As a rule, binding land-use rules (whether this concerns a new land-use plan or a modification of one to create new building possibilities) are only approved once negotiations with developers/landowners have taken place or, at least, when there is enough certainty about their successfully conclusion. Thus, the binding land-use rules that enable new developments are approved only after intending developers find out whether their intentions conform with the imposed development conditions. In other words, binding land-use rules are in practice approved at or shortly before the "development moment", as is the case in the UK

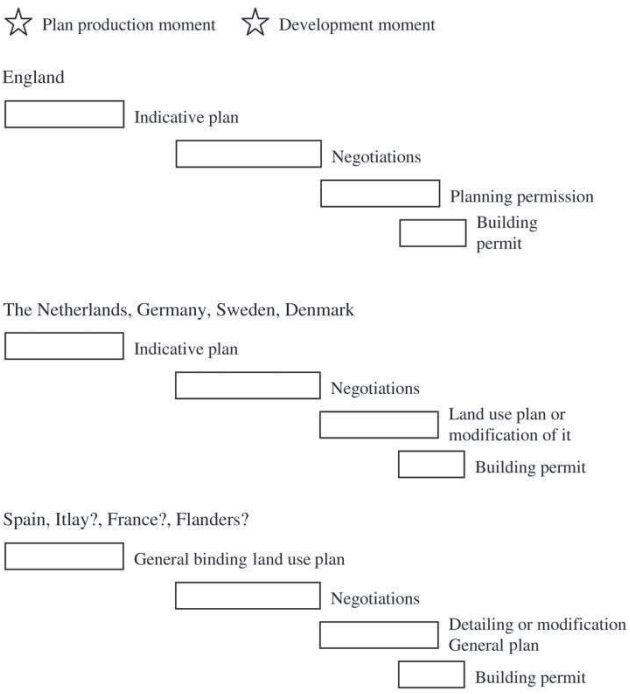

Figure 2. Actual place of legally binding land-use plans in development processes in various Western European countries

(Muñoz Gielen, 2007). Table 1 summarizes the differences among the nine studied countries. A comparative study by the European Commission concurs with these findings. In the 1990s, when this study was carried out, most countries belonging to the plan-led system showed in practice similar deviations from their theoretical working as the deviations we found in seven of our nine studied countries (European Commission, 1997, pp. 45–46).

3. Flexibility and Certainty in Planning: Where to Draw the Line?

Although development-led planning has connotations of opportunism and flexibility, it should be underlined that these terms provide related but different meanings. Faludi (1987, p. 206) clearly states the distinction between flexibility and opportunism: "By accepting uncertainty and applying forethought to how to cope with it, flexibility helps in achieving as much certainty as is possible in a world in flux. Opportunism, on the other hand, merely reacts to uncertainty wherever and whenever it hits".

The planning profession has altered according to social, economic and political as well as national and international transformations and dynamics. Decision-making systems have also been affected by macro-level structural changes, namely globalization and the spread of neoliberal ideology. In the 1970s, John Friedmann drew the attention of scholars by saying that direct control cannot be the role of the planner. Although he emphasized that planning intervention should be filtered through a series of complex structures and

Table 1. Summary of variations in the planning systems of the nine studied countries

	NL	England	Spain (Valencia)	Germany	France	Italy	Sweden	Belgium (Flanders)	Denmark
Early stages in development process, before negotiations	No land-use plan	No land-use plan	Yes, General Land-use Plan	No land-use plan	Yes, General Land-use Plan, in transition to new sort of plan	Yes, General Land-use Plan, in transition to indicative structure plans	No land-use plan	Yes, regional land-use plan	No land-use plan
Development moment, after negotiations	Binding rules approved the first time, in one document/ step	Binding rules approved the first time, in one document/ step	If general plan not detailed yet, is detailed further in another plan document	Binding rules approved the first time, often simultaneously in more than one document	General plan is detailed in another plan document	General plan is detailed in another plan document	Binding rules approved the first time, often simultaneously in more than one document	Regional plan is detailed/ modified in another plan document	Binding rules approved the first time, in one document/step
Plan-led or development-led	Not really plan-led	Development-led	Plan-led	Not really plan-led	Plan-led	Plan-led, in transition	Not really plan-led	Plan-led	Not really plan-led

processes (Friedmann, 1973), he nevertheless defined the role of the planner as a guiding/controlling one. Precisely 30 years later, Friedmann (2003) emphasized the shift in planning from an instrument of control to an instrument of innovation and action. This summarizes the shift in interpretation in the planning literature, which has implications for the planning profession as well. During those 30 years in the planning profession, greater flexibility and less rigid rules possibly became a common tendency in planning practice (Healey & Williams, 1993). However, this may not necessarily have resulted in more countries adopting development-led practices, and may coincide with the trend in development-led countries of assuming some plan-led practices. In a comparative study, the European Commission found a double trend in planning practice: countries operating with rigid plan-led systems tend indeed to incorporate flexibility, but those operating in development-led systems seek to provide greater certainty (European Commission, 1997, p. 45).

There are various arguments behind the shifts towards more or less flexibility in planning practice (Tasan-Kok, 2008). Moroni (2007, pp. 146–147, 153) suggests that flexible planning systems (such as the British development-led system) are unpredictable and unstable as each case is judged on its merits and cannot be predicted in advance. In the same publication, he suggests that more flexible (abstract, general and end-independent) rules and actions are needed to deal with the complexity of the contemporary urban systems (Moroni, 2007, p. 156). Needham (2006: quoted in Moroni, 2007) also gives the British system as a case of being too open to the state administration's discretion and not meeting the Rule of Law. On the other hand, he puts certainty in the framework of *predictability* when he emphasizes that public authorities do not want to be bound to the principle of predictability. Instead they want to be able to examine plans informally and if necessary change land-use plans to accommodate various applications. In fact, certainty can be provided to citizens if strict rules are followed when the plan is being made or approved (Needham, 2007b, p. 186). Thus, plan-makers, especially local governments using public–private partnership instruments, may prefer not to provide this kind of strict certainty to leave some room for negotiation or for contingencies that might occur during the process of implementation. Faludi (1986, pp. 185–192) argues that the assumptions underlying the plan-led system (i.e. planners can predict the nature and quantities of a community's needs and convert this quantification into an allocation and designation of land uses) are invalid. Moreover, the idea that economic and political forces in a community will respond compliantly with these designations and for prescribed uses might be difficult to meet. Departures from plans are inevitable, and all-out commitment to environmental plans (legally binding land-use plans) is unreasonable.

Thus, the discussion seems to focus on the methods or theories that might be practicable in current urban planning, taking into account the context of neoliberal planning instruments: those methods and theories that create certainty about future development possibilities *before* or *after* negotiations take place.

This paper makes a distinction between two independent sub-variables (types of certainty) to further put into operation data gathering: certainty about *building possibilities* (what, where and how the landowner will be allowed to build), and certainty about *future contributions* (how much the landowner will have to contribute, in kind or in money). The arguments for this differentiation are of an economic nature and relate directly to the possible consequences of certainty on public-value capturing. Provided that a developer's minimum profit and development costs are covered, variations in public-value capturing (i.e. sum of contributions to be paid in kind or in money) seem

to affect only the market price of land (White, 1986, pp. 104–107). The assumption is that when developers are made aware in the early stages that they are likely to face financial obligations, arrangements can be made to incorporate these into the land price. For instance, the developer can concur with the landowner that the agreed price will be subject to a reduction. If there is no certainty about the obligations to be paid at the time when developers agree the price with landowners, landowners might ask, and developers pay, a price that incorporates maximum profit margins. If local authorities introduce new obligations too late in the process, there may be no more financial room left in the developer's budget (Rowan-Robinson & Lloyd, 1988, pp. 128–130; Campbell *et al.*, 2000, pp. 769–771).

4. Method and Data

A fundamental question in case-based research is whether the findings are valid. Central here are the concepts of "internal validity" (i.e. can the findings explain the studied cases?) and "external validity" (i.e. are the findings generalizable to other cases?). This paper mainly bases its conclusions on data from cases of urban regeneration: three in England, four in Spain (Valencia) and four in the Netherlands. Internal validity was confirmed by a combination of four measures:

(a) Maintaining the context as constant as possible: To control possible differences in the context of the cases and reduce the risk of spurious third variables, we applied two measures:

  (1) We studied countries with somewhat similar political, economic and social contexts. This limited the total pool of countries to be studied to those whose contexts are more or less the same as the Dutch context. These countries are eight fellow EU members: the UK, Spain, Germany, France, Italy, Flanders (Belgium), Denmark and Sweden.
  (2) The cases to be selected had to show similarities in terms of landownership situation (most/all land privately owned), the need for significant public infrastructure, and the degree to which the economic value of land increases;

(b) Maximizing the variance in the independent variable: Previous measures were combined with a second strategy, that of "heterogeneity in the independent variable": selecting those countries and cases that show the broadest variance in the independent variable "certainty", and seeing what happens in the public-value capturing variable (Swanborn, 1996, pp. 62–64; León & Montero, 1997, pp. 110–117; Polit *et al.*, 2001, pp. 188–192). This combination of maintaining context as constantly as possible and then maximizing the variance in the independent variable is a methodological strategy referred to as "most similar systems design". It is appropriate for uncovering causal relationships between two variables (Pierre, 2005, pp. 454–455). Specifically, we introduced two measures:

  (1) Of the eight countries, those were selected for in-depth research that showed the widest variation in the certainty variable: the UK and Spain. Both may be considered examples of opposing models: as we saw above, the UK has a development-led planning system, and Spain turned out to have probably the most authentic example of a plan-led system. Thanks to this variance, the likelihood of a possible causal relationship with the public-value capturing variable

becomes larger. Because of differences in local planning law in both countries, we focused on England in the UK and the region of Valencia in Spain.

