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Model and Factors

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When Property Value Changes During Urban Development

– Model and Factors

Finn Kjær Christensen
Aalborg University

When Property Value Changes During Urban Development

– Model and Factors

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Preface

This Ph.D. thesis marks the ending of my studies conducted from November 2007 to October 2010 under the doctoral programme Planning and Development at Aalborg University. The research is funded by Aalborg University and the Danish Building Research Institute (SBi), which made it possible to do research on how property value changes value during the urban development process. This thesis consists of 13 chapters and is written as a monograph.

This research is conducted in a Danish context, implying that the Danish planning system and planning traditions are the background in which property value changes in the urban development process are understood. If looking across borders, this is important to keep in mind. Most theory on this subject is international and to accommodate the different contexts, this research has a high degree of empirical work to facilitate adaption to the Danish context.

I would like to thank Michael Tophøj Sørensen and Christian Aunsborg for their moral support along the way and of course for commenting and discussing my work. They have along with the rest of my colleagues made me feel as a part of the research group. I would also like to thank Thomas Kalbro from KTH, Stockholm, for helping me find important references on this subject and especially for letting me stay at KTH in the autumn 2009. That was a tremendous experience both educationally and personally. It furthermore gave me the chance to catch up on writing this thesis, so that I could hand it in, in time. I would also like to thank the interviewees that have kindly offered some of their time to contribute to this research. Their input has been very valuable. A special thanks to Marie Sølgaard Bang for reading the final draft of my thesis and giving the very important comments: “What do you mean by this?”; “Why?” and “This section does not make sense!” That has been very helpful.

Figures, photos, graphs and tables are referred to as “Figure X.X”, where X.X is the chapter’s number followed by the figure’s number in that chapter.

References are cited by the author’s surname and year of publication, e.g. (Dunkerley 1987), and the full references can be found in the Reference list in the back of the report. Websites are cited as e.g.

(www.byplanlab.dk) with the full URL in the Reference list. Acts are cited in the text with their popular title, e.g. The Danish Planning Act, with their full Danish title in the Reference list. Verdicts and valuation decisions are citied by their number (Publication place . Year . Start page Type of decision), e.g. (U.2008.1738V). This is a typical notation in Denmark and e.g. U.2008.1738V means; U – The Danish Weekly Law Report; 2008 – year, 1738 – start page; and V – The Danish Western High Court. If the citation is placed before a full stop, it refers to the sentence, and if it is placed after full stop, it refers to the last sentences or section.

A number of Appendixes are attached to this thesis. Appendix A, B and C are in the back of this report, while the rest (D-V) is in a separate Appendix report. Appendix A-C are the interview guides and are printed together with the thesis for methodological reasons – to enable the readers to see what the interviewees were asked. The remaining appendixes are in a separate report in order to keep the anonymity of the interviewees and the cases.

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Summary

In this Ph.D. thesis it is analysed how urban development for the private housing market causes the urban development area's property value to change throughout the urban development process. The conducted research is financed by Aalborg University and the Danish Building Research Institute (SBi).

Aim and Scope of Research

The aim of this research is to identify the main key factors, which influence the urban development area's Market Value during the urban development process. Furthermore, it is the aim to create a conceptual model that show how the Market Value of the development area change throughout the urban development process, based on these influencing factors. It is especially pursued how and why value changes, when urban development areas are being planned. The research question can be found in the Introduction.

This field of research have had very little focus in a Danish context, meaning that findings on how and why property value changes in a Danish context will in part be new knowledge. Some parts will be new knowledge and some parts will bring forth existing but undocumented "common" knowledge which developers and others have. It is relevant for consultants and municipalities, dealing with urban development and developers, to understand more about how the urban development area changes value in order to improve and initiate urban development.

Research Strategy

The research takes a starting point in the existing theory with three theoretical analyses; "The Value of Property and Its Determinants", "The Urban Development Process", and "Property Value Changes during Urban Development". From these analyses, a first edition of a conceptual model of changes in property value during urban development is created. This ends the theoretical part of the research and through empirical analyses, the findings and conceptual model are transferred and adapted to a Danish context. There are three empirical analyses; Interview Analysis I with five interviews; a Multiple Case study with four cases; and Interview Analysis II with five interviews. After each empirical analysis, a revised conceptual model is presented, and the final conceptual model is created in

the Conclusion. It is also shown below. Especially the empirical part of the project had an iterative approach – going back and forth between "finding knowledge" and "revising model". In all, four versions of the conceptual model has been made as illustrated in figure 0.1. The research strategy can be found in the chapter Research Strategy and methods for the empirical analyses can be found in the chapter Empirical Methodologies.

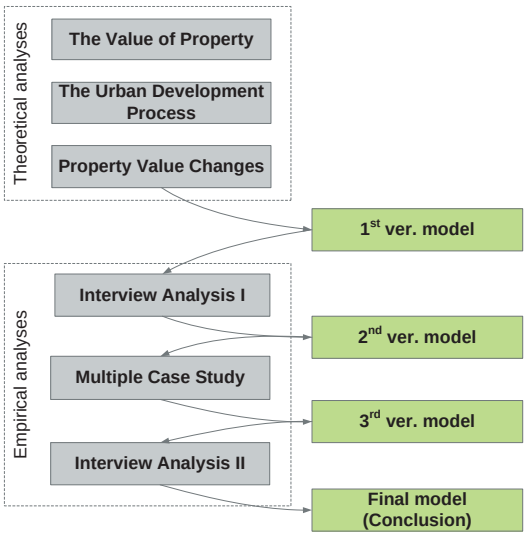


Figure 0.1.: Research design. The figure shows the principle of the iterative process, and how the theoretical and empirical analyses are in continuation of each other.

Findings

The final conceptual model of how the urban development area's Market Value, changes during the urban development process is one of two key elements in this research's results. The other being the main key factors influencing the urban development area's Market Value, during the urban development process.

The Final model is shown in figure 0.2. below, and it is created in the Conclusion of this project. The y-axis is the property value measured in DKK (Danish currency) and the x-axis is the urban development process measured in time. On the x-axis, the different steps of the urban development process, as they are defined in this research, are shown as well. The curve shows the Market Value of the properties in an urban development area. A part of the model is a set of "all things being equal" consideration, were it is e.g. assumed that the steps in the urban development process do not overlap, that the market situation is stable, and that it is a Danish planning system – these and the remaining conditions are described further in the Conclusion.

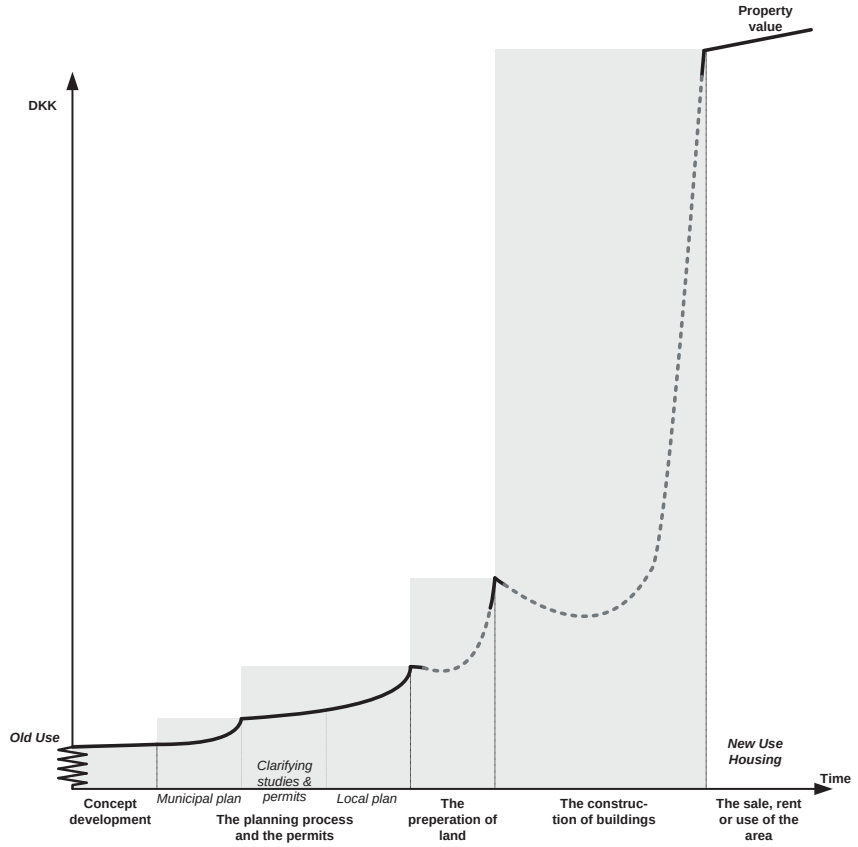


Figure 0.2.: The final conceptual model, showing how the properties' Market Value changes during an urban development process in Denmark.

Regarding the key influencing factors, it is found that the *Old Use* and *Location* of the urban development area have an influence on the start value of the urban development project. Location will also have an influence on the value of the finished project – the end value. A better and more attractive location will result in an increased end value compared to less attractive locations. Furthermore, the end value will in the good locations have increased more than the start value has increased, which entails a possibility of gaining more profit from developing certain locations. Looking further into the location element, the *Social structure* of the area is also influential, meaning the composition of people who lives there. This is, as it is also the case with surrounding areas, something that can be changed, e.g. a new park or new metro station can *change the location*, and due to this increase the value of the urban development area. During the Concept development step, increases in Market Value have only

been found due to *General price development*, which influences the value of property during the whole process. In the Planning process and the permits step, the planning documents *Municipal Plan* and *Local Plan* are major influencing factors. It is especially the stipulations on *Zoning*, allowed *Density* and future *Quality* and standard of the area which are key elements in planning. Planning and the *Clarifying studies and permits* are value increasing because they provide certainty for the developer, making the future development more likely to be allowed. In other words, the steps causes less *Risk*, where one of the major risk elements are the *Political decision making* in the planning process. In the Preparation of land step, it is especially changes in the urban development area's *Physical standard* that takes place when *Land is prepared*. The *Construction of buildings* is the most influencing factor in the urban development process. These factors are unfolded further in the Conclusion.

The conceptual model and the found influencing key factors on a property's value concern a Danish context, hence a Danish planning system, and the findings therefore by default only apply for Denmark. With some minor adaptations, especially concerning planning systems, it should be possible to adapt the model to other countries with planning regulation and a market based economy. The model is conceptual and the factors are key factors, implying that it is principles, that have been pursued in this project to which actual cases, due to their individual context, most likely will deviate.

Summary - DK

I den foreliggende Ph.D. afhandling er det blevet analyseret, hvordan projektudvikling til det private boligmarked har indflydelse på, hvordan ejendomsværdien af projektejendommene ændrer sig i løbet af udviklingsprocessen. Stipendiet, der har gjort denne forskning mulig, er finansieret af Aalborg Universitet og SBi.

Projektets Formål

Det har været forskningens sigte at identificere nøglefaktorer i byudviklingsprocessen, som påvirker ejendomsværdien af de implicerede ejendomme. Det har desuden været målet ud fra de fundne nøglefaktorer at fremstille en konceptuel model, der viser hvordan markedsværdien af de implicerede ejendomme ændrer sig i løbet af processen med udvikling af fast ejendom til det private boligmarked. Der er speciel fokus på hvordan og hvorfor markedsværdien ændrer sig, når den fysiske planlægning udarbejdes og vedtages. Projektets problemformulering kan ses i projektets introduktion (kapitel 1).

Dette felt har ikke haft særlig fokus i Danmark hvilket betyder, at resultaterne af dette projekt til dels vil være ny viden. En del vil være ny viden og en del af projektet vil bringe tavs viden frem, som projektudviklere m.fl. ligger inde med. Det vil være relevant for konsulenter og kommuner, som arbejder med projektudvikling, at vide mere om hvordan ejendomsværdien ændrer sig i løbet af byudviklingsprocessen og derved blive bedre til at agere i udviklingen af fast ejendom.

Projektets metode

Projektet taget udgangspunkt i den eksisterende teori. Det sker i tre analyser: “The Value of Property and Its Determinants”, “The Urban Development Process” and “Property Value Changes during Urban Development”. Ud fra disse analyser udarbejdes en første version af en konceptuel model, og den første model markerer overgangen fra teori til empiri. Ud fra efterfølgende empiriske analyser tilpasses den første version af modellen til en Dansk kontekst. Der er tre empiriske analyser: Interview Analysis I, ud fra fem interviews; Multiple Case Study, med fire cases; og Interview Analysis II ud fra fem interviews. Efter hver analyse revideres modellen og tilslut udarbejdes den endelige model. Den endelige model er også vist nedenfor – figur 0.2. Specielt den empiriske del af projektet er kendetegnet ved

en iterativ proces, hvor der gås frem og tilbage imellem at "skabe viden" og "revidere modellen". I løbet af projektet er der udarbejdet fire versioner af en konceptuel model, hvilket også er illustreret i figur 0.1. Projektets metode kan ses i kapitel 2 og de empiriske undersøgelsesmetoder kan ses i kapitel 7.

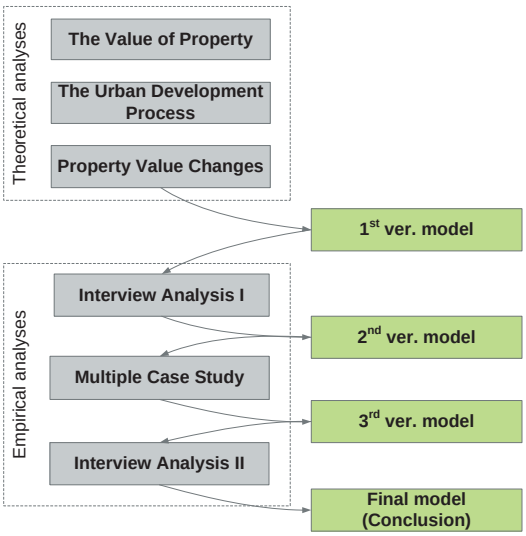


Figure 0.1.: Figuren viser princippet for den iterative process og desuden hvordan de teoretiske analyser og empiriske analyser ligger I forlængelse af hinanden.

Resultater

Den endelige konceptuelle model af hvordan markedsværdien ændrer sig i processen med udvikling af fast ejendom er den ene af to hovedelementer i projektets resultater. Det andet element er nøglefaktorer, der påvirker ejendomsværdien i løbet af byudviklingsprocessen. Den endelige konceptuelle model kan ses i figur 0.2. nedenfor, og den er udarbejdet i projektets konklusion (kapitel 13). På y-aksen ses værdien og på x-aksen ses tiden. De forskellige trin i udviklingsprocessen, som de er defineret i dette projekt, kan også ses på x-aksen. Kurven i modellen viser markedsværdien af de ejendomme som udvikles. Med til modellen hører også en række "alt andet lige" betragtninger, som fx at der ikke er overlap mellem trinene, at der er en stabil markedssituation og at der er tale om det Danske plansystem. De øvrige omstændigheder for modellen kan læses i konklusionen.

Den *tidligere anvendelse* og *beliggenheden* af byudviklingsområdet påvirker områdets start værdi, når udviklingen begynder. Beliggenheden vil også påvirke markedsværdien af det færdige projekt – slut værdien. En bedre og mere attraktiv beliggenhed vil have en højere værdi sammenlignet med en ringe beliggenhed. Det vil imidlertid være sådan at beliggenhedsfaktoren har større indvirkning på slut værdien end start værdien, hvilket giver mulighed for større profit på gode beliggenheder. Ses der nærmere på beliggenhedsfaktoren har områdets *sociale struktur* også betydning, med andre ord sammensætningen af beboere i området. Denne del af beliggenhedsfaktoren kan påvirkes, ligesom omkringliggende områders forandring

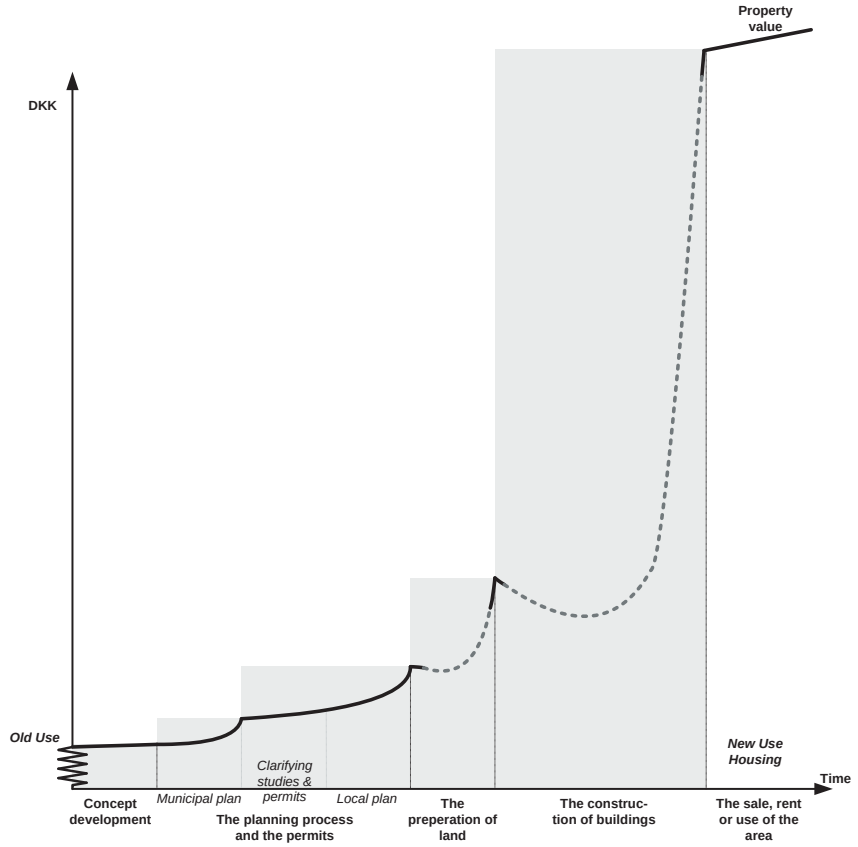


Figure 0.2.: Den endelige konceptuelle model af hvordan markedsværdien ændrer sig i processen med udvikling af fast ejendom i Danmark.