(2) In these three countries (including the Netherlands), we selected cases that showed innovative features in the independent variable. We asked local experts and persons directly involved to help us find these innovative cases;

(c) Checking for other variables: To see if they might have played a role in each case we systematically checked a list of possible third variables (personal circumstances of those involved, political circumstances, market price of real estate; interviewed people were asked to identify possible variables);

(d) Applying a hypothetical-deductive method: The assumption stated above that certainty about future contributions helps developers to incorporate the obligations into the land price has been confronted with the findings.

The external validity (generalizability of the research findings to other cases) was also the goal of diverse measures. Some authors consider that establishing internal validity in case research is, in the first instance, good enough because it proves that something can happen. This is what Yin (1989) does when considering that instead of generalizing to populations or universes, it is possible to generalize to theoretical propositions, what he calls "analytic or theoretical generalization" (pp. 21, 44). Actually, as Swanborn (1996, p. 67) observes, Yin implicitly considers the studied case to be the same as a causal experiment in a laboratory. In a laboratory experiment, the context of studied variables can be perfectly modulated and controlled so that there is no doubt that the findings are true; it is possible to reject any alternative explanation to the findings. Therefore, there is no actual need for any representative sample of cases because the studied cases are totally internally valid and are thus deprived of possible errors. Since they are sufficiently representative of the total population, they are thus externally valid. In fact Yin's theoretical generalization implies a generalization to the total population. However, we consider, as Swanborn does for social science research in general (*ibidem*), that the cases in this research are not fully comparable to a laboratory experiment as Yin implicitly postulates. Without a reasonable degree of external validity, obtained through means other than solely internal validity, the findings in this paper would run the risk of being supported by overly specific cases. Several measures have been taken in order to be able to claim that what happens in the studied cases is not an exception and somehow stands for other urban regeneration cases in the three studied and other European countries:

(1) First we selected cases that in some way stand for the main sorts of urban regeneration projects (Table 2).

(2) The second measure involved systematically placing the case findings alongside other sources of more or less general knowledge (publications about other cases and expert interviews) in order to assess their degree of external validity.

(3) The UK and Spain were selected because they show extreme values in the independent variable (plan-led versus development-led qualities, i.e. degree of certainty). As mentioned above, this increases the possibility of measuring differences in variable public-value capturing. It also makes the studied countries more representative, as examples of the extreme values that the independent variable can assume. Many countries are situated in between these two extremes.

Table 2. Selected urban regeneration cases in England, Spain (Valencia) and the Netherlands

	Valencia	England	The Netherlands
Multi-functional central areas	*Guillem de Anglesola* and *Periodista Gil Sumbiela*	*Temple Quay*	*Stationskwartier*
Monofunctional residential areas	*Guillem de Anglesola* and part of *Benalúa Sur*	[a]	*Kruidenbuurt*
Old brown-field sites	*Periodista Gil Sumbiela*, *Camino Hondo* and part of *Benalúa Sur*	*Megabowl* and *Harbourside*	*De Funen* and *Kop van Oost*

Note: Multi-functional central areas are city/town downtown areas and sites around railway stations. Monofunctional residential areas are districts with a predominantly residential use. Old brown-field sites are derelict sites: business and other sorts of economic-industrial activities; gas and electricity factories; harbour areas; railway infrastructure; and hospitals, government buildings and military sites.
[a]It was not possible to find a case in England that would fit within this category.

5. Introduction to the Studied Cases

5.1. *The English Cases*

The three English urban regeneration projects are located in the city of Bristol. All three, prior to negotiations, had only indicative zoning prescriptions, which were ultimately departed from to differing degrees. "Harbourside/Canon's Marsh" (7.8 ha, see Figure 3) forms the last and largest part of the redevelopment of a former dockland, and was mostly flat before redevelopment. The 1997 Bristol Local Plan and the 1998 Planning Brief Implementation Phase for Harbourside regeneration (a supplementary document to the Local Plan) foresaw in the redevelopment of the site. In 1999, a developer submitted a first application, which was rejected along with a second one. In 2001, the third application succeeded, and planning permission became definitive in 2003, after negotiations under Section 106 ended with the sealing of a Development Agreement. The central government regeneration agency, English Partnerships issued inexpensive

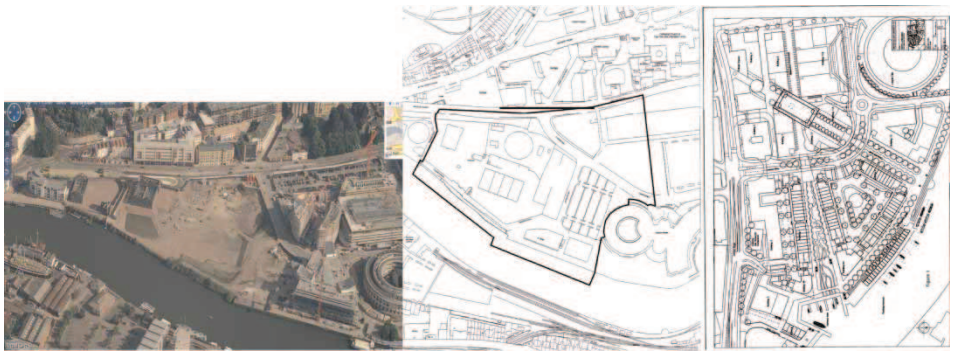

Figure 3. Harbourside, Bristol. Aerial photo of former situation, boundaries site development plan and new plan
Sources: Maps live; report from the Head of Bristol Planning Services to Bristol Local Council Committee, 17 October 2001.

loans for the infrastructure. Initially, 60% of the land was privately owned, the rest was owned by the City Council of Bristol. Work on infrastructure provision commenced in 2004. By June 2007 more than half of the development had been delivered or was under construction, and the first buildings of in total 700 apartments, 44,000 m^2 office space and 30,000 m^2 leisure space were already occupied and in use.

"Temple Quay" (7.4 ha) includes former railway sidings and industrial terrain, largely flat at the time of redevelopment. The 1997 Bristol Local Plan and the City Centre Strategy (a supplementary document to the Local Plan) foresaw in the redevelopment of part of the site. In the past an Urban Development Corporation (UDC) had taken over the local competencies and bought part of the land. When the UDC closed in 1996, a regional public body took over its property. Two other developers and the City Council of Bristol owned the remainder of the land. In 2001, the regional public body, together with one of the developers, submitted a planning application to redevelop the site. The planning permission became definitive in 2003, after the signing of a Development Agreement. Work on infrastructure provision commenced in 2004. By June 2007 about one quarter of all construction was delivered, in total 495 apartments, 61,000 m^2 office space and 7000 m^2 leisure space.

The "Megabowl" site (1.3 ha) is relatively isolated from the rest of the city. Prior to redevelopment the site was used as a bowling alley. The 1997 Bristol Local Plan and the 2003 Proposed Alterations to the Bristol Local Plan (a supplementary document to the Local Plan) foresaw no redevelopment of the site. In 2006, the landowner submitted an application for redevelopment into 184 apartments, and after provisional approval at the end of that year he sold the site to a commercial developer. In 2007, negotiations ended with the sealing of a Development Agreement. Demolition began in June 2007, and at the time the infrastructure provision was expected to start at the end of that year.

5.2. *The Valencian Cases*

In all four cases (three in the city of Valencia, one in the city of Alicante), a General Land-use Plan, that included the legally binding zoning regulations, and other policy documents defined many of the final development possibilities before negotiations began. The 1988 General Plan of the City of Valencia had foreseen in the redevelopment of "Guillem de Anglesola" (1.2 ha): demolition of old and decrepit housing, owned by hundreds, and the construction of a main road flanked by about 125 apartments. A commercial developer submitted a proposal in 1999 and the detailed Land-use Plan was definitively approved in 2005 after public tender, negotiations and the signing of a Development Agreement. The detailed plan fitted in with the also very detailed provisions of the previous 1988 Plan. In 1999, the developer owned almost none of the land. He had bought almost all of it by the end of the land readjustment procedure, in May 2008, at which time infrastructure provision had not yet begun.

The 1988 General Plan also foresaw the redevelopment of "Periodista Gil Sumbiela" (0.6 ha): demolition of some industrial buildings and offices and construction of about 100 apartments and some retail space. In 2005, a commercial developer, supported by the owners of 65% of the land, submitted a detailed plan that increased the building volume established in the 1988 plan. This proposal was definitively approved in 2007 by which time the developer had bought all the land but work had not yet started by the end of that year.

The 1988 General Plan foresaw the continuation of the industrial use in "Camino Hondo del Grao" (5.7 ha). In 2000, a commercial developer submitted a proposal to redevelop the

site into residential space, but at the time the municipality did not accept any modifications to the General Plan. In 2003, once the municipality had approved policy that enabled modifications to the General Plan, another commercial developer tried again. However, in a public tender in 2004 the municipality selected another proposal, submitted by the owners of the existing industries in the site, 80% of the land. The detailed plan re-zoned the previous industrial use into about 465 apartments and a considerable amount of office and retail space. It was definitively approved in 2006, after the signing of a Development Agreement. In 2005, a commercial developer bought nearly all the land and demolition works began in April 2008.

The 1987 General Plan of the City of Alicante foresaw the redevelopment of "Benalúa Sur" (8 ha), a site with empty plots, some decrepit housing and several industries, into residential and some commercial space. In 1997, the municipality approved a modification of the 1987 plan to reduce the number of dwellings. In 1998 the owners of 60% of the land, led by a small consultancy group that owned 15% of the land, submitted a proposal. After public tender in 2004, the Development Agreement was signed and the detailed plan became definitive. It included about 600 apartments plus some offices and retail space (Figure 4). By 2007 a commercial developer had bought an important share of the land and work had begun on the provision of infrastructure.

5.3. *The Dutch Cases*

The four Dutch cases are located in the cities of Amsterdam, Eindhoven, Groningen and Breda. For all four, prior to negotiations, there were only indicative zoning prescriptions, which ultimately were always departed from, to different extents. In 1991 the Structure Plan of Amsterdam, an indicative document, prescribed redevelopment in "De Funen" (8 ha). At the time, the site was partly vacant and partly used for warehousing and storage. The first site-specific indicative plan on which current development is based was approved in 1993. Dutch Railways, owner of most of the land, was initially not interested in developing the site or in selling it to the municipality, not until a commercial developer showed interest. In 1997, after signing a Development Agreement with the municipality, Dutch Railways sold most of its land to the commercial developer, which in 1999 signed a second Agreement with the municipality. The land-use plan was approved definitively in 2000. In 2002 the land was sold to another commercial developer. In January 2008 the construction of 565 single-family dwellings and apartments, and 2500 m^2 office space was ongoing and more than half of the dwellings were already inhabited.

At the end of the 1990s the first indicative site-specific plans were made for regeneration in "Kruidenbuurt Noord" (17 ha, Eindhoven). Of some 850 existing houses, almost all social housing built in the 1930s, 750 units have been or will be demolished, leaving some 100 units untouched and building 650 new single-family dwellings and apartments. A social housing association owns 50% of the plan area, while the municipality retains ownership of the public space and some buildings. The association and the municipality sealed a Development Agreement in 2004, and the land-use plan was definitively approved in 2005. By November 2007, 189 dwellings had been delivered and another 194 dwellings were under construction.

The 1996 Structure Plan by the Groningen Municipality foresaw the redevelopment of "Kop van Oost" (5 ha). At the time of the development initiative in 2000 this site was no longer in use, and 60% of the land was owned by the former user: a wood-processing

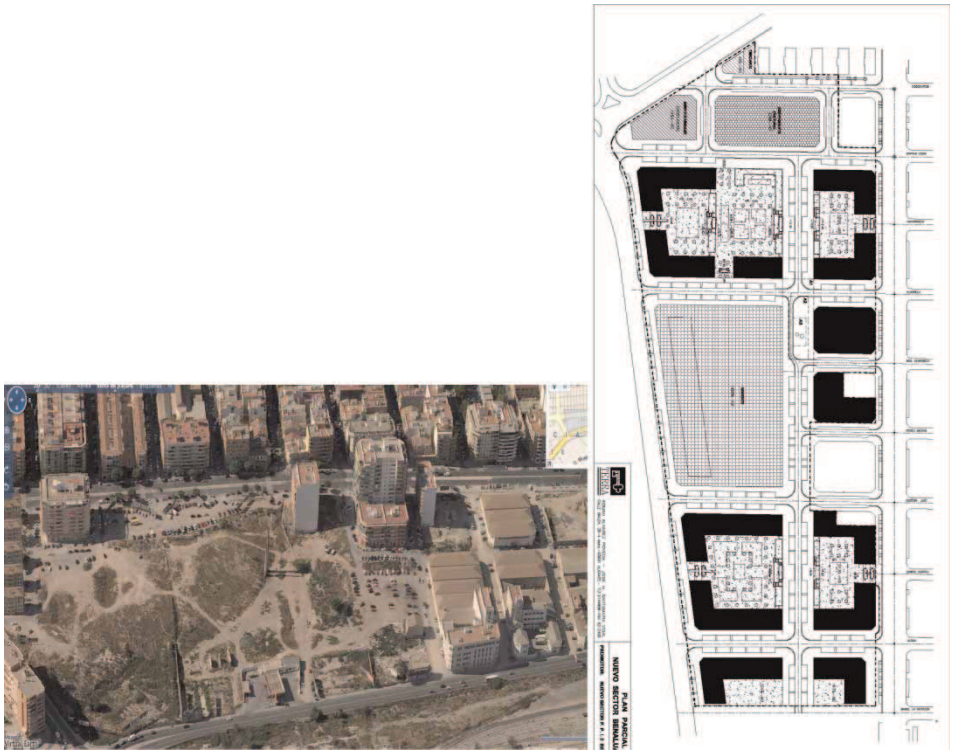

Figure 4. Benalúa, Valencia. Aerial photo of former situation and site development plan
Sources: Maps live; 2003 Joint Development Programme.

company. In 2000, an intermediary bought the land. After negotiating general development terms with the municipality, the land has been re-sold twice to commercial developers: in 2001 and in 2002. Negotiations with the final developer crystallized in 2005 in a Development Agreement. The land-use plan was definitively approved in 2006, including 430 dwellings, most of them apartments, and about 4000 m^2 commercial space (Figure 5). In October 2007 infrastructure provision was ongoing. Some roads around the site will be refurbished.

Since the 1980s the Breda Municipality has developed indicative plans for the regeneration of the "Stationskwartier" site (16 ha) into a mixed-use scheme: about 80,000 m^2 apartments, 650 units, plus 140,000 m^2 office space, some shops, a new railway and bus station and 50,000 m^2 in car parking buildings. The existing use is railways, deserted land, and some infrastructure for bus stops, parking places, a hotel and the railway station. In 1998, the Dutch government appointed the site as one of the railways stations to be connected to the high-speed railway network. Both national and provincial governments issued important subsidies. Negotiations have already crystallized in several development agreements. Dutch Railways owns 80% of the land, and the municipality of Breda the existing public space and some plots. The land-use plan was definitively approved in 2007. At the end of 2007 work on infrastructure provision had started on the northern side of the railway.

Now let us look at how local public bodies create certainty or uncertainty by exploring the sort of documentation used and analysing the consequences for public-value capturing.

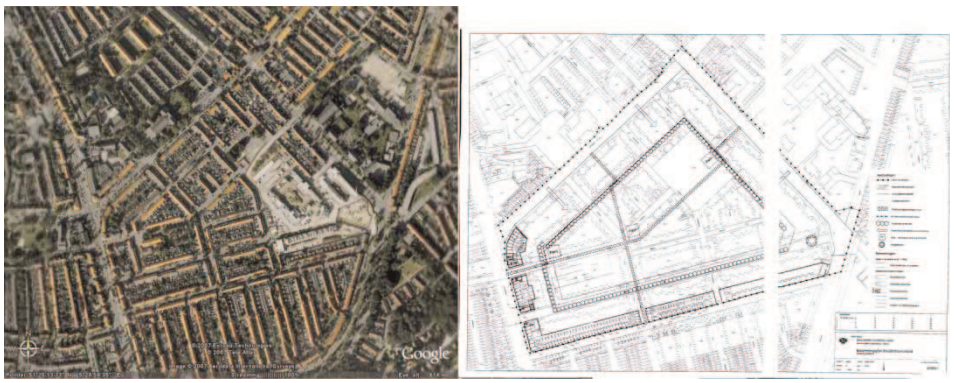

Figure 5. Kruidenbuurt, Eindhoven. Aerial photo of former situation and Land-use plan
Sources: Photo: Google Earth. Map: Land-use.

6. Effects of Certainty on Public-value Capturing in English Urban Regeneration

6.1. *How Much Certainty is in there in the English System?*

In England, prior to development initiatives, local authorities usually approve non-site-specific zoning plans called variously "Structure plans", "Local plans", "Unitary development plans" and, since 2004, "Local development frameworks". In addition, local authorities can draw up site-specific documents that might not be predefined in planning legislation but receive the status of supplementary policy guidance. Since the 1990s, encouraged by central government advice, local authorities have tended to create far more similar informal and formal documents that make clearer to both themselves and applicants how they intend to behave (European Commission, 1997, p. 45; Booth, 2003, pp. 12–13).

In principle, however, these documents do not offer much certainty about future development possibilities. With regard to the consideration of applications for planning permission, the 1990 Town and Country Planning Act gives local authorities the broad competencies for evaluation. Authorities "shall have regard to the provisions of the zoning plan (and supplementary planning guidance, ed.), so far as material to the application, and to any other material considerations" (Section 70.2). The courts have held that the expression "shall have regard to the provisions of the zoning plan" does not require that the plan be slavishly adhered to (Moore, 2005, p. 223, §12.32). The possibility of considering the zoning plan and the supplementary planning guidance as not pertinent and having regard to "any other material considerations" gives local planning authorities (LPAs) potentially the highly discretional power to decide each case on its own merits. By refusing applications or by submitting them to planning conditions and obligations, LPAs may refer to such broad principles and ambiguous concepts as "amenity".

In practice LPAs often use this provision to depart from the zoning plans and supplementary planning guidance.[1] The cases confirm this general conclusion. Bristol departed in all the three studied cases, although to different extents: in *Harbourside* and *Temple* the departure was considerable, and in *Megabowl* the greatest. These cases also show that zoning plans and supplementary planning guidance are not always well-detailed. The 1997 Bristol Local Plan is not a detailed plan: it does not include the maximum building volume or each amount of land use, or the building envelope and alignments,

etc. The 1998 Planning Brief for *Harbourside* provided some certainty by specifying the development possibilities and the obligations to be paid; however, this did not result in detailed prescriptions. It seems plausible that this case-based finding (zoning plans and site-specific supplementary planning guidance are often not detailed) is not an exception in England.