– fx etablering af park – kan *ændre beliggenheden* af et område og medvirke til en værdistigning i projektudviklingsområdet. Den *generelle priseudvikling* er den eneste fundne faktor i trinnet Concept development, dette er dog en faktor, der påvirker under hele udviklingsprocessen. I The planning process and the permits trinnet er *kommuneplanen* og *lokalplanen* betydelige faktorer, der påvirker ejendomsværdien. Det er specielt *zonering*, reguleringen af *områdets tæthed* (typisk bebyggelsesprocent) og området fremtidige *kvalitet* og standard, som er nøglefaktorer i planernes påvirkning. Planlægningen, *forundersøgelser* og *tilladelser ift. reguleringslove* er værdipåvirkende faktorer, idet de skaber sikkerhed for projektudvikleren, og gør det mere sandsynligt, at projektet kan gennemføres. Med andre ord mindre *risiko*, hvor en af de store risiko elementer er *den politisk vedtagelse af planerne* i planprocessen. I byggemodningstrinnet er det specielt de *fysiske forandringer af området* i form

af *byggemodning*, der er værdipåvirkende. Selve *byggeriet* er den mest værdipåvirkende faktor i udviklingen af fast ejendom. En mere udfoldet beskrivelse af de fundne nøglefaktorer kan ses i projektets konklusion.

Den konceptuelle model og de fundne faktorer omhandler en dansk kontekst og resultaterne gælder derfor som udgangspunkt kun for Danmark. Fx betyder den danske kontekst, at der er taget udgangspunkt i det danske plansystem. Med nogle mindre justeringer, specielt omkring plansystem, burde det være muligt at tilpasse projektets resultater til andre lande med planregulering og en markedsbaseret økonomi. Modellen er konceptuel og de fundne faktorer er nøglefaktorer, hvilket indikerer, at projektets resultater er et udtryk for principper. Som det er tilfældet i mange andre situationer vil det enkelte byudviklingsprojekt afvige fra principperne pga. projektets individuelle kontekst.

1. Introduction

When urban development takes place for the private housing market, it will have economic consequences for the implicated area, and in many cases also the surrounding areas. An example of this is when a city expands with a new housing area at the edge of the city – this can be illustrated with the examples in figure 1.1. It is clear that something has happened, since the value of the land, transferred from agricultural land to housing – or from a Rural Zone[1] to

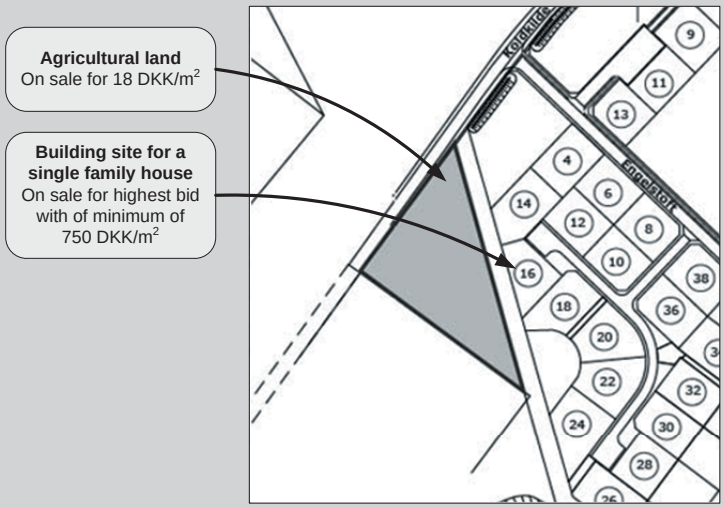


Figure 1.1.: Illustration of a housing area in Elev near Århus and the different land values in the Urban Zone and the Rural Zone.

A new housing area in the town Elev near Århus, Denmark was developed. The agricultural land in the Rural Zone just next to the town Elev was sold for 18 DKK/m² (www.aarhuskommune.dk, a). However, in Elev's Urban Zone, new building sites for single family houses, just next to the agricultural land, were sold for highest bid with of minimum of 750 DKK/m² (www.aarhuskommune.dk, b). The land for building sites were most likely bought by the municipality from the farmer at around 18 DKK/m², since the municipality sells the left over land at that price, which means that the value of the land has increased from around 18 DKK/m² to around 750 DKK/m².

1 Denmark's land is divided into three different zones: Urban Zones, Summer Cottage Areas and Rural Zones, cf. the Danish Planning Act §34. Urban Zones are for urban uses like residential areas, industry, offices etc.; Summer Cottage Areas are reserved for summer cottages and the Rural Zones are the rest of land, which is located in the country side. In Rural Zones almost all uses other than agricultural and fishing requires a permit from the planning authority, which is the municipality.

an Urban Zone (see footnote [2]), has increased so dramatically. It is certain that a least two things has happened; firstly a Local Plan (and Municipal Plan)[2] was produced, which appointed the area as a housing area. This means from a regulatory perspective that the area, which was in Rural Zone, is transferred into Urban Zone. Secondly the area has been prepared for construction, meaning that roads have been made, property boundaries have been drawn, etc. But what has specifically caused this increase in land value? This issue is discussed very little in literature that concerns the conditions that apply in Denmark. As shown, it is relatively easy to determine that there can be an increase in value, but not why it is so. Planning is only one of several factors that can influence the value of urban development project.

Economic consequences of urban development and planning can be both positive and negative, since urban development and planning, as also exemplified in figure 1.2., not always have a positive effect. An effect (or a consequence) is in this context considered a change

Figure 1.2.: Pictures of the redevelopment area for a mixed housing and office area in Aalborg, Denmark. (own photos)

An example of a case within the city boundaries where old harbour and industrial sites are redeveloped. (Nielsen et.al. 2005) found that the municipal's original plans for the area, which was to have a density of 200 %, were seen as a hindrance for the developers. In order to make the area more appealing and profitable from a developer's point of view, the municipality changed the allowed density to between 230-490 %, and that made it possible for the municipality to sell the sites to developers.

2 The local council produces, revises or re-approves the Municipal Plan every 4th year. It has a 12 year perspective and contains a general structure for the development and land use in the municipality. It also contains guidelines for land use and the framework for the content of Local Plans cf. the Danish Planning Act §11 subsection 2.
A Local Plan is a legally binding plan for a smaller area. It consists of a descriptive part and a regulatory part, containing stipulations on how the local planned area can be used and what can be build. It could for instance contain regulation on density and where roads should be build.

in property value[3], meaning that a positive effect is an increase in value and vice versa. The understanding of value is discussed further in chapter "3. The Value of Property and Its Determinants". The value of interest in this project is the change in property value that presumably takes place when the urban development area is transformed from e.g. agricultural land to housing area. This value is essential, if an area is to be developed, because it is within this value change that developers find their profit, and, due to the profit, interest in the development. An urban development area has a value both before and after the development, which can be determined in monetary terms. In developer's and investor's perspectives, the value of the developed property is expected to be larger than the value of the property before development in order to gain profit and the difference will be the increase in property value. The size of increased value is very depended on the actual urban development project. If the developer and investor are to make a profit, the increased value must exceed the costs to develop the urban development area. This increase in value (or decrease) throughout the development is the effect or consequence of the urban development process. Thus, the scope of this project is to explore the effect/value change by breaking it down to smaller pieces as a way to identify what has caused the value change.

Why is This Relevant?

The starting point of this Ph.D. project is the initiating problem and general wondering that planning and urban development seem to change the value of property, but not much is known about why, how or how much. Knowledge on how value changes throughout the urban development process and furthermore why it changes in a Danish context will in part be new knowledge – at least in Denmark. Some parts will be new knowledge and some parts will bring forth existing, but undocumented "common" knowledge that developers and others have. It will also be possible to contribute to the international knowledge on value changes in urban development and models of such.

That planning does (or can) influence and change the value of property puts planning and the planning authority – the municipality – in an important role, where they have direct influence on value, see for example the case in figure 1.2. But how important a role is this, and how can and do the municipality utilise this role? Do they use it deliberate or unknowingly? The example in figure 1.2. shows that planning in combination with the value of land can make land

3 It must be recognised that e.g. architectural consequences and effects on urban life etc. can influence the value of property and therefore indirectly be important as well.

unprofitable to develop, and raises the question of how the municipality handles the key issue that their planning needs to be implementable.

It is clear when examining the Danish planning Act that a municipality can stop development, if they want. However there are not in the same way tools if the municipality wants to encourage development. Then it is necessary to understand urban development processes, how value changes in the urban development process and how the developer sees this. If more is known about how municipal planning impacts on the value of property it will be possible to take this into consideration in the planning process. Developers need planning and planning authorities to be able to develop, and the municipality needs the developers to implement their planning; a mutually beneficial relation among where the developers and municipality have to interact with each other. It is hard to make things happen if the things that planning allows are not profitable for developers to engage in. When the local council and their administration conduct their planning, they are required cf. the Planning Act to make plans that are in the best interest of the community, take nature and environmental issues into account and they are obligated to include the communities' citizens in their planning, but those who actually implement their planning – developers, investors and owners – are not formally a part of the target group when planning takes place. However, it is necessary to look at the developers' (economical) perspective to increase the chance of development actually taking place.

It is well known that a major part of the produced Local Plans are initiated by developers, investors and owners – about 78% of the Local Plans adopted in 2005 were initiated by one of these parties (Skov- og Naturstyrelsen 2006, p. 7). This illustrates a direct interaction between developers, investors and owners on one side and the local council and their municipal planners on the other in those situations. This interaction concentrates on what the future plans allows and negotiations regarding preparation of land (Miljøministeriet 2006, p. 38-39). Knowledge on how value changes throughout the urban development process and how municipal planning impacts on the value of property can help to qualify this interaction between developers, investors, owners and the local council (and their municipal planners). Or as it is put in the introduction to a network meeting in Plan09[4] on value increase in urban redevelop-

4 Plan09 was a partnership between the Ministery of Environment and Real Dania with the purpose to inspire and be a driver to improve and develop the spatial planning culture in Denmark. The project ran from 2005-2009.

ment: *"Nevertheless, knowledge on this (read: value of developments and spinoff effects) is an important piece in the dialogue on partnerships between public and private investors"* (www.byplanlab.dk).

Research Question

As illustrated above, planning causes a change in property value, and from a developer's or investor's point of view this change needs to be positive. However, planning, here understood as the actual change in land use as reflected in the planning documents, is only one out of several steps in an urban development process that can cause changes in value. It is necessary to look at the whole urban development process, and how different factors influence the value of property in urban development areas, in order to find what causes value to increase in urban development and what the role of planning is. The research question of this Ph.D. project is therefore:

> *How does property value change in urban development areas from the time when the existing Old Use[5] stops and until the area is fully (re)developed as a residential area; and is it possible to create a conceptual model, describing the key factors (and their weight) in this increase of value?*
>
> - *The project will have particular emphasis on how municipal planning, and thereby new usage options, influences on the value of property.*

The urban development situation in focus is "Residential use" as "New Use" (the future use of the development area). It is in practice the most common use, and a use that is present all the way from city centre to the fringe in most Danish cities. It is a regulated use, just as all other land use, and is as everything else also influenced by "the general economic situation"[6]. The urban development can have any "Old Use" (the area's use when the urban development process starts).

Developers, investors and landowners who typically develop an urban development area (are expected to) have an economical interest in the area[7]. It is chosen to take their point of view, since they typically implement planning, regardless if the plans are initiated

5 By "existing use" is meant the development area's use prior to the development – in the project referred to as "Old Use".

6 By "the general economic situation" is meant – in this case – the financial situation in Denmark, which in periods are good and in others slows down.

7 They can also have a "personal need" to cover, for example a need of a new domicile for a company. In that situation the economical aspect may be reduced. It is however chosen to focus on the "strict economical focus", since this serves the scope of the project best.

by the developer themselves or by the municipality[8]. Consequently, this means that developers – with their economic interest – bring an economical perspective into the urban development process and the planning process. This fits well with this project's focus on the urban development area's increase in value. The developer is chosen because the focus of this project is property value changes in the urban development process, and one way of applying this focus is to "put on the glasses of those" who also and already look at the urban development process from an economical angle.

In sum, this Ph.D. project aims at clarifying how property value changes when areas are developed into residential uses, and thereby document the value change (presumable value increase) that is said to exists based on a literature study, interviews and a multiple case study (see chapter "2. Research Strategy").

8 Although in both cases adopted by the municipality, and with a plan process that follows the rules in the Danish Planning act.

2. Research Strategy and Methodological Considerations

The purpose of this chapter is to describe the chosen research strategy, methods and the considerations behind the choices, which are made. Choosing a research strategy including different research methods for gathering relevant data is the natural continuation of formulating a research question, meaning after defining what to investigate the natural step is to consider how the investigation should be conducted. This chapter includes the research strategy for this research, and it is presented in four parts: First a section where the overall research strategy is presented, justified and discussed; second the theoretical analyses is described; the third part describes the empirical analyses; and finally, the fourth part is a summation of the research strategy.

2.1. The Overall Research Strategy

The research question focuses on "how property value changes during the urban development process", but also "why it changes" since key factors that causes value changes are also in focus. By "why" it is meant; what or who causes the change of value, while it by "how" is meant when the value changes, how big the change is and how significant the change is in comparison to other factors in the whole development process. However, there is a strong link between how and why in this context. It is a prerequisite to determine "how it changes" in order to explain "why it changes", otherwise it would not be clear what was being explained. It will probably be possible to make a model of property value changes in a specific development project by only looking at "how and when property value change", but if the model is to be generalised into a conceptual model, it is necessary also to investigate "why property value changes" throughout the urban development process. A conceptual model cannot be made without some understanding of "why property value change" as it does. When referring to the possibilities of generalisation and making of a conceptual model, it is here not thought of the discussion of whether there can be generalised on one case (one empirical sample) as (Flyvbjerg 2009) argues or if a representative sample (or all samples) is required. The issue of generalisation is also addressed in chapter 7.

The research question has emphasis on municipal planning, and planning's effect on property value is the initial point of departure for this project. However, municipal planning is only one of the "things"/factors that cause changes in property value during the urban development process. Figuratively speaking, "how property value changes" and "why it changes", as introduced above, is the big picture – the whole urban development process. The emphasis in the research question on municipal planning is to zoom in on a part of the process – how value changes due to municipal planning. Three sub-questions can be identified from this:

- *How does property value change throughout the urban development process?*
  - *When does the value change?*
  - *How significant is the change compared to other changes?*
- *Why does property value change as it does?*
  - *What or whom causes the changes in property value?*
- *How does municipal planning cause property value to change in the urban development process?*

Finding answers to these sub-questions, makes it possible to compile the collected knowledge and build a conceptual model showing not only how value changes throughout the whole urban development process, but also in detail show how especially planning causes value to change in the urban development process.

It is possible to approach the investigation of the research question and its sub-questions in at least two overall ways – one with an empirical starting point and one with a theoretical starting point; both described further below. The selected research strategy for analysing the research question and its sub-questions is chosen by outlining the two mentioned approaches in the following two sections and in the third section a decision on a strategy for this research is made.

2.1.1. Empirical Starting Point

The first approach takes its origin in the empirical data and starts by analysing "how property value changes" over time throughout the urban development process in a real life context. When property value – and how it changes – is determined, it can be related to time and events in the process. It is then possible to analyse and explain "why the property value change". This is illustrated in figure 2.1. The figure shows value measured in currency on the y-axis and the urban development process measured in time on the x-axis. Time is also linked to the events in the process, which are shown below the x-axis. Events that occur (or may occur) in the urban development

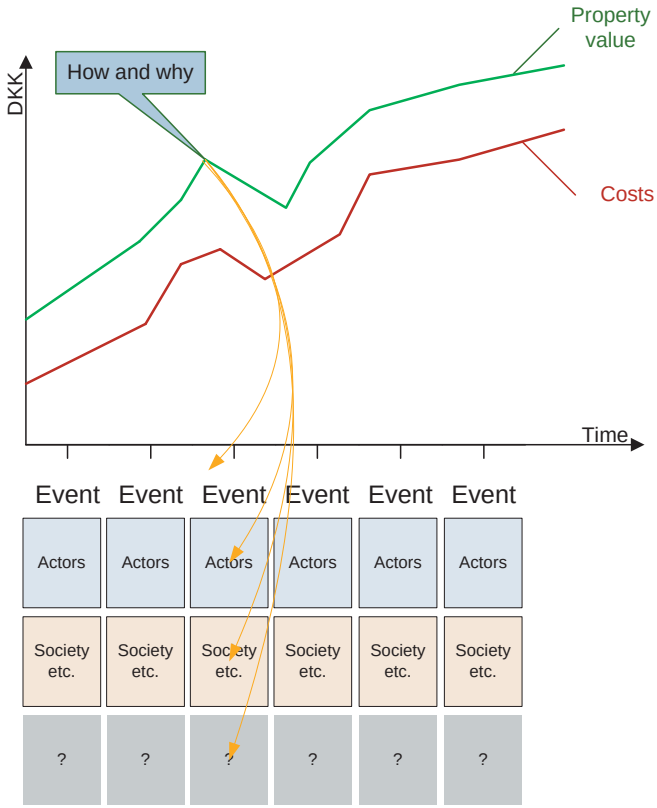


Figure 2.1.: The figure shows the empirical approach, which starts by finding the size of property value changes and costs and afterwards analysing why they changes as they do (own figure).

process are described and further elaborated in chapter 4. There are two curves in the graph: The property value and the costs of the development. Since there is only a price tack on a property when it is sold, the property's value[9] is only explicit available a limited number of times throughout the urban development process. However, it can also be estimated during a valuation, e.g. the valuation for taxation purposes. Therefore, to draw a curve on property value will inevitably mean that parts of the curve must be estimated. On the opposite, the costs of the urban development can be calculated throughout the whole process, and may to some extent give some guidance in the evaluation of changes in property value. It will only be guidance since cost – at least from a theoretical point of view as described in chapter 3. – does not have influence on property value. When property value (and how it changes) is determined and related

9 The relation between Market Value and sale prices is discussed further in chapter 3.

to time and events, the next step is to explain why property value changes. The arrows in figure 2.1. indicate that the changed value is to be explained by a combination of what happens, who does it and the context that surrounds the development, i.e. a number of different factors. The construction of this figure is inspired by the read literature, but also by the fact that the development process is a series of events that take place over a period of time. One of the inspirations is (Healey 1992), who describes an approach to analyse the development process, which is similar to the one described above, in *"An institutional model of the development process"*[10]. Her method for analysis has four levels:

- A mapping of events, actors involved and outcome;
- an identification of the actors' role in the development process;
- an assessment of the actors strategies and intents; and at last
- a combined analysis of the information gathered in the first three levels.
  (Healey 1992, p. 36-37)

This first approach, as described above, combined with the intension of making a conceptual model, cf. the research question, can also be characterised as an inductive research approach, or a bottom-up approach starting by gathering empirical data and from that extracting causal relations which eventually is articulated into a larger theory (Maaløe 2002, p. 20-21). In (Bryman 2008, p. 11), induction is formulated as a process that "*involves drawing generalizable inferences out of observations*." When analysing a process like the urban development process, it is important to take into consideration that urban development is a part of the society's development and therefore a larger process. A developer's or one of the other actor's decisions are important and relevant, but the general market situation or new politics on national level can also affect the dynamics of the urban development process. That the urban development process is influenced by potentially a lot of factors complicates the possibilities for establishing causal relations and formulating general theory, because it is hard to identify what caused what. (Flyvbjerg 2009) addresses this further and claims that it is not possible to formulate a universal theory in social science – making induction in a classical sense troublesome. Analysing the urban development process is at large within the field of social science, which also implies some potential problems with making a conceptual model. A respond to this can be to formulate a set of "all things being equal" consideration – or in other words be explicit about when the model applies and when it does not.

10 (Healey 1992)

2.1.2. Theoretical Starting Point

Another approach is to realise that this research is not the first about this subject, although it is one of the first which looks at this from a developer's perspective and more importantly puts it in a Danish context. The fact is nevertheless that there are some existing knowledge on this subject. This existing knowledge are most likely beneficial to this research – a stepping stone. The starting point of the second possible approach is to analyse the existing knowledge to answer the question: "What do we already know?" in relation to the research question and the three sub-questions. When this is brought forth, it is possible to determine what empirical work is necessary to answer the research question. This approach resembles the deductive research approach, which in many ways is an opposite of the inductive research approach. The starting point of the classic deductive approach is the existing theory and from that a specific theory is made, which is then tested through some kind of empirical work (Bryman 2008, p. 9-11; Maaløe 2002, p. 18-21). The deductive research approach is illustrated in figure 2.2.

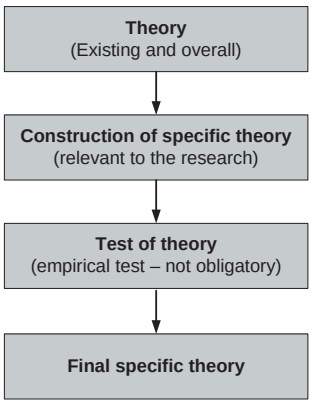


Figure 2.2.: The figure shows a deductive research method. (own figure)

2.1.3. The Chosen Strategy

Each of the two approaches above has its strengths and weaknesses. The first approach, that starts by looking at reality through empirical work, has a strong connection to practice. This approach does however to some extent neglect what has already been found. The second approach, which starts by looking at theory, has a direct link to the former traditions within the research area. It can however be claimed that is has a weak link to reality and that the researcher becomes biased and only sees what he wants to see during the empirical work. A pragmatic middle way is also possible, and by mixing the two approaches the research can get a strong link to both what is written and reality. Where the first approach goes from empirical work to theory (the inductive approach), and the second approach goes from theory to empirical work (the deductive approach), a combination of these will figuratively speaking mean to do a full circle instead of just half way around.

By choosing "both" approaches and exploiting the best of both, it is possible to satisfy the need for a good link to the already established research tradition and knowledge and still have a research strategy that has its roots in empirical work. The pragmatic combination of the two approaches is to use the existing knowledge and literature as a starting point – and answer "what do we already know?" This is no. 1 in figure 2.3. The existing knowledge is in that way used as a stepping stone to get as much knowledge as possible before the empirical work and thereby hopefully enable improvement of the possible outcome of the empirical analyses. The second step in the research strategy, displayed as no. 2 in figure 2.3., is to produce a first edition of a conceptual model based on the existing knowledge – or in other words a half way status summing up the results. The third step is the empirical analyses, which has the purposes of improving the model and calibrate it into a Danish context – this is no. 3 in the figure. This is necessary because the existing knowledge is limited in a Danish context and therefore the existing knowledge will only bring the research some of the way. Based on the empirical analyses, the model can potentially be improved and contextualised to a Danish setting, shown as no. 4 in the figure. Some of the things found in the empirical analyses may bring forth the need of supplementing theories, and the research can in principle continue this iterative process and continue in as many circles as wanted. This project will however due to certain limitations in time and resources stop after no. 4, meaning doing only one circle. In practices, it may be more fluently, but as an overall structure of the research strategy, it is step 1 through 4, which consist of both theoretical and empirical analyses, complementing each other.

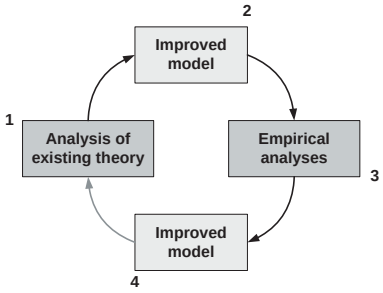


Figure 2.3.: The underlying theory in this Ph.D. project's research approach is a circular and in principle iterative process. (own figure)

2.2. Theoretical Analyses

The aim of the theoretical analyses is to answer the question: "What do we already know?" – regarding the research question and the sub-questions. In other words exploration of the existing understandings and models, concerning changes in property value throughout the urban development process. When looking at the research question and the sub-questions, there are furthermore a number of terms/ concepts which are relevant to analyse and that is "property value", "the urban development process"[11] and "how municipal planning cause property value to change". This is analysed in chapter 3, 4 and 5, which each consist of a theoretical analysis. How municipal planning cause property value to change is analysed in chapter 3 and 5. Short descriptions of the content of the theoretical analyses are given below.

"3. The Value of Property and Its Determinants" – In order to create a meaningful understanding of property value, it is necessary to get an understanding of the term "value". What is value, and just as importantly, how is value understood in this research. Furthermore, what determines value, and since there is emphasis on municipal planning, it is in this analysis scrutinised how municipal planning influences value.

"4. The Urban Development Process" – A necessary extension of exploring value changes in the urban development process is to define and describe the urban development process and the main actors that engage in this process in Denmark.

"5. Property Value Changes during Urban Development" – This analysis zooms in on the economic theories – especially the stair step models – that describe how value changes throughout the urban development process. The focus in this analysis is on value changes and why it changes.

The expected outcome of the theoretical analyses is mainly an understanding of the subject, but also the creation of a first edition of a model that shows how value changes throughout the urban development process. The first edition of a model is displayed and described in chapter "6. A Model of Changes in Property Value during Urban Development – in Theory". In order to determine clearly "What do we already know?", it is relevant to follow the theoretical analyses with the construction of a "first edition" conceptual model – and start answering the research question – at this early stage. It will furthermore help to identify the needs that the empirical analyses are to deal with.

11 Although partly outlined in the research question.

Existing Knowledge in This Research

An important issue in relation to the theoretical analyses is a discussion of what is considered knowledge. It is clear that a classical theory as the "Supply and Demand" theory is to be considered theory, and also more specific theories as for example a model for the correlation between allowed density and value on land. However, the borders of knowledge becomes unclear when an author describes a conducted empirical study and its results. If the author through some sort of analytical generalisation extracts a model or a small scale theory, is that to be considered theory and knowledge? And what about the description of the empirical study? This is in its essence a discussion of producing valid and generalizable results, and in prolongation of the saying "the chain is not stronger than its weakest link", the input of these analyses – existing theory and knowledge – will influence the results of these analyses. (Bryman 2008, p. 32-33) talks about different kinds of validity, and especially internal and external validity is interesting here. Internal validity mainly concerns whether the causal relations established within the research are correct and not biased by other parameters. External validity concerns the possibilities to generalise the results. Both internal and external validity are important parameters when using existing knowledge as input – and furthermore when using observations in the empirical analyses – meaning that found theory and knowledge should not only be relevant but also valid, or used with sufficient caution.

It is not the intention here to define theory, but to articulate that previously academic studies should be considered as knowledge in this context. However, if statements are presented without any documentation, proof or signs of validity it can – and should – be disqualified. It is possible to know something without it being formulated as a grand theory. In the theoretical analyses in this project, knowledge is understood as written knowledge, ranging from grand scale theory to documentation of empirical studies, as long as they represent valid knowledge. The broad understanding of knowledge can be summed up as "The bundle of knowledge".

2.2.1. Literature Analyses

As previously mentioned, the theoretical analyses have the purpose of providing a theoretical foundation of knowledge about property value and how it changes before creating and later revising a conceptual model. This foundation is founded by analysing literature about the topic. However, it is not possible to go through all the worlds' literature, nor would it be relevant; it is a necessity to somehow narrow down the search field. (Bryman 2008, p. 85-94)

outlines two opposite approaches concerning literature reviews; the systematic review and the narrative review. The systematic review is focused and systematic and it is illustrated by (Miller 2004 cited in Bryman 2008, p. 86-88) with a workflow where:

1. The purpose of the review is defined,
2. Criteria for the literature search are defined,
3. Literature is found,
4. Key features in found literature are identified and structured and
5. Syntheses are made.

The narrative approach is broader and more unfocused, often used in inductive research. Were the systematic review needs clear boundaries between what is relevant and what is not, the narrative approach can embrace more unclear boundaries. However, (Bryman 2008, p. 94) indicates that the systematic approach can be adapted to the narrative review and used as a starting point. The boundaries for the theoretical analyses in this research – when searching for literature – cannot be said to be clear. An example of clear cut issue could be "how are forests in Denmark regulated through the Danish forest law?" In the case of the theoretical analyses in this research the purpose is to get an understanding of the value of property and the urban development process and further to investigate "what do we already know" about the influence of planning and how the property value changes throughout the urban development process. Even though these are, in this context, specific aims, the boundaries are a bit fuzzy.

It is chosen to use the systematic review as a guideline, but also to realise that it is an iterative process, in which some literature leads to other literature – sometimes relevant and sometimes not. A starting point has been taken in a search on keywords like property value, value change, planning, urban development, development process etc. From here the search is expanded by using reference lists in relevant literature and see where important and relevant references are cited. The latter has especially been used when searching for literature regarding "what do we already know" about the influence of planning and how value change throughout the urban development process. Literature review, no matter if the approach is systematic or narrative, does not come with a guarantee that all relevant literature has been found. This literature search was stopped in a balancing of time effort against redundancy in found literature, meaning the search was stopped when the last found literature concerned issue already found one or multiple times before. This does however not mean that another search machine, library, professor and so on could not bring forth new relevant material.

2.3. Empirical Analyses

The purpose of the empirical analyses is to develop the result of the theoretical analyses further and to set it into a Danish context. It is not the intention to use the empirical analyses to test the model based on the theoretical analyses, but on the contrary to develop it further and adapt it to a Danish context. Maybe it even proves necessary to make a new model, and not only revise the first model. If the purpose of the empirical analyses was exclusively to test the model, it would only be possible to see if it works or does not work – or maybe if it should be changed to a minor degree. It would not be possible to see if the urban development process in reality is different from theory, and if so why it is different. The aim of the empirical analyses is to look at actual development projects and those who work with development and, together with the knowledge gathered in the theoretical analyses, answer the three sub-questions fully. It is the intention to use a "first edition of the model"[12] as the starting point and perception of how value changes in the development process, when doing the empirical analyses.

First of all, the aim is to identify "how" property value changes over time. This is the first sub-question – "how does property value change throughout the development process". The second sub-question – "why does property value change as it does" – and third sub-question – "how does municipal planning cause property value to change in the development process" – focuses on explanations on why value changes. Especially the first sub-question has elements of mapping value in relation to time in the urban development process. To analyse and map "how" property value changes, it would be convenient if there were a big database that contained property values in different steps of the urban development process – especially if the same property was sold several times during the process. This would make it possible to do statistical analyses and through statistical generalisation say something general about how property value changes – in other words a quantitative method. The necessary data is unfortunately not accessible, if it even exists in Denmark. One thing is that a database of "sales" does not exist; another thing is that an urban development is very context dependent. (Bryman 2008, p. 393-395) indicates that a quantitative method can be problematic when studying a context dependent process, which is the case of an urban development process as it takes place on a property rather than national level, i.e. a micro level, and it changes through time, making it dynamic rather than

12 The first edition model is based on the theoretical analyses – chapter 3.-5. – and is presented in chapter 6.

static. (Flyvbjerg 2009) also illustrates on a theoretical level that "social science methods" are better at embracing context based situations, in natural settings, than natural science[13]. Qualitative methods are chosen in this research because they are suitable – also due to lack of quantitative data – and because they can embrace context depended process better. The qualitative methods chosen must be the type that suits the research question best, but it must also be within the possibilities of the allotted time, resources and the data/ persons must be assessable.

It is chosen to do three empirical analyses: Two interview analyses and a multiple case study. All analyses are concerned with the issue "how are things being practised in real life", but from different angles. The analyses are in continuation of each other; first an interview analysis, second a multiple case study and third an interview analysis. Just as the theoretical part and empirical part is in principle two iterations consisting of analysis and model building, the empirical analyses is in itself an iterative process. After each analysis the conceptual model showing how property value increases during urban development is revised. The next analysis it then based on the revised model. This is illustrated in figure 2.4.

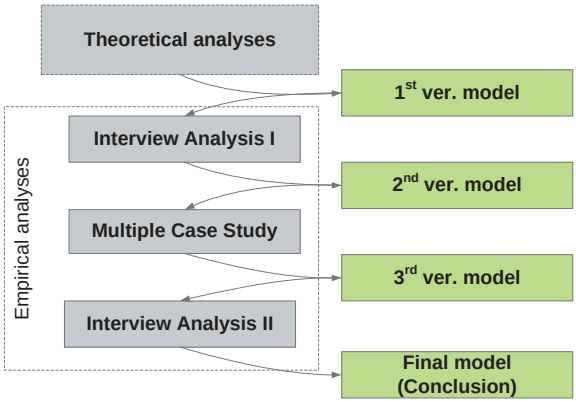


Figure 2.4.: The figure shows the principle of the iterative process and how the empirical analyses are in continuation of each other.

13 Note that (Flyvbjerg 2009) uses social science and natural science as terms for different traditions within the production of knowledge, and it is here interpreted as also being a distinction between quantitative and qualitative methods.

The thought behind these midway updates of the model is to let the found information influences what is search in the following analysis – new information can reveal new questions. This is not a new approach e.g. the Delhi method[14] works after similar principles.

The first interview analysis contributes by adding facts on how different actors in urban projects perceive and understand changes in property value. The strengths of the interviews are that it is possible to look at the urban development process in a whole and go in depth with the different aspects of the process in a Danish context. The weakness is that the result of the interviews will be influenced by the interviewees' opinions and preferences. This problem can however be limited by selecting interview persons with different backgrounds and roles in the urban development process and in that way triangulate the answers they give. Also increasing the numbers of persons interviewed can increase the possibility to generalise the answers. The multiple case study contributes to this research by adding facts about how urban development projects are conducted and how value changes in specific cases. The strengths of the multiple case study is that it can show value changes in actual cases and thereby give more direct answers on how it can change in practise. In this context, the reality is however that urban development projects are not sold that many times throughout the urban development process – therefore, the property value must be estimated, often based on statements from actors or with assumptions from the author's side. In the ideal situation, a case study would be a very appropriate method, but in reality it is hard to get hold of enough information of the situation to clarify all value changes in the process – either because of limited time or because the data simply does not exist or difficult to capture. Cases that map value changes in parts of the urban development process can however support the interview analyses with illustrative examples and show if the values actually change due to different factors as the result of the theoretical analyses suggest. In other words, the cases can help validating the model and develop it further. The third analysis, which is also an interview analysis, focuses especially on the third sub-question, "how does municipal planning cause property value to change in the urban development process", and thereby zooms in on a part of the whole urban development process. This issue is also emphasised in

14 The Delphi method origins from the American Airforce in the 1950's were it had the purpose to "*...obtain the most reliable consensus of opinion of a group of experts ... by a series of intensive questionnaires interspersed with controlled opinion feedback*" (Linstone & Turoff 1975, p. 10). The "Conventional Delphi method" works by asking a group of experts on an issue; go back an summarise the result and revise the questions; return and ask the group of experts on the issue and so on (Linstone & Turoff 1975, p. 5). (Linstone & Turoff 1975) also provides an extensive set of examples were this method was implemented.

the research question, and for the empirical part of this project it is implemented in this second interview analysis. Having a second opportunity to interview developers et.al. it is also a chance to take up issues that have come up in the first two analyses.

The purpose of the first interview analysis – Interview Analysis I – is therefore to further develop the first edition of the model based on the theoretical analysis and to set it into a Danish context. Furthermore, by adding facts on how different actors in urban projects perceive and understand value changes, the analysis should improve both the model and the understanding of the urban development process.