Thus, there is in the British planning system an intrinsic uncertainty, although the trend of local authorities approving formal and informal indicative documents creates some certainty. Additionally, there is another clear trend, at least since the late 1990s, and also encouraged by central government advice, of local authorities augmenting the certainty about one specific aspect: the future contributions. English local authorities are increasingly elaborating on planning obligation policy that has the same status as complementary planning guidance. This trend seems to be, in part, a response to criticism. The development sector has objected strongly to the delays associated with negotiating planning agreements, and there is wide concern about the lack of accountability of the negotiation processes. Nowadays, a majority of local authorities has enacted formal policy on planning obligations (Campbell *et al.*, 2000, pp. 760, 763–764; Department for Communities and Local Government, 2006, pp. 19–20) in various sorts of documentation:

(1) Generic non-site specific policy for all or parts of municipal territory, for example Bristol's Supplementary Planning Document Number 4 (SPD4) ("Achieving Positive Planning through the use of Planning Obligations"), adopted in 2005. This document was important in the *Megabowl* case and part of *Temple Quay*.
(2) Site-specific documents for development sites of strategic relevance, Bristol's 1998 Planning Brief, for example. This document was important in the *Harbourside* case.

Let us examine these cases in more detail. In *Harbourside* there was some certainty at the time of the application procedure and negotiations (March 2001–February 2003). The 1997 Bristol Local Plan zoned the entire site as a "Major regeneration area", with offices (no specific building volume), leisure/tourist activities, and housing (about 200 dwellings). In addition, in 1998 the Council approved a Planning Brief that specified the building possibilities (augmenting the number of dwellings to 400) and prescribed the obligations likely to be paid (see Box A).

Box A
Examples of obligatory contributions included in the *1998 Planning Brief for Harbourside*:

- Profits should "cross-subsidise the achievement of the essential infrastructure and the Council's leisure (...) objectives ..." (p. 13, see also p. 51). "Leisure objectives" include at any rate a financial contribution to the construction of a non-commercial leisure facility, situated nearby but outside the plan area in question;
- The developer must provide directly related infrastructure (the roads and public space within the plan area, remediation of contaminated land, p. 51, Appendix I: (i). Appendix I: (ii–viii) prescribes which development sites will assume the costs of which infrastructure, and a realization schedule.

Although the 1998 document did not prescribe any specific amount, it seems that it created enough clarity for the developer to assess, within a certain margin, the financial feasibility of the scheme. One involved planning officer insisted that the goal was to create beforehand enough certainty about the development value *and* costs to avoid having developers paying too much for the land. Nevertheless, this degree of certainty was relative. The Council could deviate from both documents, as actually happened several times: for example, during the negotiations, the Council first added the requirement of 30% of affordable housing and augmented the total number of dwellings from 400 to 700; afterwards it lowered the requirement of affordable housing.

In *Temple Quay* the Council chose not to specify the vague determinations of the 1997 Local Plan. No other site-specific supplementary planning guidance was enacted for this site at the time of the application procedure and negotiations (May 2001–May 2003). The 1997 Plan zoned more than the half of the site as "regeneration area", "mixed commercial area", and both new "housing site" and "industrial and warehousing". However, the rest of the site (about less than half) was zoned as "primarily industrial and warehousing", or had no zoning at all. Thus, the certainty about the building possibilities was very low not only because the lack of details in the 1997 Plan, but also because this plan foresaw regeneration for only half of the site. There was also no certainty about obligations because the 1997 Plan said nothing about future contributions.

There is an exception to the lack of certainty in *Temple Quay*. In 2007 the developer decided to apply for a modification of part of the planning permission, with regard to one-third of the site. He applied for an augmentation of office space and number of dwellings. Modification means that planning obligations will be renegotiated. In 2005 the Council approved the SPD4, which has the same status as supplementary guidance and details the obligations to be paid/fulfilled in all schemes in the City of Bristol, most often in the form of standard charges (see Box B). Thus, since 2005 SPD4 forms an evaluation criterion for all planning applications in the city. Thanks to this document, when the developer decided in 2007 to apply for a modification of the planning permission, he had some certainty about the likely obligations to be paid.

Box B

Bristol's *2005 SPD4* establishes standard contributions, for example:

- Affordable housing: in residential developments of 25 or more dwellings or one hectare or more in size, a percentage of the total number of units according to local affordable housing policy (30% in 2007, red.);
- Educational facilities: in residential developments of 40 or more dwellings £9,136 per additional pupil numbers in excess of the capacity of local nursery and primary schools, £14,346 per additional pupil of local secondary schools; the developer is usually required to pay a sum for the provision of off-site facilities, or in exceptional cases to provide these facilities on-site.

In *Megabowl* there was much uncertainty about future building possibilities as the 1997 Bristol Local Plan and the 2003 Proposed Modifications did not in any way foresee the regeneration of the site. This is called a "windfall site". The uncertainty was reinforced by site-specific circumstances: the site is isolated by a highway and is not really suitable

for residential use. However, with regard to future contributions, there was high certainty because SPD4 had already been approved at the time of the application procedure and negotiations (April 2006–April 2007). Nevertheless, this certainty was flexible. As said, the Council could deviate from it, as actually happened: for example, during the negotiations, the Council lowered the requirements for social/affordable housing from 30% to 25%.

The question remains, what effect has the level of certainty had on public-value capturing. Here a distinction is made between certainty about building possibilities, and certainty about contributions.

6.2. *Effect of Low Certainty about Building Possibilities on Public-value Capturing*

In general, it seems that low certainty about the future building possibilities may reinforce the negotiation powers of LPAs, which seems to have improved public-value capturing (Claydon and Smith, 1997; Campbell *et al.*, 2001, pp. 18–19; see Note 1). The cases seem to confirm this general conclusion. In *Megabowl* the uncertainty about the building possibilities was the greatest in all three cases, as the site had never been foreseen for regeneration. The Council required and obtained what could be considered a high level of obligations (see Table 3 for a summary of the obtained public-value capture). Almost all possible contributions stated in SPD4 as relevant to this site were obtained here. The Council's planning department considers this case a good example of obtaining Section 106 obligations.

There are two possible explanations for this apparently positive effect of uncertainty about building possibilities in the *Megabowl* case. First, uncertainty may reinforce the negotiation position of LPAs. Both the planning officer involved and the developer's agent agree that this uncertainty gave much negotiation elbowroom to the Council. This case-based finding suggests that when certainty is high, LPAs have less to offer in the negotiations. In addition, low building expectations might improve public-value capturing because they deflate land prices. As a consequence of the lack of certainty and low building expectations, the site had not been the subject of speculative trade: no developer had been seriously interested in buying the land. The former owner and user negotiated the planning permission and obligations. The low book price of the site, about €3–4.5m (change rate: 1 British pound = 1.5 euro), gave the owner considerable leeway to pay (in money and in kind) more contributions than usual. The total development costs, which included the land price and the contributions, amounted to about €20m and the total estimated returns about €36m. After agreeing the contributions, the owner sold his land to a developer for about €11m. In a hypothetical scenario in which the expectations for the site are clear beforehand, developers would most probably have tended to buy the land earlier, paying high sums, and this would have reduced the financial leeway available for contributions. In both *Temple Quay* and *Harbourside*, developers bought land from the prior owners for a price presumably higher than the formal market price. However, it was not possible to examine the price of this land as the developers were unwilling to provide the needed information.

6.3. *Effect of Some Certainty about Contributions on Public-value Capturing*

In general for England, there is evidence that local authorities that dispose of standard, already known charges are able to gain more obligations (in number and in terms of

Table 3. Comparison of results of public-value capturing (who paid for or implemented what?) in England

	On-site land development costs		Land for on-site public infrastructure		Land for on-site public buildings		On-site public buildings		Affordable housing		Contribution to off-site public infrastructure and facilities	Capturing betterment
	Developer	Public body	Developer	Public body	Developer	Public body	Developer	Public body	Developer	Public bodies		
Generalizable knowledge England	(Almost) all the costs	Indirectly through land/ inexpensive financing	Most of the land	Part of the land	Part of the land	Part of the land	Not often	Almost always	Growing amount of affordable/ social housing	Part of	Important amount, growing in recent years	None, in theory
Harbourside (total value of real estate: €404m)[a]	€28m (7% of total value real estate)	Council paid share, English Partner issued cheap loan	30% of total plan area	20% of total plan area	None	0.3% of total plan area	Developer builds small public building	None	4% rent, 5% shared ownership	None	€32.5m (8% of total value of real estate)	
Temple Quay (total value, real estate: €409m)	€ 13.2m (3% of total value real estate)	Probably indirect subsidy SWRDA	27% of total plan area	27% of total plan area	3% of total plan area	12% of total plan area	None	Public school (existing)	4% rent, 10% shared ownership	None	€5.9m (1.5% of total value of real estate)	
Megabowl (total value, real estate: €37m)	€1.2m (3% of total value real estate)	None	65% of total plan area	None	None	None	None	None	20% rent, 5% shared ownership	None	€1.6m (4% of total value of real estate)	

Note: Dark grey: Developer contributing the most of the three cases.
Light grey: Developer contributing the second most of the three cases.
White: Developer contributing the least of the three cases.
[a]"Total value real estate": the total return accruing from the sale of the final buildings.

their economic value). This suggests that certainty about contributions could have a positive effect on the number and economic value of obligations (Department for Communities and Local Government, 2006, pp. 19, 22, 27–28, 54). The findings in our cases coincide with this general conclusion. A comparison of the three projects suggests a positive relationship between certainty and the contributions. They were higher in cases where certainty was higher: thus in *Megabowl* and *Harbourside*; and lower in the previous permission for *Temple Quay*. Another fact confirms this conclusion in *Temple*: it seems that once SPD4 was approved, on-going renegotiation of planning permission for one-third of the site in 2007 was expected to provide more obligations than the first permission: for example, more social housing and contributions for library services and car clubs.