The Multiple Case Study's purpose is to map value changes in actual cases (to support "how value changes") and see if the values actually change as the results of the theoretical analyses and first interview analysis suggest. It is also the intention to support the interview analyses with illustrative examples. The case study has an element of triangulation in it, since the findings in the case study of actual cases should be coherent with the results of the interview analyses and theoretical analyses. This should especially be the case with the interview analyses since they reflect the same reality and Danish setting.

Interview Analysis II zooms in on how planning in particular influences value changes and how the different actors use this. Thus the analysis focuses on especially the third sub-question – "How does municipal planning cause property value to change in the urban development process?" – and thereby zooms in on a part of the whole urban development process. Furthermore the purpose of the interview analysis is to confirm/disconfirm the conceptual model. Lastly additional related issues such as the time it takes to develop an urban development project has also been included in the interviews for this analysis.

2.4. Summary

From the discussion in this chapter, the research strategy, illustrated in figure 2.5., is created. The research starts with an Introduction; this is done in chapter 1. Next, the strategy and methods are chosen, which is done in this chapter. Next follows three theoretical analyses: "The Value of Property"; "The Urban Development Process" and "Property Value Changes during Urban Development". The theoretical section is the first part and it is here sought to find "what we already know". After this the three empirical analyses: an interview analysis, a multiple case study and an interview analysis. It is

through the empirical analyses sought to add further knowledge and to set this it into a Danish context. The more specific methods and approaches concerning the multiple case study and interview analyses will be discussed in chapter “7. Empirical Methodologies”. At the end, a conclusion sums up the results and contains the construction of the general model, which is the conclusion of the research.

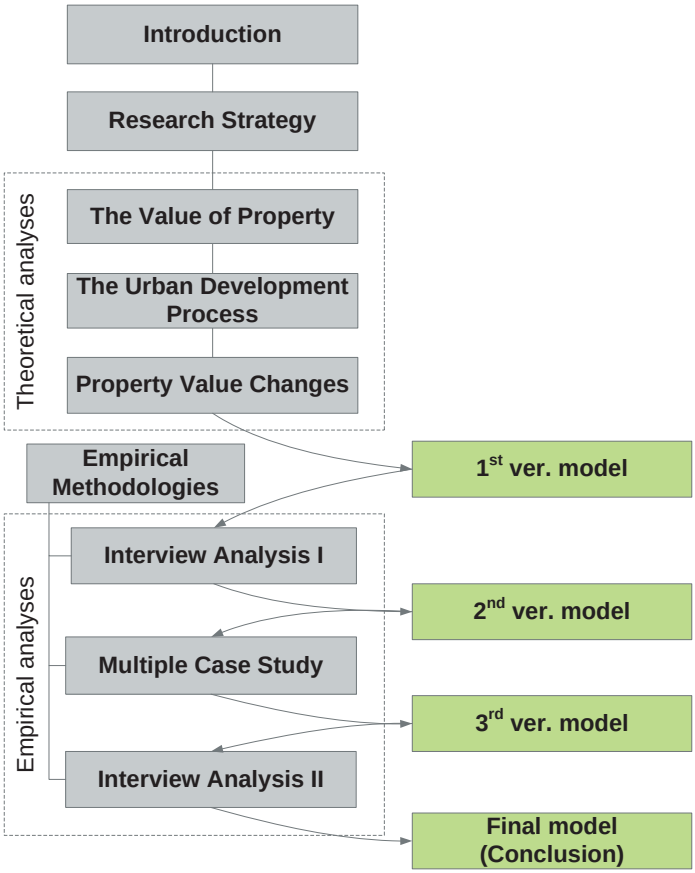


Figure 2.5.: The structure of the research.

3. The Value of Property and Its Determinants

This chapter contains the first of three theoretical analyses, and as indicated in chapter 2., the analysis aims to contribute with an understanding of the term "property value" and how it is determined in a context of this research. The chapter is divided into four major sections: The first section analyses in depth the determinations for property value; the second and third sections analyse how municipal planning affect a property's value with a discussion of zoning and density, respectively. This separation of zoning and density is due to the fact that the theory treats those elements separately and because previous studies (Nielsen et.al. 2005) have proved it useful to split them in two. The fourth and final section in this chapter is a summation of the findings and a "list" of the influencing factors on property value. As mentioned in the Introduction, the housing market and residential use will be the continual points of reference in the project and in this analysis as well.

3.1. Value in a Market Based Economy

The value of something can be measured in several ways and there are several definitions of value. Mutual is, however, that in a market based economy, such as it typically is the case in the western European countries, value is often associate with "what we get in return when sold on the market". In such a perspective, a thing's value is determined by three things: *Use, need* and *limited supply* (Lantmäteriverket & Mäklersamfundet 2004, p. 1-2). Or as it is phrased in (Eckert 1990, p. 53) *"…for a good to have value it must have Utility, it must be Scarce, and there must be a Desire for it"* (own markings).

Use – A thing has to have the potential of being of use for someone. A basic example of this, in the context of property, is the fact that a dwelling gives shelter for the rain and a place to put one's belongings. According to (Perrson 2008, p. 245), value is a function of the potential future usefulness and emphasises that it is the future use, which is of interest when it comes the determination of value. By this is meant that both the potential buyer and seller evaluate the potential future use of the property, which might be a projection of how the property has been of use so far.

Need – Someone has to be in need of the thing, and opposite if the thing is of no use to anyone, there is also no need for it. The first is in general the case with dwellings, since everybody wants shelter for the rain etc. Although the population at large already have a place to live, people change and so do their need of homes. Eventually, young people want their own home or have children and need more space. For something, and thereby also dwellings, to have a value there must be someone who needs it.

Limited supply – There has to be a limited supply of the thing, or to put it in more economical terms, it has to be a scarce resource cf. the quote above. An example of this is air, which for now at least, is not limited and free for all to use. Nobody buys it because it is just in front of us - the supply is too big and not limited. Air in scuba diving cylinder for divers is another thing, because when under water, air is a scarce resource.

These three terms and their interaction relates to the theory of "Supply and Demand" as described below.

3.1.1. The Theory of "Supply and Demand"

The general perspective on value within the market based economy, in the above, can be put into the "Supply and Demand" theory. The "Supply and Demand" theory is a classical economic theory that has been around for over 200 years (Eklund 2004, p. 60). The models and theories presented throughout this project also have this theory as an underlying understanding of the market mechanisms.

The Use (from Use, Need and Limited supply described above) determines which market it is, meaning whether it is the property market, the stock market or maybe the market for orange juice. In this context, the property market is of most relevance. The property market can also be divided into smaller markets such as the housing market and the market for industrial properties. Even the housing market can be further divided into different types of dwellings, for example whether it is a property with or without buildings. Instead of dividing the property market further, it can also be viewed upon as the diversity of the housing market. When the market is set, there are the *Need* and *Limited supply* left.

In its simplest form, the "Supply and Demand" theory is a model on, how Market Price is determined by the Supply and Demand on a market; in this case, the Supply and Demand of properties. On one side is the quantity of properties for sale on the market (Supply) and one the other side is the quantity of people who want to buy a

property (Demand) – sellers and buyers, respectively. The Supply is linked to the Limited supply, and the Demand is linked to the Need as described above. The principle is that if there are few properties and lots of buyers the price is high, because there are a lot of people to buy few items and the seller can increase the price, since he only needs the few buyers that are willing to pay a high price. On the other hand, if there are lots of properties for sale and only few buyers the price will fall, because the buyer will pick the cheap property, when assuming that the properties for sale are of the same standard. (Eklund 2004, p. 60-63)

Buyers and sellers meet on the property market and depending on how big a demand there is and how big the supply is, the size of the prices for property are determined. This is according to the "Supply and Demand" theory the case, but it requires an unregulated market. This is not the case in Denmark and that influences the Supply and Demand of properties. For example, it is not allowed for people without an agricultural education[15] to buy a farm with over 30 hectares of land. This implies fewer potential buyers and therefore less demand. On the other hand there is regulation that limits the amount of animals allowed on a farm, and the amount of animals is partly measured up against the size of the farm (amount of land). So if the farmer wants to increase the animal stock, he will also have to increase the amount of owned land, and this increases the demand for land. Another example of planning or planning regulation influencing the possible supply of land is through zoning. As mentioned earlier, Denmark is divided into three different zones, and 5.5 % of Denmark is within Urban Zone, 1.2 % of Denmark is within Summer Cottage Areas and the remaining 93.3 % of Demark is Rural Zone. This entails that only 5.5 % of Denmark is available for urban uses, which influence the supply of properties. The population is, however, located differently because 86 % of the population live in cities with more than 200 inhabitants (at large equal to Urban Zone) and the remaining 14 % live in rural areas and small villages. It is in general not allowed to live all year in Summer Cottage Areas[16] (Miljøministeriet 2007, p. 2 & 27). In other words, a large part of the demand for housing is within the 5.5 % of Denmark, which is designated for urban uses. It is necessary to note that a Rural Zone area can be transferred to Urban Zone through planning, but it does not change the fact that planning in general influences the supply of land.

15 Which educations, that are sufficient, are regulated in detail.

16 Under some special conditions it is allowed for retired citizens to live all year in summer cottage areas.

In this research, residential use is in focus and in extension of the need for housing it is relevant to give an overview of how the Danes live. It is not a measure for demand, but leaves an impression of the typical preferences. On 1st January 2007 there were 2,684,002 housing units in Denmark and 5,447,084 people. 40% of the homes were single family houses, 38 % were flats and the remaining part were divided in different groups – mainly types more or less similar to single family houses. In 2007, the number of homes increased with 26,173 new homes[17]. 51 % of the stock of housing units were owned by the residents, while 46 % of the population were renting their home. When looking at single family houses and flats –representing 78 % of the homes in 2007 (2,087,612 homes) – 71,905 of those changed owner in 2006. (Danmarks Statistik 2008, table 9, 244, 296, 303 and 305)

When discussing Supply and Demand in the Danish housing market, it is therefore not just new homes which are in play, but also the existing stock. A big part of the homes that is sold are "second hand", unlike the market of building land where even redevelopment sites at large are cleared before use again. (Needham & Verhage 1998, p. 35-36) describes a Stock Adjustment Model relevant for the housing markets, also the Danish. The stock adjustment model is applicable to markets with durable goods like the housing market. The model can be used on markets which is dominated by the existing stock and where there is sold significantly more than there is being produced. It is also a requirement that second hand house is a good alternative to new. When the number of sales is significantly higher than the production of new dwellings, the price will not be determined by the new dwellings. This applies well on the Danish housing market. The production of new dwellings is depended on how much it costs to produce and its potential price when finished. If there is a high positive difference, the production will increase and vice versa. Two things can be learned from adding this to the basic "Supply and Demand theory"; that the Market Value is highly influenced by the existing stock and that new dwelling in principle only will be made if there is a profit to be made. The latter will be returned to in section 3.2.2., where a Danish study relating directly to the last point is discussed.

3.1.2. Market Value and Other Definitions of Value

When an urban development project is capitalised at the end of the development, the seller will try to get as high a price as possible and the buyer will try to buy it as cheap as possible, just as

17 In 2007, a building boom was still partly on going and peeked in Denmark. In e.g. 2009 the number of constructions had droped.

the rest of the property market works. Urban development projects are not necessarily sold at that point, the price it would be sold for is in any case interesting. The price that they will agree on is the "value in exchange". Value in exchange has a counterpart namely "value in use" (Eckert 1990, p. 53). (Perrson 2008, p. 236) presents a categorisation of value definitions consisting of three categories: "Market Value related definitions" (Value in exchange), "Return value related definitions" and "Cost value related definitions". Market Value is described below and the return value – or value in use – is described below. Cost value is a little off since it as discussed below does not fit in the classical Supply and Demand perspective of value. However, it is not unlikely that a property's replacement costs can be relevant, for instance in insurance questions or compulsory purchase. Value in use will be discussed further below, but first value in exchange.

Market Value and the Value in Exchange

As stated in (Eckert 1990, p. 53), value in exchange is determined by the market and is the Market Price. If the project is sold at an early stage, the price agreed on will be the expected Market Price estimated on the basis of the information known at the time of sale. It is necessary to make a distinction between "Market Price" and "Market Value". "Market Price" is the price paid and agreed on between the buyer (those who has the demand and need) and the seller (those who have the supply). Market Value is on the other hand an estimation of the Market Price. The Market Value is estimated in several situations. One of the common ones is in relation to taxation. The Danish Tax Valuation defines Market Value as the cash value a sensible buyer will pay at the valuation time when taking the property's value at a resale into account (Skat 2004, A.1). The International Valuation Standards from 2001 defines Market Value as *"…the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion"* (Lantmäteriverket & Mäklersamfundet 2004, p. 3-4).

The definitions above show the differences between Market Value and the price paid in a transaction. First of all, the Market Value is excluded from the actual transactions relation to mortgage etc. and only includes the property, meaning no special agreements on tractors, lawnmowers, furniture etc. Another important difference is that the buyer in the definition of Market Value takes the resale value into account, which means he is not only concerned about the price that he can pay, but also the price that others are willing

to pay. Both buyer and seller should be knowledgeable about what is available on the market and what is usually paid for properties on the market. These definitions of Market Value also set a time for the valuation, since Market Value is not stable over time. The price for which properties exchange hands also depends on how fast the seller wants to get rid of his property. Is the expected sales period normal[18], there will (or should) be a connection to the Market Value, but maybe the seller needs to sell the property within a short period of time due to personal reasons and therefore needs to dump the price. Looking at the differences between Market Value and Market Price, it can be said that Market Value is Market Price "if" certain conditions are met. Conditions as they are stated in the definition of marked value like an arm's length transaction, taking resale into account and so on.

When estimating the Market Value there is often a connection to the purpose of the valuation. Even though the definition of Market Value in the different valuation situations is pretty much the same, the estimated value might not be. The taxation value (estimated through mass valuation) might be a little lower to avoid too many complaints, and estimation of the collateral value may be a bit higher[19], the booked value may high or low depending on how a company want to present themselves in their accounts. A property's Market Value can in other words be more than one thing.

When looking at the definitions above and the "Supply and Demand" theory, the construction costs are not visible. Market Value is in principle not related to construction costs / actual costs (Lantmäteriverket & Mäklersamfundet 2004, p. 2). This is however not necessarily that simple in real life, as (Bogason et.al. 2008, p. 7) concludes that the value of e.g. sites for single family housing in Denmark is determined by two things: the Market Value of the finished project and the construction costs. Construction costs may not be determining at large, but for at least new projects, (Bogason et.al. 2008, p. 7) shows that it can be a factor.

In this project, it is chosen to use the International Valuation Standard's definition of Market Value and aim towards the sale situation as described in the definition. Tying the end to the discussion of Market Price vs. Market Value, the choice of the International Valuation Standards definition of Market Value means that the seller and buyer's individual factors (as e.g. mortgage – see also section

18 There is not at standard or indication of how long "normal" is. It is here assumed that "normal" reflects the average sales period in the specific area.

19 Or, with the current market slump, lower.

3.1.3.) are sought excluded. It does not mean that the Market Price is not relevant, or in practise different from Market Value, but that is should be used critically and seller and buyer's individual situation should be considered when using Market Price as an indication of Market Value. The benefit of using Market Value is that it focuses on what the exchange value "should be" and not what it "can be" sold for. "Should be" should in principle also be the price that any other seller and buyer would agree on.

Value in Use

The other value definitions brought forth here relates to the "value in use" mentioned above. According to (Eckert 1990, p. 53), value in use relates to the property's current use. For a commercial property, such as an apartment building, this is often measured in the rent that the property can produce. Different investor types have different demands; some accepts a low return rate[20] if they have a secure return over a series of years, other want a higher return rate (Buch & Møller 2005, p. 44-48). These assessments of value in use are therefore much depended on the owner or investors individual preferences. A person's assessment of a dwellings value in use is in other words, what the property is worth to him related to how he uses the dwelling. Another person may use the same dwelling differently or simple care less about the dwelling. This means that value in use is not suitable for the purpose of this project, since there are too many individual aspects involved to find which factors generally influence property value in urban development projects. When the investor looks at a property's potential value in use, he looks at the property's future usefulness with the current use. There is however nothing that prevents him from estimating the property's value in use (from his perspective) with another use. (Perrson 2008, p. 251) distinguishes between "present use" (current) and "highest and best use". These can be one and the same use, but in for instance in redevelopment areas they are most likely different, and "highest and best use" will be a potential "future use".

According to (Kalbro 2007a, p. 109-114), a potential seller of a property will decide to sell his property when his "value in use" is less than the value he can achieve (or should be able to achieve) when selling the property – the Market Value. The potential buyer of a property will only be interested in buying when his "value in use" is higher than Market Value. Therefore, it is relevant to point out that there is a correlation between "value in use" and "value in ex-

20 Rate of return can be defined with more or less complicated equations, in principle it is rent/investment. The complicated part is defining the time span of rent period and investment, decrease in value and maintenance etc.

change" in the way that "value in use" influences seller and buyer's willingness to engage in a sale of property. This willingness influence the demand for and supply of property on the property market and thereby the value of property.

3.1.3. Factors Determining Property Value

It has been found that the Market Value is the best measure of properties value in this research. The next natural step is to get an overview of what determines a property's Market Value. This project and research focuses on key factors that increase the value of property during the urban development process, and it is therefore furthermore necessary to look into which factors that normally influence property value. This would be a long list almost impossible to make complete. Looking at what normally influences property value is therefore divided into a set of roomy categories based on (Lantmäteriverket & Mäklersamfundet 2004, p. 64-66 & 107-109; Perrson 2008, p. 256; Eckert 1990, p. 180-181).

Property Related Factors - Property related factors relate to both the land and the buildings on the land. Regarding the buildings, it is factors like age, standard, maintenance standard, size, and if it is rented to tenants, the amount of rent that the building can produce is also a factor. The land is influenced by its size, and its usage possibilities (allowed land use and this is where municipal planning fits in).

Location and Area Related Factors - These factors are outside the property and are the service and transportation options in the area, how the area looks, its reputation and so on. It also includes negative factors like noise and air pollution.

Social Factors - Social factors are an off spring of location. People seek people that they are alike; this can be described in different ways and one of them is to acknowledge that people seek and create "clusters". A negative word for this is ghettos and is often associated with people from the lower income groups of the society. However this clustering also occurs in higher groups in the society – most cities have areas where "rich" people live (or have areas that a least have this reputation).

Affiliated Community Factors - The general development in prices, the mortgage rent level, adopted legislation etc. are factors which influence the price paid for property, but they are factors that relates to development of the society in either national or regional level.

Individual Factors - Especially for single family houses, the financial situation of the buyer and seller can influence the price paid for a property. As mentioned earlier, the seller may be lacking money and needs to sell the property fast or maybe the buyer can only afford a certain price. These factors do not normally influence the Market Value of a property, but it may change the price paid – Market Price.

These five categories do not give a clear answer to the research question, but can facilitate the search for factors that influence property value throughout an urban development process, especially since they indicate that there are different types of factors. A different categorisation may be possible to make, but these are suitable for this purpose. The Supply and Demand mechanisms described earlier are underlying mechanisms in relation to these factors. For example, social factors will cause an increase in demand for some type of dwellings in some places and a decrease in other areas, in the way that – very simplified off course – that wealthy people will aim for settling down in some areas and increase the demand in some areas for the type of dwelling they like and less wealthy people will search for other areas.

3.1.4. Findings

It has been chosen to focus on the urban development projects Market Value in this research, and it has been found that the mechanisms of Supply and Demand is an underlying element in the property market and the determination of Market Value. The factors that determine Market Value can be grouped in the following categories:

- Property Related Factors
- Location and Area Related Factors
- Social Factors
- Affiliated Community Factors

3.2. The Effect of Zoning - Specific Use Options for Land

In this section, it is analysed how zoning in the municipal planning[21] influences on property's Market Value, and how it is a factor in the determination of Market Value. The theories discussed in this section focuses on the value of land and not the whole property, but the value of land has direct influence on the value of the whole property, since the land is a part of the whole property. In Danish municipal planning, all land is designated for at specific use – some areas have a general use like agricultural in the Rural Zone, and some areas are appointed to have a more specific use such as high density housing – and that is here referred to as zoning. In this section, it is first discussed what the situation from a theoretical point of view would be if there were no zoning applied on property. This is done in "3.2.1. When No Zoning or Planning is Applied". Secondly, it is discussed how zoning between urban and rural areas influences on property value. This is done in "3.2.2. Zoning of Land between Urban and Agricultural Use". Thirdly, it is discussed how zoning for different uses within the urban area influences of property value. This is done in "3.3.3. Differentiated Zoning within the Urban Area". Finally, the findings of this section on zoning are summarised.

3.2.1. When No Zoning or Planning is Applied

To discuss how and why land values are different in different locations due to zoning, a starting point is taken from Von Thunen's theory articulated in "The Isolated State" from year 1850 which does not include zoning. Von Thunen says: *"...To free one factor, distance from the market, from its permanent association with all the other factors, to see its workings and ascertain its significance, we had to postulate a large town built, not on a navigable river, but at the centre of a plain whose soil is everywhere of the same inherent quality and at the same fertility"* cited in (Blaug, M., 1979, p. 27). Von Thunen's theory is according to (Evans 2004b, p. 4 & 23), in short, that the rent and land value of agricultural land – and the type of crops that are grown on the land – are determined by the distance to the market where the crops are sold. He found that the type of crops – and thereby use of agricultural land – were placed in circles around the city centre (the city market). This implied that certain types of crops where grown close to the market and others far away. This is illustrated in figure 3.1., where the x-axis is the distance to the market (market on the left) and the y-axis is the value (both land value and rent value). The value drops quite dramatically at first and then

21 By municipal planning is meant Municipal Plan and Local Plan. See further in section 4.1.3.

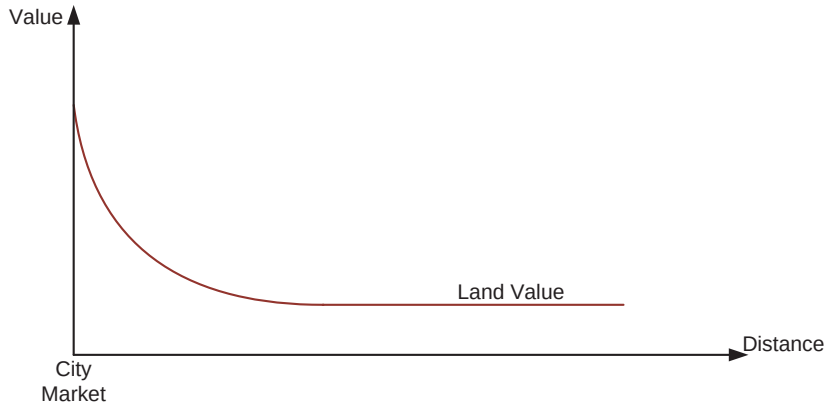


Figure 3.1.: The principle of Von Thunen's theory. Free after (Evans 2004b, p. 23)

more slowly until value has fallen to a point, where the distance is out of influence or land simply does not have any value. To understand this model, it is necessary to take into account how crops were transported at the time – most likely by horse wagon or similar. Evans also mentions that the transportation costs and methods have changed a lot since 1850, and this means that if the curve were to be drawn today and still based on transportation of crops, the picture would be different. First of all, there is not in the same way one market for crops as there might have been in year 1850, and it is much easier to get around, also with crops. Furthermore, it will also be thoughtless to state that every city and its surrounding areas meet the conditions that Von Thunen defines above. It is however useful as a theoretical framework and has also been widely used elsewhere in academia. The framework has, as shown below, also been applied to an urban economic model. Von Thunen states another important point; that factors are permanently associated with each other. He thereby acknowledges that "distance" is not the only factor, and that the model (figure 3.1.) is a simplified view. In that point, he also states that there is a correlation with other factors, as section 3.3. also shows below.

(Alonso 1960, 1964 cited in Evans 2004b, p. 5; Bramley et.al. 1995, p. 49) has moved Von Thunen's theory into the urban area. By doing so, he has replaced the market (Von Thunens crop-market) with a Central Business District and instead of transporting crops it is now people commuting from home to work that determines the distance (Evans 2004b, p. 5). The preconditions for the model are still a larger city with only one centre, which is placed on a piece of land that does

not differ in quality and geographic standard. This is illustrated in figure 3.2., where the x-axis is the distance to the Central Business District and the y-axis is land value. The graph shows how high land value would be if there were no planning or restrictions and if land value was determined only by competition (Bramley et.al. 1995); in other words, a pure "Supply and Demand" thinking. Land values are highest in the city centre around the Central Business District and are being reduced as the distance to the centre increases. Land values will keep falling as distance increases until it reaches a point where land value is equal to the value of agricultural land – shown as the dotted line. When this happens the urban area will stop and the rural area begins, because it will not be profitable to change the agricultural land into urban use. Density will also decrease from the city centre and towards the edge of the city, just as the value of land, as section 3.3. also shows below.

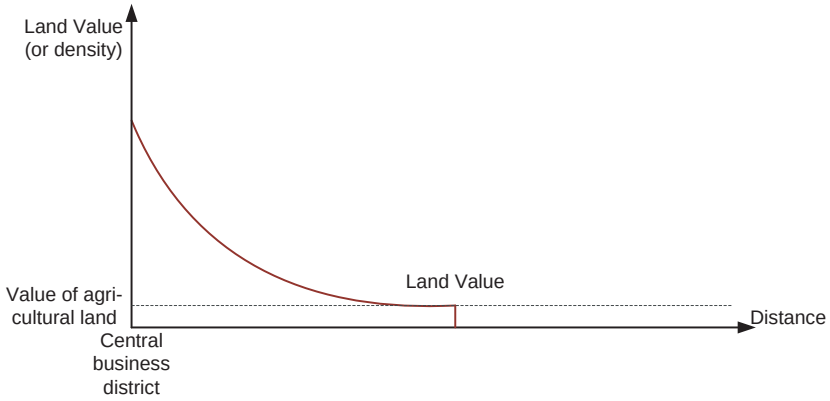


Figure 3.2.: The principle of Alonso's theory. Free after (Bramley et.al. 1995, p. 50)

Both Von Thunen's and Alonso's models are very general in their approach and assume that neither zoning nor planning occur. They show a main principle – that land values are linked to distance measured from a centre point of some sort. However, Von Thunen is very clear about distance; it is not the only factor, and that there is a connection between distance and other factors. The assumption that the city is placed on plain land without any geographical diversity is unlikely to be the case in reality. At least in Denmark, there will always be topological diversity or infrastructure that will cause some sides of the city to be more preferable than others. The city limit – the geographical point where the farmer must decide whether to sell the land for urban use – has an underlying assumption, which has not yet been brought forth: The assumption that the farmer wants to sell his land, which is not necessarily the case

in reality. Both Von Thunen's and Alonso's models concerns "Location and Area Related Factors" and all land is viewed upon as the same, with the same qualities, meaning that there are no "Property Related Factors" involved in their models.

3.2.2. Zoning of Land between Urban and Agricultural Use

Land use is regulated quite intensively in Denmark and as mentioned in chapter 1. and all land are zoned. The effect of zoning the land is according to (Bramley et.al. 1995, p. 54) that areas designated for urban uses will have a higher value than areas designated for agricultural uses, which have a low value. This is illustrated in figure 3.3., where the x-axis is the distance to the Central Business District and the y-axis is land value. The point "Cl" (City limit) on the x-axis is the border between the Urban Zone and the Rural Zone. Evans offers an explanation to why this is so.

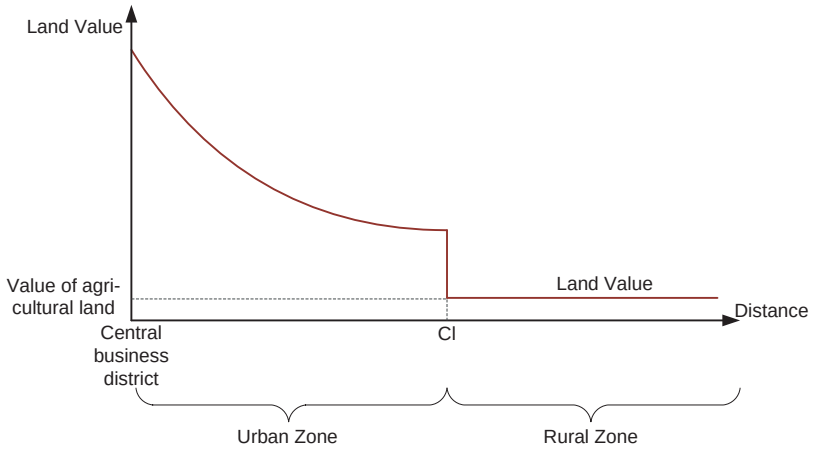


Figure 3.3.: Zoning of land causes a higher value on urban land and a lower value on agricultural land. Free after (Bramley et.al. 1995, p. 55)

Evans uses another model to explain why zoning causes this diversity of land values (Evans 2004a, p. 76-79; Evans 2004b, p. 12-13). The theory origins from David Ricardo and is known as the "Ricardian Theory". The original analysis is like Von Thunen, an analysis of the value of agricultural land. The amount or supply of land is thought to be fixed, mainly because the original theory is on national level. In that way, he has a point, since something dramatically must happen if England's (in his case) amount of land was to change at large. From a Supply and Demand perspective, the value of land will only change if the demand changes, when the supply of land is fixed. This is illustrated in figure 3.4., where the x-axis is the amount of land (and not distance like in Von Thunen's model)

and the y-axis is the value of land. When the supply is fixed at S (a certain amount of land) on the x-axis, the value will be P when the demand line DD' is as shown.

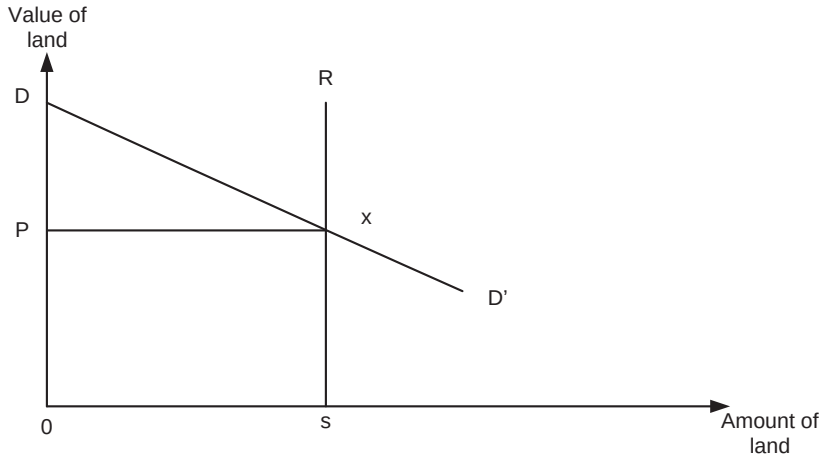


Figure 3.4.: The principle of Ricardian Theory. Free after (Evans 2004a, p. 76)

The point is that land values are determined solely by demand since the supply is fixed (Evans 2004a, p. 76-77; Evans 2004b, p. 12-13). Whether the supply of land is as fixed as claimed, when zooming in on for instance a city, can be discussed. The Danish zoning system, mentioned above, does create a situation which to a certain degree can be viewed as a fixed supply, because planning determines the opportunities to utilise the land. The supply (or amount) of land can however be changed through planning – by changing the allowed use – but only through planning and until it happens, the supply is fixed. The supply of land is fixed in the way that certain areas can be used for urban purposes and others cannot. This is illustrated in figure 3.5., which again has the amount or supply of land available on the x-axis and the value of land on the y-axis (Evans 2004a, p. 78). However, the total amount of land from O-S is divided into Housing (O-X) and agricultural land (X-S). There are two demand lines – one for each use – HH' for housing and AA' for agricultural. The demand line for agricultural land AA' is flat because it is thought that the supply of agricultural land is so big that changes in supply will not influence land values (Evans 2004a, p. 90-93). Around 93 % of Denmark is in the Rural Zone, but not everything is used for agriculture, some is used for forest, nature and so on (Miljøministeriet 2007, p. 27), but it points toward a big supply in a Danish context. However the value of agricultural land has risen over the past years in Denmark, but so has the demand for agricultural land, and it is false to claim that land values on agricultural land do not change.

The curve AA' is properly still flat at large – though there might be regional differences. The general level changes over time, at least in Denmark. The demand curve HH' for housing is downward sloping in the way that a decrease in supply will increase land values and an increase in supply will decrease land values. The latter is illustrated in the figure where the supply is increased from X to X_1 and the land value falls from P to P_1 (Evans 2004a, p. 76-79 & 90-93). The land between X and X_1 which is transformed from agricultural land to urban purposes does however increase in value. The value increase, of the land that is transformed from agricultural land to urban purposes, is theoretically from its prior value A to its new value P'.

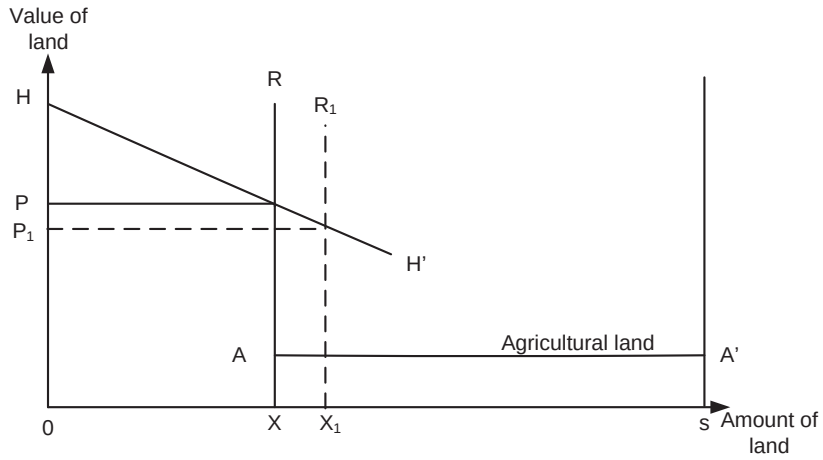


Figure 3.5.: The principle of Ricardian Theory with two different uses. Free after (Evans 2004a, p. 78)

The essence of these models is that the limited supply of land for urban purposes pushes land value up within the urban area, because the demand for urban areas is high and remains. And if the demand increases further without an increase in supply of urban land, land value will increase further. In other words urban land is a scarce resource, hence a higher value. The value of rural area remains low because its value is determined by the demand for agricultural land. This is what causes the value "drop" in figure 3.3. at the edge of the city at the point "Cl". This can also be illustrated with the example from Elev near Århus, Denmark described in chapter 1., where agricultural land was sold for 18 DKR/m^2 in the Rural Zone next to Elev's Urban Zone, where new building sites for single family houses were sold for highest bid with of minimum of 750 DKR/m^2. Zoning is in other words a type of regulation that changes the conditions of Supply and Demand of property, since it affects the supply. But why

have a zoning system that makes some land worth less and some land worth more? When looking at the discussion of value above it seems that there is some of the agricultural land which is not put to its highest and best use. There may not be a sufficient answer to this question, but (Christensen 1970) offers at least a couple of arguments. Firstly, if urban development is unregulated it will be so scattered that public resources for infrastructure, sewage systems etc. will be wasted. The infrastructure would then have to cover a large area with scattered use, instead of a small area with concentrated urban use. The cost of providing and maintaining this infrastructure is lower, when the urban use is concentrated. Secondly, there is a general understanding that the public and politicians in general want to preserve[22] the "Open Land" (agricultural land, forest and other nature types). In a recent Danish study (Bogason et.al. 2008), a group of researchers took upon themselves to answer why the Danish municipalities did not increase the supply of urban land in a market situation where housing values were increasing. Furthermore, they wanted to investigate why the increase – although limited – did not make the housing value decrease as the Supply and Demand theory and the above suggest. They found that there were three issues that prevented the prices from falling and the supply to rise significantly:

- None of the actors (municipality, landowner and developer) had anything to gain by a supply that was bigger than their economy and capacity could handle.
- The price of a piece of land is in practice determined by the expected Market Value of the property when it has been build. So the price tack on land will only be lower if the building costs increase or sales prices of build up land falls.
- The aims of the national and regional planning are towards a limited supply of land for urban uses in order to save nature and to force building around station etc.
  (Bogason et.al. 2008, p. 5-6)

It can be argued that zoning causes a differentiation in the value of land depending on how the land can be used, just as a rocky hillside has a different potential use than a flat field. Zoning changes the possibilities of a market based pricing via Supply and Demand mechanisms, pushing prices up in some areas and keeping them low in others, because it has been decided for what the land can be used. Not only municipal zoning does that, but it is also a consequence of the national and regional planning. This means that

22 Not meant as no changes, but to make sure that there will be larger Danish areas with forest, nature and agriculture and so on.