There are two possible explanations for this apparently positive influence of certainty about contributions. First, it may reinforce the negotiation position of LPAs: making specific policy for obligations means that they become material to the determination of planning permission. This allows LPAs to successfully refuse those applications that do not fulfil the required contributions, or to successfully subject the applications to conditions and obligations (Campbell *et al.*, 2000, p. 773, 2001). A representative of the English developers' umbrella organization thinks that local authorities create strong arguments for eventual refusal and this provides them with a strong starting point in the negotiations (see Note 1). The cases seem to confirm this general conclusion: in all three cases, the public officers in charge considered a strong policy base for asking planning obligations very relevant. In *Temple Quay*, at the time of the negotiations there was no such strong policy base, and the planning officer considered this had a crucial negative influence on the resulting contributions. Here the mentioned expected additional contributions in the renegotiation of part of the planning permission confirm the crucial role of certainty. The findings in our cases coincide with the findings of other studies. In a case study in Newbury, Berkshire, the lack of such an obligations policy base seems to have negatively influenced public-value capturing (Campbell *et al.*, 2001, p. 24). In another study of three projects in London, Weymouth and Liverpool, the researchers formulated similar conclusions (Claydon & Smith, 1997, p. 2017).

The second explanation is based on the assumption stated at the end of Section 3: certainty deflates land price and other development costs, leaving more financial leeway for contributions. The cases seem to confirm this general assumption. In *Megabowl*, certainty about a high degree of contributions might have been relevant to determining the selling price of the land: the owner-developer sold the land to a second developer for €11m at the end of 2006, after having agreed the contributions. It seems very plausible that this price internalized the high degree of planning obligations. In *Harbourside*, certainty probably also lowered the price that the developer had to pay for the land, as developer and landowners agreed that the price was dependant on final profit margins. In *Temple Quay*, it seems plausible that the lack of certainty inflated the land price. In general, it seems that once the price of land internalizes part of the profit expectations, it is difficult to extract them. *Harbourside* provides an example of this: because the Council added the requirement of 30% of affordable housing only afterwards, the developer argued that he had no financial room to accommodate this contribution in his budget. The developer was unwilling to provide information about the land price, information that is crucial to accurately evaluate his arguments. However, our own estimations about the development value and costs in *Harbourside*

show a great difference between the estimated development costs (excluded land price) and returns. This suggests that there may have been enough financial room to pay for 30% affordable housing. Here the problem might have been that the 30% requirement came too late in the sense that the developer and landowners had already incorporated their full development surplus in the land price. Ultimately the developer will build only 9% of affordable housing.

7. Effects of Certainty on Public-value Capturing in Valencian Urban Regeneration

7.1. *Effect of High Certainty about Building Possibilities and Contributions on Public-value Capturing*

The Valencian planning system is remarkable in that it provides beforehand a high degree of legal certainty, both about future building possibilities and future contributions. This is first due to the legal obligation of municipalities to approve a legally binding General Land-use Plan (*Plan General de Ordenación Urbana*) that must cover the whole municipal territory. Early in the development process, this document prescribes future development possibilities, both in green-field and urban regeneration sites (see Box C and Figure 6). The 1988 General Plan of the city of Valencia prescribed detailed regulations for cases located in the city. In *Guillem* and *Periodista*, the 1998 document prescribed the alignment of public streets and apartment buildings (including their height), and the maximum building volume, 15,468 and 5556 m^2 floor space, respectively. In *Camino* it prescribed

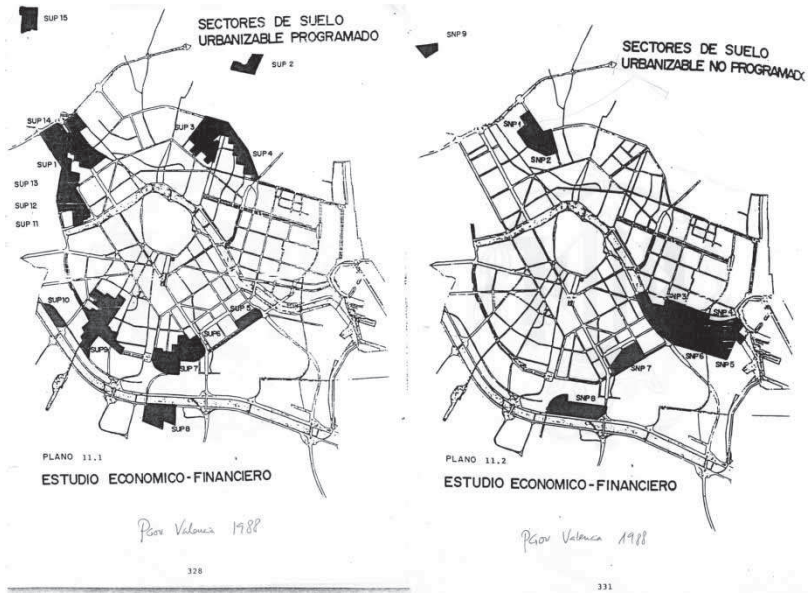

Figure 6. 1988 General Land-use Plan of the city of Valencia, sites zoned to be developed in the future (soon left, in the longer term right).
Source: 1988 General Plan.

the continuation of industrial use, adding some commercial use, a maximal building volume of 72,663 m^2 floor space and delineating the buildings and public infrastructure. The 1987 General Plan of the city of Alicante, and its subsequent modification in 1997, prescribed detailed regulations for the *Benalúa* case, for instance, the detailed alignment of public infrastructure and apartment buildings, and a maximum building volume of 103,670 m^2 floor space for a maximum of 742 dwellings.

Box C
Examples of prescriptions in a Valencian General Land-use Plan:
For the whole municipal territory:

- Zones land into: (i) existing urban land; (ii) Land to be developed or redeveloped in the future, soon or in the longer term; and (iii) Non-developable land or rural area;
- Possible building typologies, maximum number of dwellings and sometimes a maximum floor space index;
- Logical phasing of development;
- Main public infrastructure;
- Land-use determinations for non-developable land;
- Zones land into building regulation zones (e.g. historic city, urban extension, area of scattered buildings, etc.).

In green-field sites to be developed in the short term, and in urban regeneration sites (thus in all four studied cases as well), General Plans also prescribe detailed regulations, as height and delimitation of buildings, public infrastructure drafts, etc.

In the second place, the high certainty is also due to a wide set of legally minimum standards for public infrastructure established in planning law. These standards are compulsory for all projects in the region of Valencia. Municipalities cannot diverge from this legislation (see Box D).

Box D
Examples of minimum standards for residential schemes in the 1998 Regulation:

- Minimum public space: with an index of 1 m^2 floor space per m^2 land, a minimum of 63% of the plan area must be used for public space: 15% for green areas, 20% for public facilities and 28% for roads;
- Minimum number of plots for public facilities: schemes with more than 8000 m^2 floor space must provide at least one plot for public facilities.

What is the effect of this high certainty on public-value capturing? It was not possible to measure this in our cases because the degree of certainty was similar in all, and there was no contrary example to compare them with. However, it seems reasonable to conclude that municipalities might lose some negotiation room when creating absolute certainty about the future building possibilities. This conclusion is based on the fact that public-value capturing improved in cases where municipalities made use of their statutory potential

to deviate from the General Land-use Plan, that is, in cases where municipalities created some uncertainty about additional building possibilities (see below).

7.2. *Effect of Modifying the General Plan on Public-value Capturing*

The legal framework in Valencia offers the possibility to modify the General Plan. Once the development initiative has taken place, in green-field sites municipalities use to strictly follow the provisions of the General Plan. However, in urban regeneration it seems clear that municipalities often use this possibility to re-zone one urban use into another and/or increase the building volume.[2,3] In exchange, they ask for more contributions, additional to the legally minimum standards mentioned above. Modifications mostly involve the re-zoning of industrial and commercial/recreational space (offices, etc) into housing. For example, in the city of Valencia, more than 90% of all locations zoned in the 1988 General plan as industry seem to have been re-zoned into housing and office space. Between 50% and 80% of all locations zoned as commercial/recreational areas seem to have been re-zoned too (see Note 2).[4]

The situation varied in the studied cases. In *Guillem* and *Benalúa* the detailed Land-use Plans of 2004 and 2005, respectively, assumed the detailed regulations of the General Plans without relevant modifications. In *Periodista*, the 2007 Detailed Plan modified some relevant aspects of the 1988 General Plan: it enlarged the surface area of public space, reducing the building surface but re-zoning the residential and commercial/recreational use into fully residential, and enlarged the building volume from 5556 to 11,000 m^2 floor space (Figure 7). In *Camino*, the 2006 Detailed Plan modified relevant aspects of the 1988 General Plan: it more than doubled the public space, considerably reducing the building surface but re-zoning the industrial use into residential, and augmenting the building volume from 72,663 to about 80,000 m^2 floor space.