"Affiliated community factors" can also influence the supply of land (planning on regional and national level). Actors choose (Individual factor) when and if they want to sell and develop, as (Bogason et.al. 2008, p. 5-6) found, and that will inevitably also affect the supply of land. It would seem that zoning effects the lands usage possibilities and that is a "Property Related factor".

Greenbelts

In England – where Bramley, Evans and Harvey are from – they have so called Greenbelts. A Greenbelt is a buffer zone around a city where it is not possible to develop land for urban purposes. Its purpose is to safeguard the countryside and to encourage redevelopment in the existing urban areas (Evans 2004a, p. 62). At large, the Greenbelt restricts the rural area in the same way as the Rural Zone in the Danish zoning system, and that is why it is interesting in this context. The effect of these Greenbelts is said to be that land values in the urban area increases until the point where the urban area becomes so expensive that it becomes attractive to develop land on the other side of the Greenbelt – in the surrounding villages / satellite cities. It is in figure 3.6. illustrated how land, due to Greenbelts, have different values depending on its distance to the city centre and the Greenbelt. In a Danish context, the discussion of Greenbelts can be a bit misplaced, since land can be transferred from Rural Zone to Urban Zone, but there are two things that can be learned from the discussion. In figure 3.6., it is shown how the land in a satellite town in near proximity to a bigger city can increase in value because of the Greenbelt, which in its essence is a regulated area where urban development is prohibited – just as the Rural Zone in Denmark.

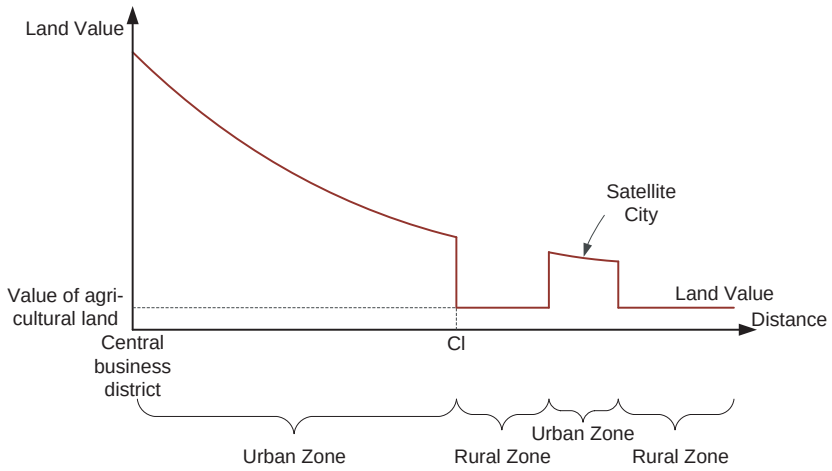


Figure 3.6.: A greenbelt (in the Rural Zone to the right from Cl) is applied which leaves an area where urban use is not possible. Free after (Bramley et.al. 1995, p. 56)

The demand pressure can push land value in the city up to a point where it – from an economical point of view – is more attractive to buy a property in one of the surrounding satellite towns because the land here is cheaper, even when commuting costs is taking into account. (Bramley et.al. 1995, p. 56) This effect can also be seen in Denmark although Denmark does not have Greenbelts, but a Rural Zone. The effect may not be to the same extent as with Greenbelts since land in the Rural Zone can be transferred into Urban Zone if the municipality wishes so. Land values may in other words also increase in the surrounding villages and not just in the "big city".

The second point can be seen in figure 3.7., which in a very illustrative way shows that attractive surroundings (Location and Area Related Factors) can push land values up. Real estate agents often use the term "good location" for an attractive area in for example near proximity to a green area (i.e. a Greenbelt). In figure 3.7., value increases – beside towards the city centre – around the Greenbelt, because the environment around the Greenbelt is desirable. At first sight it seems pointless to have a ring around a city (or for that matter a big park) which have no real Market Value. Figure 3.7. does however explain that the value that could have been in the Greenbelt is "pushed" over to the surrounding areas – and in total the same amount (not necessarily literally total equal) of value is present.

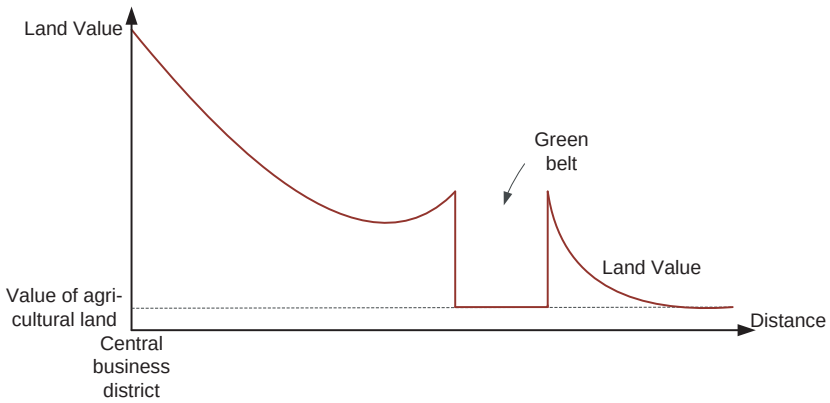


Figure 3.7.: Illustrates that the Greenbelt can have a positive effect on the urban land in close proximity to the Greenbelt. Free after (Harvey & Jowsey 2004, p. 191).

The effects of parks and the like have also been subject for research e.g. by (Jim & Chen 2010) who refers to both other studies and presents their own study on neighbour parks in high rise residential areas in Hong Kong. They note that the effect of a park depends on both the type of residential area and the park itself. In their study of Hong Kong, they found that a park could lift the prices of surrounding high rise with over 16 %, but at the same time their literature review showed that the influence can also be negative (Jim & Chen 2010). This leads to the conclusion that green areas (such as parks but also Greenbelts) can have positive effects like shown in figure 3.7., and that the principle can also apply parks in urban areas. There is a rather big mass of publications were regressions analyses has been used to analyse how an element – in this case parks – influence the value of surrounding properties. Mutual for these studies are that the input data represent a "snapshot" in time and not how value changes, due to this these analyses are not examined further in the forthcoming analysis. It is not in the present analyses the aim to present a mapping of what specifically cause good or bad location – e.g. the influence of a waste dump – and there is therefore not a state of the art review of these analyses included in this research.

The models shown in this section all concerns zoning of land in two types, urban and rural, are all based on the assumption of a fixed supply of land. The supply of land for urban purposes is limited and therefore according to the Supply and Demand theory has a high price – assuming there is a demand as well. At least in a Danish context, it is questionable how fixed the supply is. The relocation of things within the urban area might change the supply, and it is not rare that rural areas through planning are moved into urban area and used for urban purposes. Furthermore, there is no guarantee, in Denmark at least, that the land is used in the best economical way. The landowner decides how he wants to use his land, within the possibilities given in planning and legislation in general. The assumption that land transferred into the Urban Zone is actually used for urban purposes is not necessarily correct, since planning can only give the right to use land in a certain way, but the landowner still choses if he want to use this possibility or continue the existing use. Nevertheless, the point in these models – that planning and zoning effects the supply of different types of land – is right. It depends on the planning system, and within the Danish system zoning affects the land usage possibilities and value as a "Property Related factor".

3.2.3. Differentiated Zoning within the Urban Area

The urban area consists of different uses, for instance industrial, residential and offices as illustrated in figure 3.8. The x-axis is the distance to the Central Business District and the y-axis is the land value. The point "Cl" (City limit) on the x-axis is the border between Urban Zone and Rural Zone and within Urban Zone the land is divided according to its allowed land use. This is regulated through the municipal planning in Denmark as described in chapter 4. The effect of planning in prolongation of its effect on zoning between rural and urban land above is that the supply of land is further limited for specific uses. This means that not all urban land can be used for a specific purpose, but only the subset that is designated for that specific purpose. If the demand for a specific use increases, it will push land value up in those areas which are designated for that use. This could be the case for the use Offices in figure 3.8.

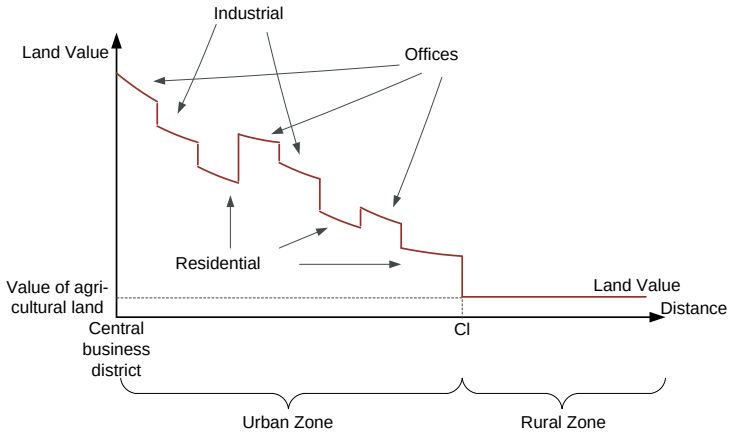


Figure 3.8.: Different urban uses within the urban area have different values. Free after (Evans 2004b, p. 25)

Land value for areas designated for other uses will however not change because of an increased demand for offices, since the value of these areas are determined by the demand of their respective uses. (Evans 2004b, p. 24-25) This is the reason why different uses have different values from a theoretical point of view. It is, as if each use, is its own subpart of the property market as previously discussed in the discussion of Supply and Demand and the property market. Planning thereby also affects the land's usage possibilities and value within the urban area as a "Property Related Factor". The point that an increasing demand for one use does not affect the value on (and demand for) land with other uses may rely on the assumption that the permitted use for land cannot be changed.

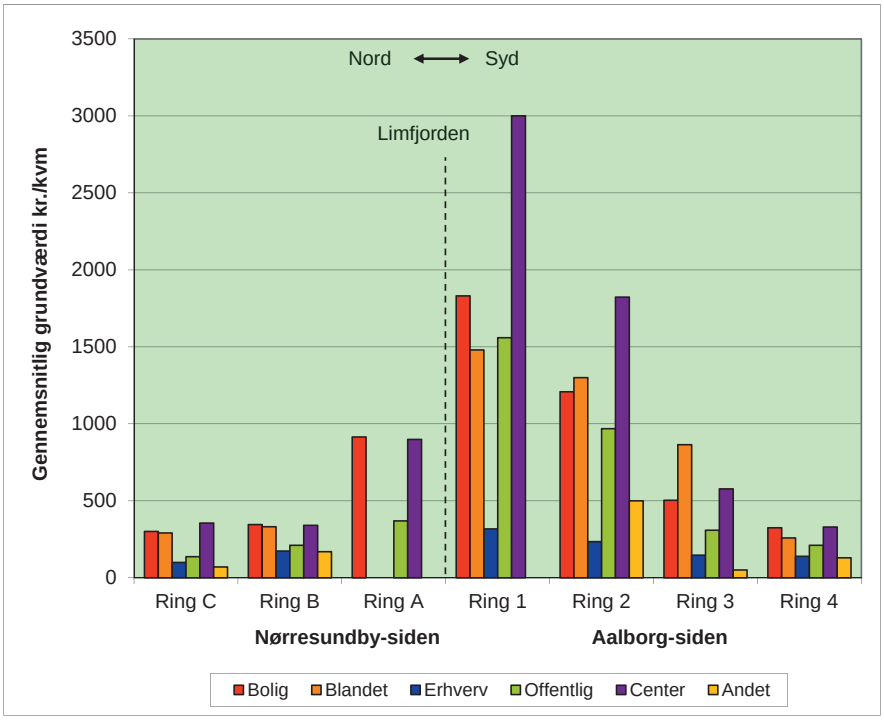


Figure 3.9.: The average estimated land values for different areas and with different uses in the city Aalborg in Denmark. (Nielsen et.al. 2005, p. 53)

This is not the case in Denmark; the permitted use can be changed through municipal planning[23]. Since this is the case in Denmark, it is likely that an increasing demand for one use will have at least some effect on the land values and demand for other use, but maybe only locally.

An example of the previous model, in which different uses are expected to have different land values, is the Danish city of Aalborg[24]. Figure 3.9. shows the average estimated land values in the city of Aalborg for each of the uses Housing (red), Mixed use (orange), Industry (blue), Public use (green), Retail/office (purple) and Other uses (yellow). The values shown are land values in DKK/m^2, and the values origins from the Danish Property Valuation for taxation. The left side of the figure is the north side of Aalborg, the right side is the southern part of the city and in the middle it the city centre. Aalborg is mono-centric, but is cut through by "Limfjorden"; a fjord which

23 It is not as easy as it sounds in practice, since it has to fit in the municipality's plan for development of the city and there has to be political will to adopt the changes.

24 Aalborg is the fourth biggest city in Denmark and has around 120,000 inhabitants. It is located in the northern part of Jutland.

around Aalborg is quite narrow. “Limfjorden” is illustrated as the dotted line in the figure. The figure shows that land values increase towards the city centre, and it shows that different uses have different values. Aalborg almost meet Von Thunen and Alonso’s criteria about being a larger city with only one centre, which is placed on a piece of land that does not differ in quality and geographic standard. The study showed that value increases towards the city centre – as the models in section 3.2.1. also suggests – and the study showed the different uses have different values as discussed above. Furthermore, it showed that the difference between the different uses’ land values increase towards the city centre. Finally, the study showed that the density increased towards the city centre – this is discussed further below in section 3.3. (Nielsen et.al. 2005)

Within the urban area, there is a differentiation between land values, which according to the above is caused by the permitted use. The study of Aalborg shows that it at least in a Danish framework seems to be the case in real life as well. The question is if for instance the low value of industrial sites in the city centre is caused by a) planning alone or by b) planning and the fact that it is troublesome to be a industrial company in an area where there are limitations on pollution and noice levels and the traffic connections migth be poor. In other words the low value is not only due to “Property Related Facors” (planning) or is it also due to “Affiliated Community Factors” and “Location and Area Related Factors”. If the latter is the case planning as a factor is correlated with other factors, which would make planning a measure for showing the differentiated values, but not the only influencing factor.

3.2.4. Findings

The models and theory concerning zoning of land discussed in this section all in one way or another centres around the theory of Supply and Demand, meaning that changing the conditions for either the supply of properties or the demand for properties will result in a change in land value. The theories also focus on the value of land alone and not the property with buildings included. The factors that have been found in this section still affects property value in the way that they influence the value of land, and land is a part of the whole property. The factors that have come forth can be grouped in four and they are a further extension of the factors grouped in section 3.1.3.; “Location and Area Related Factors”, “Property Related Factors”, ”Individual Factors” and “Affiliated Community Factors”.

Property Related Facors

Zoning, which has been discussed above, is only a part of the municipality's planning tools and there is more to planning than this, including the regulation of density discussed below. Zoning does however have a big influence on the determination of land value. There is a clear difference between value of land in Rural Zones and Urban Zones. There is also a clear difference between value of land in areas within the Urban Zone where the permitted use is differentiated. This means that zoning (and the plans where this is confirmed) is an influencing factor in this context. It is a factor in the sense that the supply of land is regulated by planning. The supply is also influenced by other things, but planning determines which subset of the market particular pieces of land belong to; some areas belong to a housing subset of the market and others to an office subset of the market. The zoning between urban and rural use determines if the land can be sold as agricultural land or as land for urban development. The zoning within the urban area narrows the market situation further since each piece of land has a permitted use, meaning that if the permitted use is residential it will at large only be sold for residential purposes.

Location and Area Related Factors

In both theory and empirical studies, *Distance* has shown to have a connection to the value of land. However, distance without something to measure from is meaningless, and from the above, two things have emerged; the distance from the city centre and from attractive surroundings. In Alonso's model, the city centre is a synonym for the location of workplaces and distance to work is likely to be relevant, but it would be false to assume that people in general work in the city centre. Surroundings are in the theory related to Greenbelts and therefore amenity and recreation.

According to the models above, *Location* and the factors that relates to location such as amenity and recreation value influence the demand in the way that there is a higher demand for land for housing in popular areas (short distance to the influencing factor). In this way, some areas have higher land value because they have a higher demand, while the opposite is the case in other areas.

On development project level it would seem (c.f. figure 3.9.) that the location of a redevelopment site is of importance in the way that a potential value increase when changing a piece of land through planning from one use to another is large in areas with good location and low in other areas. If the area is located at the city edge the value difference between Old Use and New Use is lower (typically at least) than if the redevelopment site is located at the city centre.

Individual Factors

Even though theory describes how zoning gives usage options and influence value, it is necessary to take the actors into account. As studies have shown, they decide if they want to sell, when they want to sell and if they want to develop. It may be a good idea to develop a piece of land from the municipal perspective, but the landowner does not necessarily share that vision. Actors' visions, plans and goals are therefore influential on eventual sale prices – meaning how willing the buyer and seller are. "Individual Factors" do in principle not influence the Market Value, but as shown in (Bogason et.al. 2008) it may do that anyway if the actors keep supply low.