In sum, there is flexibility in practice to re-zone land from one urban use into a more profitable one, and to increase the building volume. The uncertainty this might create has, however, been limited in the same way English LPAs increase the degree of certainty: Valencian municipalities are used to specify which types of modifications are possible, and approve criteria for additional contributions, in the case of modification. This happens in indicative documents approved by the Local Council. The example of the

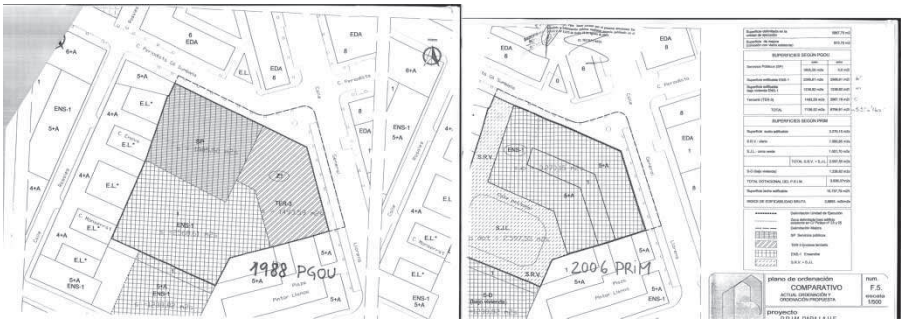

Figure 7. (1) Site *Periodista* in 1988 General Land-use Plan; (2) the same site in 2006 Detailed Land-use Plan
Source: 1988 General Plan, 2006 Detailed Plan (PRIM).

Municipality of Valencia could be representative. According to one public officer (see Note 4), at the end of the 1990s, more and more market parties were taking the initiative to redevelop old industrial and office sites into housing. However, up to 2000, the Municipality of Valencia did not accepted modifications of the General plan. In 2000, the municipality decided to make it possible to modify the General Plan to re-zone industrial land into housing. It also elaborated on several criteria, mostly related to public-value capturing (see Box E).

Box E

Examples of General Plan modification criteria set by the Municipality of Valencia:

- The re-zoning must improve the urban quality: reducing the total building volume, or introducing any other objective improvement.
- Of the total building volume 20% must be commercial/recreational or affordable housing.
- Compensation: for each new m^2 floor space, 1 m^2 land must be reserved for public facilities (additional to the minimum obligations already established by the legal standards and in the General Plan), or 0.5 if the developer uses at least 20% of the building volume for affordable housing. These m^2 of land may also be ceded outside the plan area, or paid in money.
- If the new dwellings add more than 1000 inhabitants to the area, landowners have to cede at least 5000 m^2 land for a park (additional to the legally minimum cessions).

What is the effect of certainty about the possibilities of modifying the General Plan? The cases confirm the idea that the possibility of modifying the General Plan (re-zoning land and augmenting building volume), together with certainty about the additional contributions may increase the negotiation capacity of the municipality. In *Periodista* it led to 80% of affordable housing, an increase in public space from 1805 to 2597 m^2, and the payment of a substantial amount to the municipality. In *Camino* it led to an increase in public space and facilities from 16,186 to 38,720 m^2, the rehabilitation and free cession to the municipality of four old industrial buildings, and the payment of an important amount to the municipality. All these contributions were additional to those prescribed initially in the General Plan and by the legally minimum standards (for a comparison of contributions in all four cases, see Table 4). It is very plausible that similar effects took place in other modifications of the 1988 General Plan of the city of Valencia.

8. Effects of Certainty on Public-value Capturing in Dutch Urban Regeneration

8.1. *Binding Rules are Approved after Negotiations, not Before*

We have mentioned previously that the Dutch planning system is plan-led, in the sense that the land-use plan is supposed to be approved before negotiations take place. However, the legal constrictions allow for a relatively flexible application and do not oblige municipalities to approve the land-use plan beforehand. First, a land-use plan or any departure from it can vary in scale according to each development. Neither law nor jurisprudence has

Table 4. Comparison of results of public-value capturing (who paid for or implemented what?) in the Valencia region of Spain

	On-site land development costs		Land for on-site public infrastructure		Land for on-site public buildings		On-site public buildings		Affordable housing		Contribution to off-site public infrastructure and facilities	Capturing betterment
	Land-owners	Public body	Land-owners	Public body	Land-owners	Public body	Urbanizing agent	Public body	Land-owners	Public body		
Generalizable knowledge, Valencia region	All or almost all of the costs	None (only if getting building rights)	Almost all the land	Land that already was public infra-structure	Almost all the land	Land that already was public infrastructure	Sometimes	Almost always	Almost all	Subject to subsidies	Landowners cede significant quantities of land, and sometimes pay for construction	10% of building volume in developable land, often money
Guillem de Anglesola (total value of building plots: €9.4mb)[a]	€2.7m 30% of total value of building plots)	None	45%	29% already public infra-structure	None	None	None	None	30% of total housing units	Subject to subsidies	Landowners cede much land for main road and pay construction together with developer (included in on-site land development costs)	None
Periodista Gil (total value of building plots: €3m)	€4m (125% of total value of building plots)	None	44%	None	None	None	None	None	80% of total housing units	Subject to subsidies	None	€ 1.6m (53% of total value of building plots)
Camino Hondo (total value of building plots: €95m)	€10.6m (11% total value of building plots)	€0.6m (1% total value building plots)	About 70%	A small part was already public infra	Land for extension of existing school	None	Rehabilitation/ free cession of buildings, ca. €15m	Extension of existing school	None	None	Landowners pay €168,010 for road construction alongside development site	€ 4m (4% of total value of building plots)
Benalúa Sur (total value of building plots: €92.5m)	€7.7m (8.3% total value of building plots)	€0.25 (0.2% total value building plots)	About 79%	None	20% of total plan area for new school	None	None	New school	None	None	Landowners cede 54.398 m^2 of land and pay about €400,000 for pipelines and other underground infrastructure	17% of total building volume

Note: Dark grey: Developer/landowners contributing the most of the four cases.
Light grey: Developer/landowners contributing the second or third most.
White: Developer/landowners contributing the least of the four cases.
[a]"Total value of building plots": the total return accruing from the sale of the empty serviced building plots, thus excluding real estate development.

established general limitations to the minimum size of a plan area. It might cover an entire municipality (seldom seen) or merely a few plots (known as a "postage stamp plan"; *post-zegelplan*). Regarding departures from the land-use plan, in practice they usually cover just one or more plots, but they can also be large-scale developments (Bosch & Hanemaayer, 1992: quoted in Bregman & Sievers, 2002; Van Damme & Verdaas, 1996, pp. 73–78). In other words, municipalities are free to delineate the boundaries of the plan area. Second, no legal prescription exists to determine when a land-use plan should be approved in relation to the rest of the development process, whether that should be 5, 10 or *x* years/weeks before the development process takes place.

In practice, this has translated into the fact that at least when confronted by comprehensive urban regeneration development on privately owned land, Dutch municipalities mostly wait until negotiations with the developers or landowners have ended. Only after the negotiations ended and usually after the Development Agreement is signed, do they modify the binding rules—that is, they approve a new land-use plan to replace the old one, or approve a departure from the old one (VROM *et al.*, 2008, p. 67).[5,6]

The studied cases support this general conclusion. In all of them, the municipalities approved the binding rules after the negotiations had finished and did so because of the consequences for public-value capturing. The municipalities saw the land-use plan as the final move in negotiations because the land was privately owned and so the process could not be steered through the acquisition of land. The municipalities waited until the costs were secured before approving the land-use plan or any departures from it. A study of local planning in the Dutch city of Leiden made at the beginning of the 1980s showed also a similar situation, which suggests that this might have been the actual practice for quite some while (Thomas *et al.*, 1983: in Faludi, 1986, pp. 116, 185). However, there might be exceptions to this general conclusion. Several experts point out that in some cases, prior to the negotiations municipalities will approve an outline land-use plan (*Globaal Bestemmingsplan met uitwerkingsplicht*), which will be worked out in detail after the Development Agreement has been signed.[7,8] The cases do not confirm this experts' opinion. *Kruidenbuurt* and *Stationskwartier* show the use of outline land-use plans, but they were approved only after the negotiations ended successfully. Only in *Stationskwartier* did the municipality approve the outlined regulations before negotiations with the landowners took place, but this was for only a small plot (3% of the total plan area).

8.2. *Before Negotiations, Indicative Plans Create Limited Certainty*

Instead of approving the binding rules in the early stages, Dutch municipalities tend to approve indicative zoning plans. These might be *ad hoc* for a specific site, or area, they might cover the whole municipal territory or a large part of it. Planning law regulates one type of indicative zoning plan, the Structure Plan, which was replaced in 2008 by the Structure Vision. More common are indicative plans unregulated by any planning law in terms of form, content and approval procedure (e.g. *Nota van Uitgangspunten*, *Stedenbouwkundig Plan/Visie*, *Ontwikkelingsprogramma*, *Programma van Eisen*, *Masterplan*.). However, the level of certainty offered by these indicative plans is limited, no matter whether they are regulated by planning law or not. This is because (1) they tend not to be specific, and (2) because definitive plans can and indeed mostly do depart from these indicative plans, as they are not legally binding.

In *De Funen*, several indicative plans preceded the signing of the first Development Agreement in 1997. In 1991, the Structure Plan of Amsterdam described the redevelopment of the whole site, and in 1993 the municipality approved a site-specific document (*Nota van Uitgangspunten "Czaar Peterbuurt-Oost"*) that established many aspects of the future programme (450–500 dwellings, of which 30% social housing, offices and workplaces, the location of most of the public spaces, including a park, and a list of public facilities and buildings). This means that there was some certainty about the future building possibilities. Regarding the future obligations, the 1993 document defined the unprofitable parts to some extent: 30% social housing, a park and some public buildings. However, it did not say anything about who should pay for these.

In *Kruidenbuurt*, several indicative plans preceded the signing of the Development Agreement in 2004. In 1999, the municipality approved a site-specific document (*Masterplan*) which established that 630–770 housing units could be built there. In 2001, the municipality approved another site-specific planning document (*Programma van Eisen*) which somewhat specified the programme: 650 housing units (of which 300 had to be social housing and 175 "medium- expensive" units), a supermarket and possibly a public building. This document also vaguely described the public space. Altogether, this means that there was some certainty about the future building possibilities. Besides these documents, however, another document was also important here: in 2000, Eindhoven Municipality and all the housing associations in the city agreed the municipal financial contribution for urban regeneration in the city, including *Kruidenbuurt*. Following this agreement, the municipality would contribute €9m to the regeneration of *Kruidenbuurt*, leaving the housing associations responsible for the rest of the development costs. Thanks to this document, it has been clear since 2000 what the municipal contribution would be, and that the housing associations would have to pay the rest. Dutch housing associations and municipalities have in general a close relationship and are accustomed to signing similar agreements.

In *Kop van Oost*, several indicative plans preceded the signing of the Development Agreement in 2005. In 1996, the Structure Plan of Groningen foresaw "house and business" in the site (p. 64) and in 1999 and 2004, other documents confirmed this zoning, without specifying it very much further. In 2004, a plan for an area broader than the development in question (*Eemskanaalzone—verbinding in stad. Een visie op de ontwikkeling van de Eemskanaalzone*) detailed the outline zoning by specifying a number of around 400 units (p. 40). This means that there was some certainty about the future building possibilities. Regarding the future obligations, there was no certainty at all, as the documents mentioned above failed to define either specific unprofitable elements or any cost allocation principle.

In *Stationskwartier*, several indicative plans preceded the signing of the Development Agreement in 2006. Since the 1980s, Breda Municipality had been preparing plans for the regeneration of the site into a mixed-use scheme for public transport (railways and bus), housing, office and facilities. These plans were revitalized when the national government appointed the site as New Key Project (NSP), provisionally in 1998, and definitively in January 2000. This strengthened the redevelopment possibilities of the site. In 2003, the municipality and the Dutch government approved the Central Breda Master Plan, a document that specified the building possibilities: 50,000 m^2 floor space for housing, between 400 and 650 units; 20,000 m^2 flexible, preferably for housing; 80,000 m^2 for office, enlargeable up to 120,000 m^2; and 8000 m^2 for hotel and shops. It defined further the

location of the new railway and bus station, but it did not define the public roads and space. In 2005, another important document (*Structuurvisie Via Breda Spoorzone 2025*) ratified the figures of the 2003 Master Plan. Altogether this meant that there was some certainty about the future-building possibilities. Regarding the future obligations, NSP projects tend to define *a priori* development costs and their allocation because of the financial involvement of the provincial and national government, who subsidize the regeneration. Seemingly this was also the case in *Stationskwartier*: The 2003 Master Plan included a business case that might have played an important role in establishing the degree of certainty about future obligations but unfortunately it was not available for this research. According to the interviewed developer and public officers, the document included a rough estimate of development costs and a proposal for their allocation. It seems somehow to have made the future obligations clear, before the signing of the first agreement in 2003 (*Planontwikkelingsovereenkomst*) and of the definitive Development Agreement in 2006 (*Samenwerkingsovereenkomst, SOK*).

In sum, in the studied cases, the indicative plans created some certainty, or expectations, about future building possibilities. However, only in *Kruidenbuurt* and *Stationskwartier* was there some certainty beforehand about the costs and about who would have to pay them: although there was no certainty before the development initiative, at least some certainty appeared before the negotiations resulted in definitive development agreements. Seemingly this only happens in specific circumstances, which explains why it did not happen in the other cases. In *Kruidenbuurt*, it was the special relation between the municipality and the developer, a housing association; and in *Stationskwartier*, it was the special nature of the project itself, a national infrastructure project (NSP). In both these cases, the municipalities created a degree of certainty with value-capturing goals: to limit public contributions to a "lump sum" in *Kruidenbuurt*, and probably with somewhat more ambitious aims in *Stationskwartier*. It seems that in "ordinary" private land schemes (e.g. *De Funen* and *Kop van Oost*), beforehand there is usually no certainty whatsoever about future obligations (see Notes 5 and 6).

8.3. *Little Certainty about Building Possibilities Weakens Negotiation Position of Municipalities*

The fact that municipalities tend to use the land-use plan as the final piece in negotiations creates uncertainty about the future building possibilities. In our cases it was not possible to measure the effects of this because all our cases followed the trend and there was no example of the contrary. However, it seems reasonable to conclude that this behaviour, in general, strengthens the negotiating positions of municipalities. This may have positively influenced public-value capturing as municipalities had "more to offer" in the negotiations. In *Stationskwartier*, one interviewed public officer stated that using the land-use plan as the final piece was important to achieving a good level of public-value capturing. Another consulted expert and the representative of the Dutch developers' umbrella organisation consider that, in general, this operational use of the land-use plan has bettered public-value capturing (see Notes 5 and 6).

Despite the initial uncertainty, the cases show that indicative plans created a degree of certainty about the future building possibilities. In other words, the uncertainty created by the approval of binding rules after negotiations end is ameliorated by the degree of certainty created by the indicative plans. It was not possible to measure the effect of this

Table 5. Comparison of results of public-value capturing (who paid for or implemented what?) in the Netherlands

	On-site land development costs		Land for on-site public infrastructure		Land for on-site public buildings		On-site public buildings		Affordable housing		Contributions to off-site public infra-structure and facilities	Capturing betterment
	Developer	Public body	Developer	Public body	Developer	Public body	Developer	Public body	Developer	Public bodies		
Generalizable knowledge, The Netherlands	Part of the costs	Heavy subsidies	Important part of the land	Important part of the land	Commercial developers none; housing assoc's eventually	Public body provides most of the land	Commercial developers do not, housing associations do contribute	Almost always	Commercial developers do not; housing corporations do	Sometimes	Almost none by developers to public infrastructure/facilities outside plan area; modest contribution to that situated within plan area but serving a wider area	None
De Funen Amsterdam	Important part	Important part	Important part	Important part	None	None	None	None	30% of units, less than 30% volume	Subsidy €23,000 per unit	A small piece of park on the border of plan area	None
Kruidenbuurt Eindhoven (total value of real estate: €150m)[a]	€20m (13% of total value real estate)	€10m (7% of total value of real estate)	7% of total plan area	25% of total area; 36% incl. adjacent roads	None	None	None	None	45% of units (developer is housing association)	None	€0.5m for public facilities outside plan area and small contribution to road in plan area	None
Kop van Oost Groningen (total value of real estate: €140m)	€6m (5% total value real estate) excl VAT	Minor part	23% of total plan area	6% of total area; 29% including adjacent roads	None	None	None	None	None	None	None	None
Stationskwartier Breda (total value of real estate: €500m)	€20–30m (4–6% total value of real estate)	€42m (8% of total value of real estate)	27% of total plan area	14% of total plan area	None	None	None	None	None	None	Minor portion of costs and most of the land needed for new station (developer is Dutch Railways)	Possible share in profits

Note: Dark grey: Developer contributing the most of the four cases.

[a]"Total value of real estate": the total return accruing from the sale of the final buildings.

because all our cases had done so and there was no example of the contrary. However, it seems reasonable to conclude that this somewhat diminishes the negotiating position of municipalities. Municipalities can no longer easily and believably deny their collaboration in the development of the site; so they have "less to offer". Developers might count on that. One interviewed expert suggested that municipalities might be not aware of the possibly negative effect of creating expectations in the early stages (see Note 5).

8.4. *Certainty about Contributions Lowers Land Price*

With regard to certainty about future contributions, the studied cases show some differences among those without certainty (*De Funen* and *Kop van Oost*) and those with a certain level of certainty (*Kruidenbuurt* and *Stationskwartier*). The differences in value capturing among the four cases are not very large, but *Kruidenbuurt* and *Stationskwartier* are quite remarkable. Both cases included an important contribution by the developer to public goals: 45% units for social housing in *Kruidenbuurt*, the costs of which will be paid by the developer (a housing association), and the new railway and bus station in *Stationskwartier*, the costs of which will mainly be paid by public subsidies, but the developer (Dutch Railways) will pay a minor part and provide all the needed land. *De Funen* also includes social housing (30% of the units), but they seem to be subsidized by public bodies (for a comparison of the realized value-capturing among the cases, see Table 5). In general, the interviewed public officers and developers in *Kruidenbuurt* and *Stationskwartier*, explicitly or implicitly emphasized that certainty (provided by the 2000 agreement and the 2003 business case, respectively) improved public-value capturing. In *Kop van Oost*, an interviewed developer suggested that uncertainty about the future obligations has allowed landowners to take possession of the residual value. The developer bought the land in 2001 for about €12m, which is much more than the estimated market value of the previous use (industrial land), about €3.6m.

A possible explanation for this apparently positive effect of certainty about future obligations on value-capturing is of an economic nature, and refers to land price mechanisms. We have already mentioned in Section 3 the speculation that certainty beforehand about future contributions can help developers to pay the right price for land. This could explain the low public-value capturing in *De Funen* and *Kop van Oost*, and the relatively higher value capturing in *Stationskwartier*. In these three cases, land transactions took place that have augmented development costs in the sense that land has been bought at a higher price than the market price of the previous use. In *De Funen* and *Kop van Oost*, the price of land was agreed before any certainty existed about future obligations, before the negotiations thus. This might have increased the land price. In *Stationskwartier*, the situation was the opposite: the price of land was agreed once there was some certainty about future obligations, which might have moderated land price increases. *Kruidenbuurt* seems, however, to be less suited to this explanation, as here almost all the land was already owned by the developer, and was not transferred.