Affiliated Community Factors

This section has shown that regional and national planning initiatives can indirectly influence the value of and production of land for new building sites. This is for instance the case when there is an aim towards a densification of the urban areas in Denmark.

3.3. The Density Allowed

In the above on zoning it has been analysed how "what can be build" influences on value. In this section it is analysed what the influence of "how much can be build" is. This is in Denmark also regulated, just as the allowed use is.

Two terms are used in this study: Density and Plot ratio. Density is in this study understod as "the amount of residential space"/"development area", also called Flore Space Index. Plot ratio, as it is used in the study below, is in accordance with the definition of Plot ratio used in the Danish Building Regulation – (BR10, bilag 2) – which is "the amount of residential space"/"the size of property"[25]. This is usually not the same as Floor Space Index (FSI) which is "the amount of residential space"/"development area". The difference between size of property and development area is that – at least in bigger areas – green areas and internal roads are separate properties and therefore not part of the property of which the Plot ratio is calculated. A small example, if 50 % of the development area consists of buildable properties and the rest is roads and green areas and the Plot ratio is 30 %, then the Density is 15 %[26] while the Plot ratio in the perspective of Danish Building Regulation is 30 %.

25 A property can in Denmark consist of more than one parcel. In their definition, it is assumed that the property consists of only one parcel.

26 (amount of buildable land * Plot ratio + green area / roads * 0 = 50 % * 30 % + 50 % * 0 = 15 %)

Before engaging with the more theoretical aspects of how the allowed density affects property values, it is interesting to see how allowed Plot Ratio is spread out over a Danish city. Figure 3.10. shows the average allowed Plot ratio (Plot ratio is the grey columns and the scale for Plot ratio is on the right of the figure) and the average estimated land values in the city of Aalborg in Denmark. The values are shown for each of the uses Housing, Mixed use, Industry, Public use, Retail/office and Other uses. The values shown are land values in DKK/m^2 and the Plot ratio is % of the lot size. Figure 3.10. is an elaborated version of figure 3.9. and in this figure, Plot ratio is added, the rest is identical. It is a complex figure and is not explained in detail here, because the main point in this context is fairly visible – that the Plat ratio increases towards the city centre and that it follows the land values (more or less). It even raises the question if the allowed Plot ratio is more significant than, or at least correlated with, the "distance" from the city centre. However, it does provide a "did the chicken or the egg come first"-discussion, because are the values high because of the distance to the city centre and is high Plot ratio needed to make projects profitable or is it the high Plot ratios that makes the land values high – would it be possible/profitable to build with a high Plot ratio anywhere else than the city centre?

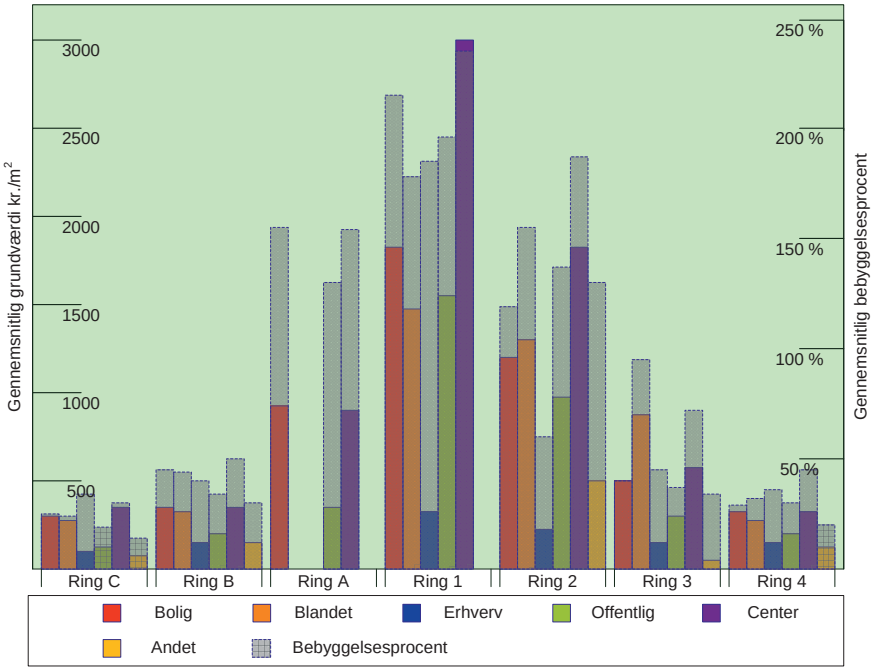


Figure 3.10.: The average estimated land values and allowed Plot ratio for different areas and with different uses in the city Aalborg in Denmark. *(Nielsen et.al. 2005, p. 87)*

Whether density is high or low is to some extent relative to the area. For instance, a 175 m^2 big single family house on 700 m^2 land in the heart of a large Danish city would be considered low Plot ratio. If the same house is placed on the same amount of land at the edge of the same big city it would properly be considered a normal Plot ratio. The Danish Building Act sets some standards for a maximum Plot ratio, which for residential use is between 30 % and 60 % of the lot's size. These limits apply unless other Plot ratios are specified in the municipal planning, and it is possible to increase Plot ratio above – or decrease below – the standards in the municipal planning. This option is widely used in Danish planning practice and this is why regulation of density is affiliated with planning in a Danish context, and not only building regulations.

(Berghauser Pont & Haupt 2007) have gone deeper into the different aspects of density and developed a model called "Spacemate". A spacemate diagram – as shown in figure 3.11. – has four axes, two of which is floating around without an intuitively anchor point and two are fixed. Nevertheless, the diagram can help to set the discussion of density in perspective, because it shows the connection/ correlation between building height, density and open space in the urban development area. The y-axis is the Floor space index (FSI) ("amount of residential space"/"development area"). The remaining three axes and terms are elaborations on density, indicating the areas looks. The x-axis is Ground Space Index (GSI) which is the "amount of land covered with buildings"/"development area". The

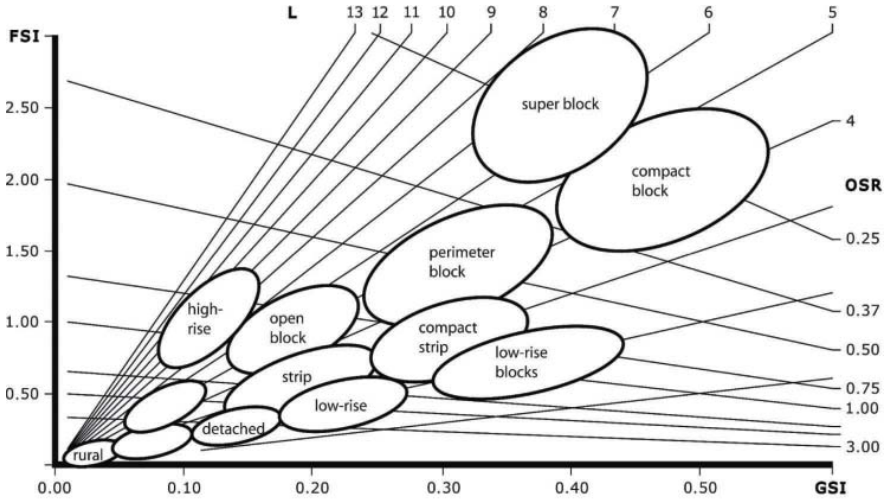


Figure 3.11.: A diagram from (Berghauser Pont & Haupt 2007) showing how different types of buildings related to different densities etc. See further description of FSI, GSI, ORS and L in the text.

other axes are OSR and L. Open Space Ratio (OSR) is the "amount of land not covered with buildings"/"amount of residential space". Layer (L) is the average number of floors in the buildings. The figure shows how different types of buildings relate to these four measures and one of the points is that the floor space index can be the same in different types of areas – simply because the amount of floors are changed. If the FSI is around 1, the figure shows that the area can be filled with high rise of 8-12 floors with a GSI of about 0.1, or the area can be low rise blocks (2 floors) with a GSI of 0.3-0.4. The difference being that in the high rise area 90 % of the development area is available for roads, green areas and so on while only 60-70 % is available in areas with low rise blocks – but the FSI is the same, in other words the same Density can have very different appearances.

Density and Value

"...at least in the English speaking countries, people prefer living at lower densities to higher" (Evans 2004a, p. 38). This implies the assumption that land in areas with a low density are sold at a larger price per square meter residential space. However, from the developer's perspective, an additional dwelling will produce a profit, if it can be sold at a larger price than its production costs, which makes it interesting to look at the construction costs. These costs can be divided into two: Fixed costs and flexible costs (Kalbro 2007a, p. 193-194). The fixed costs are for roads, land and similar things that are not influenced of what is being built. The fixed costs are divided between the constructed dwellings, which means that a high number of dwellings mean a relatively lower share of fixed costs. At some point more or bigger roads may be required, but to simplify this discussion this is considered a part of the flexible costs. The flexible costs are construction costs and other costs related directly to what and how much is being built. The flexible costs may increase in steps, when a new floor/level is needed or when an elevator is needed and so on, but in general the flexible costs increase linear to the amount of square meters being built. It can be hard to make the distinction between fixed costs and flexible costs. However, it gives a good picture of the fact that some production costs will increase more than others when additional dwellings are added. From a theoretical point of view, it means that when density increases two things happen. The value of a square meter of residential space decreases, and secondly, the construction costs of a square meter of residential space increases (caused by the need for extra foundation, elevator, new floors etc.). When Evans says that the value of a square meter of residential space decreases when going from low to high density, it does not mean that the value of the whole property decreases – on the contrary more square meters can be sold al-

though at a smaller price. This is illustrated by a small hypothetical calculation in figure 3.12. The density increases and the value of a square meter of residential space decreases. The property value in the right column increases nevertheless.

Density	Value of 1 m^2 residential land	Property Value*
25%	20,000	25,000,000
50%	15,000	37,500,000
75%	13,000	48,750,000
100%	11,000	55,000,000
		*(at 5,000 m^2 of land) Value of 1 m^2 residential land x ((5,000/Density)x100)

Figure 3.12.: Simple calculation that shows what happens when density increase – value per square meter decreases and total value increases. (hypothetical figures)

Property value increases and so do construction costs when density increases, but how do they relate to each other. This can be illustrated by the graph in figure 3.13., where the x-axis is the density and the y-axis is the value/costs. There are two curves in the graph: A curve that shows property value, and a curve that show the costs to develop the property at a certain density. Because of the fixed costs, it is necessary to build some square meters to make it profitable, and between D^1 and D^3 it is profitable. If density gets to high – past D^3 – it is not profitable to build. (Kalbro 2007a, p. 193-194; Evans 2004a, p. 38-39)

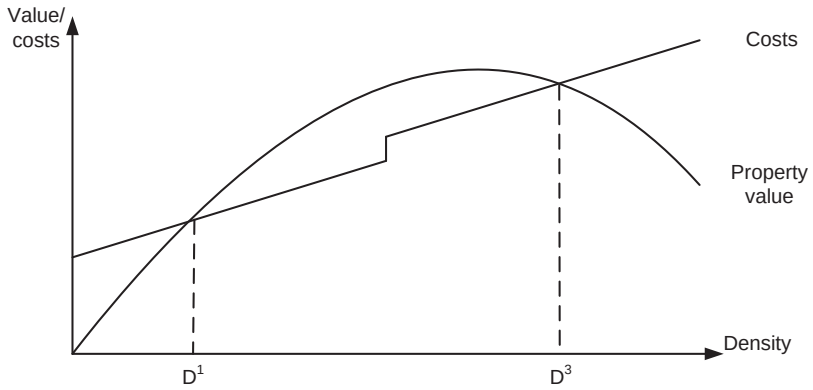


Figure 3.13.: Density in the development project relates to production costs and property value in the way that some has to be built to cover the basic costs and at some point the total construction costs will exceed the property value again. Free after (Kalbro 2007a, p. 194).

Thus, in principle there is an interval (of densities) where it is profitable for the developer to develop the property (an interval that is different from area to area). This interval can be divided into two parts – in figure 3.14. shown as D^1-D^2 and D^2-D^3. In the first part – D^1-D^2 – the development will increase the property value when adding dwellings to the project without having a negative influence on the surrounding areas (with D^2 as the turning point). In the second part – D^2-D^3 – the development will still increase property value but have a negative effect on the surrounding areas. This means that on a larger scale, the development has a negative effect on property values, but the developed property in itself increases in value. It can be argued that one of the purposes of municipal planning is to ensure that the developed density is within D^1-D^2 in figure 3.14. As mentioned, in Danish municipal planning, it is possible to set the maximum Plot ratio for a lot, and that will, if set correctly, prevent the developer from building too dense. (Evans 2004a, p. 38-39) argues that the reason for planning is that it will ensure the "highest and best use" of the area and not only the individual building lot. If the developer is developing the whole area, he would probably aim for D^1-D^2 (or close to D^2) by himself, simply because if he develops with too high density his own property will decrease in value. If he on the other hand only develops a small part of a bigger area he can increase the value of his own property on the costs of the surrounding properties. The interviewees in Interview Analysis II

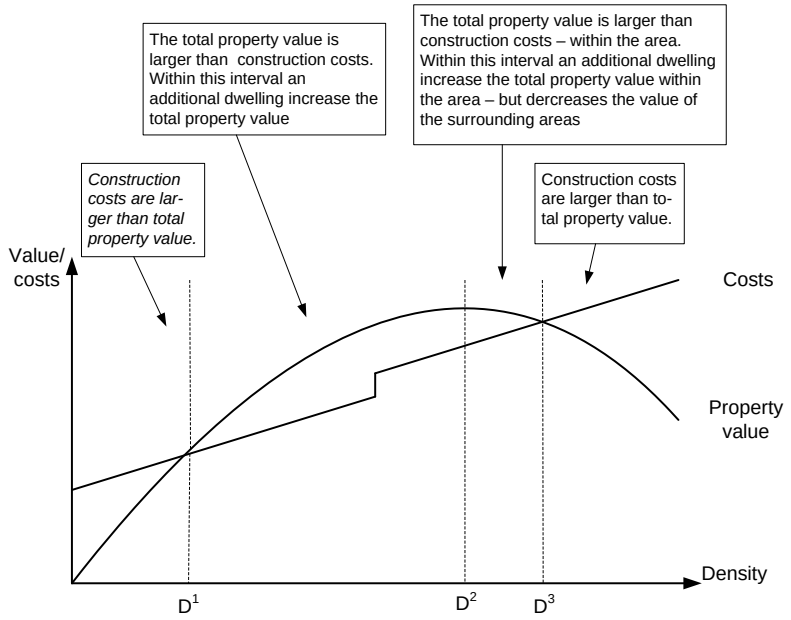


Figure 3.14.: Elaboration of figure 3.13.(own figure)

was asked if this ever happen in Denmark and this does not seem to be an issue. Another point in the figure is how much the developer needs to build in order to gain a maximum profit. In figure 3.14., it is between D^1 and D^2 where the cost curve makes a jump.

In this project, density is discussed from a purely economic point of view, but at least among planners and architects the area's allowed and planned density may probably also be a discussion of aesthetics as also indicated in chapter 12. By aesthetics, it is meant how the buildings fit into the neighbouring, landscape and other uses, what gives the area the whished expression, what attracts the right citizens and so on. In other words, the discussion of what the right density is often not purely an economical discussion. Given the developer's economical thinking at large, it is likely that they do calculations to be sure that they are above D^1 in the figure (3.13. and 3.14.).

3.3.1. Findings

In this section it was found that Density is a Property Related Factor that influences on the property value. If density is high, the property will have a value different from the value if the density is low. However, there is, as shown in figure 3.10., a correlation between the distance to the city centre and the allowed density, i.e. the shorter distance, the higher density. Furthermore, some areas in general have a lower density than others and it means that high density (or too low for that matter) is relative to the area. Therefore, there are at least two incidents where density can be a negative factor in relation to property value: if density gets too high or if density is very different from the surrounding areas. Regarding the first case, it is possible to have a density so high that it decreases the total value in either property level or area level. In the second case, density must reflect the norm in the area to have a positive effect. A very high density in a low density area does not necessarily increase property value. It is however questionable if these extreme situations will ever occur with the planning system in Denmark, where density is regulated.

3.4. Conclusion and Influencing factors

The purpose of this theoretical analysis was to analyse what determines value and identify factors, influencing a property's value. Through analyses of value in relation to a market based economy, the effects of zoning land, and the effects of allowing a certain density in an area to be developed, it was found that factors influencing property value can be categorised into five categories. Especially the first four relates to a property's Market Value and how it changes throughout the urban development process, while "Individual factors" relate to the price paid when property exchange hands (the Market Price). Market Value has been chosen as the primary value definition in this research. Other value definitions are not thereby neglected, but used with caution, e.g. when using sales prices as estimation of the Market Value, Individual factors must be taken into consideration because they can cause differentiations from Market Value. The found factors are described below those categories.

Property Related Factors

Through the analysis, it has been found that Zoning and Density are two important determinants for a property's value. *Zoning* – In Danish planning, there is a (law regulated) tradition for zoning, meaning designating areas for specific uses. This has been found to be an important value changing factor, both between urban and rural areas, but also between different urban uses. *Density* – This is also regulated through the Danish planning system and it was found that there is a connection between the distance to the city centre and the allowed density on a property. Higher density entails a possibility to build more on the plot and thereby sell more, but a higher density also has a limit which is most likely relative to the area. Both zoning and density is, as mentioned, regulated in Danish municipal planning, which is described further in the following chapter 4.

Location and Area Related Factors

Distance has been recognised as an important factor for the value of a property, but only if the area's distance is related to something to measure the distance from. The city centre has been found important as well and the distance to attractive surroundings for instance for recreational purposes. This is often articulated by real estate agents as location, and this is discussed from an empirical perspective in chapter 8. and 12.