9. Conclusions

This article sought answers to the following questions: How flexible can a planning system be (or should it be)? Where should the line between certainty and flexibility be drawn?

Should legally binding land-use rules be fixed before negotiations between developers and local planning bodies take place?

Before answering these, let us first summarize the findings. In all three countries, local public bodies usually create certainty in the early stages, to different degrees, about future building possibilities, that is, what the landowner will be allowed to build. In Spain (Valencia), this happens through the approval of legally binding General Land-use Plans. In England and the Netherlands, local public bodies usually approve indicative, not legally binding plans, which create some certainty. Examples of these documents in the Netherlands include *Nota van Uitgangspunten*, *Stedenbouwkundig Plan/Visie*, and in England, *Local Plans*, *Development Plans*. Since the 1980s, Valencia has seen a tendency to increase certainty; the same applies since the 1990s in England. Local public bodies tend to increase certainty in order to improve transparency and accountability in their planning decisions.

The findings in all three countries suggest that more certainty beforehand may result in less public-value capturing. It seems that when municipalities fix development possibilities early in the development process, this might stimulate land price increases and might also lead to the loss of a valuable negotiation tool. Municipalities might be giving away their "treasure": that of being the only institution entitled to decide, with certain discretionary powers, if, when and what is allowed to be built. However, it was not always possible to measure the actual effect of this sub-variable (certainty about future building possibilities) in this study, mainly because this certainty was similar in all cases and there were few examples to the contrary. The conclusions are thus mainly, but not exclusively, based on reasoning. In addition, this sub-variable seems not always to be the only determinant as a second sub-variable (certainty about future contributions) may play a more relevant role. In other words, certainty about building possibilities, if accompanied by certainty about future contributions, does not necessarily negatively influence public-value capturing.

The differences are larger when we look at the second sub-variable, certainty about what the landowner will have to contribute to public infrastructure. In Valencia, in the early stages, there is much certainty about future contributions through (1) legally minimum standards, (2) local policy and (3) the approval of legally binding, General Land-use Plans. This certainty seems to have improved public-value capturing. In recent years, English municipalities are increasingly creating some certainty through the approval of (1) site-specific indicative plans that establish the contributions for the development in question, and (2) non site-specific, generic policy documents for public-value capturing that establish standard and similar contributions for the whole municipality. The approval of these generic documents has been stimulated in recent years by the central government and appears to have a positive impact on public-value capturing. In the Netherlands, there is little certainty ever, created either through legally binding or indicative documents. And if there is some, it is to a limited extent. Only in exceptional circumstances is the amount of future contributions clear before negotiations take place or before the price of land is established. This uncertainty seems to have a negative influence on public-value capturing.

There are two explanations for the positive effect of certainty about contributions. First, certainty may have a deflating impact on the price of land, as developers do indeed take account of future contributions when calculating the price to be paid to the landowner, and lower land prices augment the financial leeway for public-value capturing. This explanation fits in with the economic explanations of land price mechanisms (White, 1986,

Table 6. Summary of degree of certainty in Spain (Valencia), England and the Netherlands

	Certainty beforehand about building possibilities	Certainty beforehand about contributions
Spain (Valencia)	Always, much certainty	Always, much certainty
England	Sometimes, some certainty	Sometimes, some certainty
The Netherlands	Always, some certainty	Almost never, and limited certainty

Table 7. Summary of the effect of certainty on public-value capturing

	Certainty beforehand about contributions	No certainty about future contributions
Certainty beforehand about building possibilities	++	−
No certainty about future building possibilities	++	+

Note: ++ , more public-value capturing; +, some public-value capturing; −, less public-value capturing.

pp. 104–107; Rowan-Robinson & Lloyd, 1988, pp. 128–130; Campbell, 2000, pp. 769–771). Second, certainty strengthens the policy base for public officers to require contributions, which no longer need to be introduced as new items in the negotiations. Tables 6 and 7 summarize these findings.

In short, the findings of each country suggest that certainty about future contributions improves public-value capturing. Also, when comparing the three countries, a correlation appears among certainty about contributions (higher in Valencia and England than in the Netherlands) and public-value capturing (also higher in Valencia and England than in the Netherlands). The differences mainly involve (Muñoz Gielen, 2008a, 2009b; see Table 8):

- On-site infrastructure provision costs: in England and Valencia, these are mostly or fully paid by the developers, while in the Netherlands public subsidies are very large;
- Social housing: in England and Valencia, they are paid to a large extent or almost fully by the developers, while in the Netherlands almost only by municipalities and housing associations;
- Off-site public infrastructure: in England and Valencia, developers contribute significantly, mostly either in money respectively in land, while in the Netherlands these contributions are very rare;
- Capturing betterment: local public bodies in Valencia capture a significant share of the economic betterment, even if they own no land; in England, this does not happen officially but because of the broad definition of developers' contributions for public infrastructure one might conclude the contrary; in the Netherlands, this only ever happens if the municipality owns land and/or invests and shares risks in the operation.

These variations, however, should not be considered the only consequences of differences in certainty. The three countries show several other differences in the context that might also

Table 8. Comparison of results of public-value capturing in England, Spain and the Netherlands

	On-site land development costs		Land for on-site public infrastructure		Land for on-site public buildings		On-site public buildings		Affordable housing			
	Developer	Public body	Developer	Public body	Developer	Public body	Developer	Public body	Developer	Public bodies	Contributions to off-site public infra-structure and facilities	Capturing betterment
England	Almost all the costs	Indirect through land/ cheap financing	Most of the land	Part of the land	Part of the land	Part of the land	Not often	Almost always	Increasing amount of affordable/ social housing	Partly	Important contributions, that increase in the final years	In principle, no
Spain (Valencia)	All or almost all these costs	No (only if receiving building plots)	Almost all the land	Land that already was public infra-structure	Almost all the land	Land that already was public infra-structure	Sometimes	Almost always	Almost all	Some minor object subsidies	Landowners cede significant quantities of land, and sometimes pay for construction	10% building volume in developable land; often money
The Netherlands	Part of the costs	Heavy subsidies	Important part of the land	Important part of the land	Commercial developer none; housing association eventually	Public body provides most of the land	Commercial developer none; housing association contributes	Almost always	Commercial developers do not build; housing corporations do	Sometimes	Almost no contributions by developers to public infrastructure/ facilities outside plan area, and modest contribution to infra/fac situated within but serving wider area	None

Note: Dark grey: Country in which the developer/landowner contributes the most of the three countries.
Light grey: Country in which the developer/landowner contributes the second most of the three countries.
White: Country in which the developer/landowner contributes the least of the three countries.

be relevant. The first concerns the market price of real estate: at the time of data gathering, Bristol housing prices were significantly higher (€3000–5000/m^2 floor space and even more) than prices in Valencia and the Netherlands (about €2000–3000/m^2). The second difference in context regards the executive powers of local public bodies: in Valencia, municipalities can oblige landowners to participate in land readjustment and choose a third party, not necessarily a landowner, to provide the infrastructure. This influences the power balance in negotiations. In England and the Netherlands, development depends heavily on an agreement with the landowners, while coercive instruments such as expropriation are troublesome and rarely found in practice (Muñoz Gielen & Korthals Altes, 2007).

To return to the academic debate posed in this paper: The debate on flexibility in the planning profession often focuses on the consequences of socio-economic dynamics in planning practice, and tends to embrace flexibility as the solution for the unpredictability of these dynamics. Flexibility is advocated as the way of achieving a non-linear and multi-layered decision-making system. However, in our opinion, the findings underline the relevancy of the inverse: the influence of planning practice on economic dynamics that are central in the outcome of planning processes. The findings suggest that there must be a certain level of certainty about contributions, in order to improve the involvement of the private sector in the realization of public infrastructure. Another finding with consequences for the debate is the clear differences in the level of certainty about future building possibilities, offered previously to the negotiations, with England and the Netherlands on the one side, and the Spanish region of Valencia on the other. In the English and Dutch cases, certainty was created with often vague and undetailed, indicative zoning plans, while in the Valencian case, certainty was and is offered in highly detailed and legally binding plans. The literature on comparative planning systems in Europe may not have distinguished accurately enough the actual differences between national planning systems, at least with regard to the Spanish versus English and Dutch systems.

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Notes

1. Interview with Whithaker, Andrew, Head of Planning of the Home Building Federation, 2 July 2007, 9.30–11.45.
2. Interview with Rubio, Rafael, Chairman of Local Representatives, Social Democratic party (PSPV) in Local Council of Valencia, 23 November 2006, 9:45–11:15.
3. Interview with Montiel, Antonio, significant member of Salvem, a civil organization for the defence of the natural environment and historic and cultural urban patrimony, 21 November 2006, 20:30–22:30.
4. Interview with Raga, Francisco, Head of the PAI Department of the Municipality of Valencia; 25 October, 13:00–14:00; and 6 November 2006, 9:30–10:30; 15 October 2008.
5. Interview with Verdaas, Co, Provincial Government of Gelderland; 14 November 2007, 8:00–9:00; 19 November 2007, 8:30–9:00; comments on the transcript of 21 November 2007; written answers to questionnaire of 12 February 2008.
6. Interview with Fokkema, Jan, Director of Neprom, developers' umbrella organization; 27 November 2007, 15:15–16:30; comments on the transcript of 29 November 2008.

7. Interview with De Wolff, Herman, Delft University of Technology; 11 February 2008, 16:50–17:00; 12 March 2008, 15:00–15:15.
8. Interview with Van Zundert, J.W., author of a handbook on planning legislation, 14 March 2008, 14:30–15:10.

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