Affiliated Community Factors

Regional and national planning initiatives can indirectly influence the value of and production of land for new building sites as it for instance is the case when there is an aim towards a densification of the urban areas in Denmark.

Individual Factors

Even though theory very nicely describes how things work, it is necessary to take the actors into account. They all have their own goals and different perspective meaning that they will act according to what they think is best and not according to the text book model.

In this chapter value has been analysed and especially how planning influences value. In the following chapter 4. the urban development process is analysed and described, which also includes how planning fits in the urban development process.

4. The Urban Development Process

The purpose of this chapter is to define and describe the urban development process and the main actors that engage in this process in Denmark. It is the second theoretical analysis and together with the first analysis of value they sets the arena for analysing how value change in the urban development process, and to do so it is necessary to first discuss value and the urban development process. Therefore, the urban development process is in this chapter analysed and defined through a description of it, the regulation of it and its actors. The definition is based on how urban development occurs in Denmark. Throughout the description of the urban development process the rules and customs that apply in Denmark will be described.

4.1. The Urban Development Process as a Series of Events

An urban development area will always have an existing use when the development starts, which can be characterised as its "Old Use". It can be some kind of urban use or it can be e.g. agricultural use in rural areas, but if nothing else the land will be some kind of uncultivated field – meaning nature of some sort. If the development is to have any purpose the area will also have a use when it is developed, which can be characterised as its "New Use"; for instance residential use as it is the case in this research. That the area will have a New Use is also emphasised in the Danish Planning Act §11b subsection 1 pt. 5 where a redevelopment area is defined as an area where buildings and land are *"...used for business purposes, harbour purposes or similar activities and is to be changed to residential purposes, public institutional purposes, urban centre purposes, recreational purposes or business purposes that are compatible with using the land for residential purposes"*.

The urban development process can be seen as the physical changes that occur when an area is developed from its Old Use to its New Use. Healey takes it further and defines the urban development process as *"the transformation of the physical form, bundle of rights, and material and symbolic value of land and buildings from one state to another, through the effort of agents with interests and purposes in acquiring and using resources, operating rules and applying and developing ideas and values"* (Healey 1992, p. 36). This

definition includes not only the physical changes from Old Use to New Use, but starts at the development of an idea, securing rights to development and also includes the changes in value both material and symbolic along the process. Describing the urban development process depends on the perspective, and the same process can therefore look different depending on the perspective. (Healey 1991) and (Gore & Nicholson 1991) have in their reviews of models of the urban development process outlined different groups of models with different perspectives such as "economical", "events/time", "actors" and "relations between actors". Their reviews emphasise that the urban development process can be described in different ways. The research question has a focus on value – and thereby an economical focus – but it also has a focus on events and timeline in the urban development process to which value is related. Since the issue of how value changes relates to events and time, it is chosen to use models with events and time as perspective as foundation for the description of the urban development process.

In this context the urban development process is defined as the series of events that occurs when a piece of land is transformed from its Old Use to its New Use. The end of the process is the point in time where the new area is fully developed, buildings are ready for tenants to move in and the municipality has given its permits to start using the buildings. The definition below is based on (Kalbro 2007a, p. 14) and (Healey 1991, p. 223-224) and illustrated in figure 4.1. The urban development process is described by the typical events that occur throughout the transformation from its Old Use to its New Use. The process begins when someone or something makes it possible to develop the area, and can be named – *The starting point*. This could for example be if someone gets a "good idea" or a property sale causes the right combination of owners and thereby makes it possible and profitable to develop the area. One of the typical situations in these years are when heavy industrial and harbour areas are shutting down and thereby making redevelopment of central areas possible. The first real event, after the starting point, is the developer's planning of his project and his evaluation of the projects feasibility both regarding profitability and implement ability. Inspired by the interview with AC (see Chapter 8.), this event is called *Concept development*. The next event is *The planning process and the permits* that goes along with an urban development project. It is the municipality which in Denmark is the planning authority, and that ensures that if the municipality is not landowner, they will still have some control over the development as planning authority. When the area has been planned *The preparation of land* can begin. This event is in Denmark often a combination of the municipality's

and developer's effort, since the municipality has some obligations to supply roads, sewage systems and so on. The land often changes hands along the urban development process, and in Danish single family housing areas this often happens after the preparation of land, but can and does also happen at other stages of the urban development process. *The supply of land* and the development itself needs to be *Financed*. Financing can as the supply of land take place in the beginning of the process, but can also occur later in the process. The next event is *The construction of buildings*, which is one of the most visible events for the public eye. The last event is *The sale, rent or use of the area*, depending on the developer's purpose.

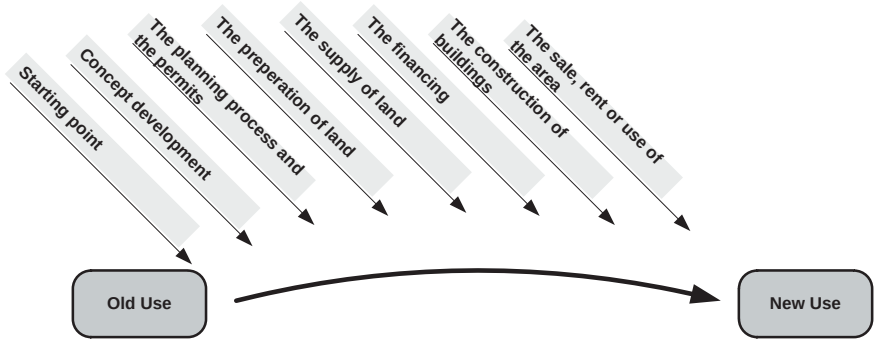


Figure 4.1.: The main events in the urban development process, throughout its transformation from Old Use to New Use. (own figure)

The steps described above may in actual urban development processes overlap. It is for instance normal to start selling apartments although the construction is not finished – or even started. However, they are here described as if they do not overlap. Each event is described in greater detail below as a way to create a greater understanding of the urban development process.

4.1.1. The Starting Point

The starting point can hardly be called an actual event because it only marks the start of the urban development process. According to (Buch & Møller 2005, p. 33-35), there are four preconditions for a development to succeed and the process of developing a piece of land can start at each of those four. The preconditions are:

- *Location* – this could a closing well located factory ready for re-development or a piece of agricultural land next to a city.
- *Project idea* – this could be a high rise housing project.
- *Future users* – this could be an identified need for student housing, or an actual agreement with a group of users.
- *Investors* – this could be an institutional investor that wants a long term investment and wants to rent out apartments.

At this point in the process, it is not necessary to have all of these conditions set, but it is necessary to know the outline of what and where it is intended to build.

4.1.2. Concept Development

In this step, the developer refines his project idea. Sketches and drawings of the potential future urban development project are made – maybe by architects. Budgets and other economical calculations are completed, the situation of the property market is evaluated. All so that the developer can evaluate the project's feasibility both regarding profitability and ability for implementation. Different consultants and accountants can be involved in this part. Only if the developer believes that the project is profitable and implementable, he continues (AC in Chapter "8. Interview Analysis I").

After completion of the above, the developer has the "sales material" ready for convincing the municipality about his project, to attract potential investors and, depending on the development project, maybe also the future users.

4.1.3. The Planning Process and the Permits

The next step is the making of planning documents and obtaining permits. Formally, this step is led by the municipality, who adopts the planning – and usually produce the plans as well – and gives the permits which the developer has applied for. However, in some areas/cases it is custom that the developer has the plans made by consultants, who then hand them over to the municipality for adoption. This can be done both with and without development agreements – described below – in Denmark, the latter has only recent been allowed and is voluntary for the developer.

The adopted plans gives, in principle, building rights, it is however necessary to have a permit for the actual construction cf. the Danish Building Act. If the construction is in accordance with the current planning and the general regulation concerning construction and fire safety, the municipality is in general obligated to give the

building permit[27]. In the following the municipal planning is examined regarding to the municipal planning's role in the Danish planning system, Municipal Plan, the Local Plan, building rights and permits and developer agreements. This is followed by a description of different area types such as e.g. redevelopment area.

Municipal Planning

The Danish planning system consist of three levels: National, regional and municipal level. The national level consists of a National planning report and guidelines in general in which the state sets the agenda for the regional and municipal planning. The regions make a regional spatial development plan, which is on a strategic level. The majority of the planning is at the municipal level and consists of a "Municipal Plan" and a number of "Local Plans". (Miljøministeriet 2007, p. 7) In the following, the focus is on the municipalities' planning since it has the most relevance in this research.

Municipal planning will always be a part of urban development in Denmark because the municipality cf. the Danish Planning Act § 11a subsection 1 pt. 2 in its Municipal Plan must position the location of areas designated for urban uses. Furthermore, the local council has a "Local Plan obligation" because *"A Local Plan shall be produced before large areas are parcelled out and before major development projects, including demolition, are carried out, and also when it is necessary to ensure the implementation of the Municipal Plan"* (the Danish Planning Act § 13 subsection 2). Urban development causes major development projects and the municipality will be obligated to make a Local Plan, unless off course the project is within the limit of an existing Local Plan's usage options. Furthermore, the local council is free to adopt area plans, debate plans and other plans that show the municipalities intentions with an area, whenever it is necessary.

The Danish Planning System

To put the Danish planning system – at municipal level – in perspective, it can be compared with the principles of other planning systems in Europe. These can, according to (Kalbro 2007b), be categorised in two systems – se figure 4.2. In alternative 1, there is a strategic plan and the next step is a building/construction permit for the actual development project, this is for instance the case in France and Great Britain. Alternative 2 also has a strategic plan, but before the permit level, a project plan is being produced. This is

27 The Danish Planning Act § 14 makes it possible for the municipality to say no, even if the project is within the frames of the Local Plan, building regulations and so on. If they do so, they must make a new Local Plan within 1 year.

the case in for instance Denmark, Norway, Sweden and Germany. In Denmark the strategic plan is called “Municipal Plan” and the project plan is called “Local Plan”.

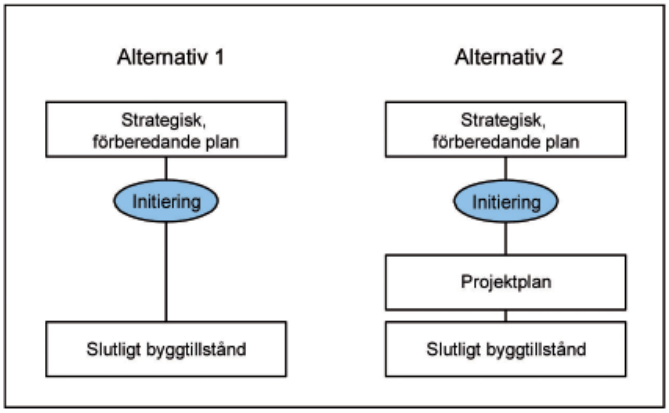


Figure 4.2.: European planning systems can be categorised in two alternatives. One with a strategic plan and a building permit and the second alternative with a strategic plan, a project plan and a building permit (Kalbro 2007b). “Strategisk förberedande plan” is “strategic plan” and “slutligt byggtilstånd” is “building permit”.

The Municipal Plan

The Municipal Plan is the municipality’s overall plan. It contains a “General structure”, “Guidelines for land use” and “Framework for local planning”. The General structure and Guidelines are a description of the municipality’s political goals for the development of the municipality at an overall level – its spatial development anyway. The Framework for local planning is the specific use at area level, which the Local Plan must be in coherence with. The framework often contains stipulations on maximum density, maximum building height, land use and a description of how the municipality wishes the specific area to be developed. The municipality revises or re-approves the plan every fourth year and the plan has a perspective of 12 years. The Municipal Plan is only binding for the municipality. (Miljøministeriet 2007, p. 18-21) Although not binding for the landowners and developers, it can influence them as well since the municipality in their decision making must act in accordance with the Municipal Plan.

In the Municipal Plan, the municipality determines the areas that are to be developed (or redeveloped) for urban purposes. Given the 12 year perspective, this can be quite a few areas and the municipality must therefore also, cf. the Danish Planning Act § 11b subsection 1 pt. 13, determine in which order the areas are to be planned at a detailed level and subsequently developed. One of the

negotiation parameters when engaging in a developer agreement – see further below – is the order of the future development areas. As a part of this agreement an area can be moved up the line.

The Local Plan

The Local Plan is the detailed plan in which the future use and appearance of an area is regulated. The Local Plan is binding for both the municipality and landowners, in opposite to the Municipal Plan which is binding for the municipality and only indirectly for the landowner and users[28]. The Local Plan do not force the landowner to start development, and landowner can continue using the land as he used to before the Local Plan was adopted, but if he want to develop and change the use of his property, it must be in agreement with the Local Plan. (Miljøministeriet 2007, p. 23-25)

The Local Plan is without expiration date and when it is adopted, it will be possible to develop in accordance with the plan until a new Local Plan is adopted. The municipality can, although it would seem meaningless, start a new Local Plan process the day when the Local Plan is adopted. In other words, the Local Plan is valid until a new is adopted and only until a new is adopted.

Building Rights and Building Permits

When does the developer have the right to build? To start backwards, a building permit is needed[29], if the developer wants to develop a project, cf. The Danish Building Act § 16. If he gets the building permit, the developer has the right to build in accordance with the permit – if he starts within one year. If he does not start within a year, he loses his right to build and must apply again.

If the development project is in accordance with the Local Plan (and building standards), the developer has the right to get the building permit applied for, cf. (BR10, section 2.7 subsection 1). If the project is so small that a Local Plan is not required[30], the project must be in accordance with the general stipulations in the Danish Building Act and BR10. In terms of building rights, one could say that the developer has the right to get building rights when the Local Plan is adopted and he wishes to develop in accordance with the Local Plan. The municipality does however have an open backdoor, since the Danish Planning Act § 14 makes it possible for the municipality

28 Because the municipality is obligated to administrate in accordance with the Municipal Plan.

29 Some smaller buildings do not require a building permit, but an urban development project exceeds this limit significantly.

30 And if there not already is a Local Plan for the area.

to reject a project, even if the project is within the frames of an adopted Local Plan and building regulations. If they do so, they must make a new Local Plan within 1 year. This means that even though the developer wants to develop in accordance to plans and regulation – and thereby fulfil the requirements for a building permit – the municipality can still deny. That is why the developer only almost has the right to build when the Local Plan is adopted.

Developer Agreement

In 2007, the possibility of developer agreements was added to the Danish Planning Act. The agreement is mentioned here because it can only, cf. the Danish Planning Act § 21b subsection 4-5, be made alongside the adoption of the Local Plan. It is a voluntary agreement between the developer and the municipality, and it must be initiated by the developer/landowner. Through the agreement, the developer and municipality can agree on that the developer pays for some of the physical infrastructure (see also 4.1.4.) or the costs of producing the amendment to the Municipal Plan and the Local Plan, cf. the Danish Planning Act § 21b subsection 3. The agreement can be made in three cases: 1) To achieve a higher standard of the physical infrastructure than initial planned; 2) to change the planned order of development areas in the Municipal Plan so that the developer's area is in front of the others (measured in time); or 3) add to the allowed building possibilities (higher density), cf. the Danish Planning Act § 21b subsection 2.

Area and Development Types

Major changes in planning and the following development occur both at the city edge and within the city. Areas within the city are known as urban redevelopment areas (Brown Fields), and as the name implies, cf. the Danish Planning Act §11b subsection 1 pt.5 defined as an area *"in which the use of buildings and undeveloped land used for business purposes, harbour purposes or similar activities is to be changed to residential purposes, public institutional purposes, urban centre purposes, recreational purposes or business purposes that are compatible with using the land for residential purposes*". De Sousa introduces the US Environmental Protection Agency's (1997) definition of "Brown Fields" as *"abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination"* (De Sousa 2000, p. 832-833). As an opposite of Brown Fields, De Sousa defines "Green Fields" as *"a clean agricultural or open land site located in the periphery"* (De Sousa 2000, p. 832-833). De Souca's definitions leave a gap in the case where the urban redevelopment

area is not polluted or perceived as polluted. In this project, Brown Fields are understood as areas within the city that previously have been used for urban purposes and are now ready for redevelopment to other urban uses, and Green Fields as areas at the city edge that have most likely been used for agricultural purposes, or at least other uses than urban purposes, until the development for urban uses. Mutual for both cases is the development for urban uses, here referred to as urban development in either Green Fields or Brown Fields. Areas reserved for urban uses – both Green Field and Brown Field – area formally designated in the Municipal Plan c.f. the Danish Planning Act §11a.

There is a third planning/development situation called "Urban Renewal" in a Danish context. Urban Renewal primarily concerns old residential areas, where buildings need to be improved and backyards opened up. Planning in those areas does not usually give any new usage possibilities. It mainly aims towards bringing the area's dwellings and surroundings up to the standards that apply today. Since focus is on areas that are planned and developed for new development, areas for urban renewal are not discussed further.

4.1.4. The Preparation of Land

When all the legal planning foundation has been produced, the preparation of land can begin. In this event, the land is transformed from the state it is in when the urban development process starts and into land that is ready to be built upon. This preparation of land concerns both the cleaning up from the lands prior use and the preparation for the future use; both are described in greater detail below.

Figure 4.3.: Area for single family housing which has just been prepared (own photo).

Cleaning Up from the Land's Prior Use

A property's prior use does not necessarily have a negative influence on the transformation and the property value. However, in most cases, something has to be removed, changed, demolished or at least tested. The latter especially applies for prehistoric settlements, graves, and pollution. In many cases, different kinds of constructions will be removed to leave space for the new urban development project.

Danish Cultural Heritage and Archaeological Findings in Urban Development

The Danish Museum Act regulates the handling of Danish cultural heritage and archaeological findings in urban development so that prehistoric artefacts such as settlements and graves are not destroyed when areas are developed. The main principle in this context is that if the developer finds something while working he must stop and let the archaeologist at the local museum conduct an investigation. This can be both time consuming and costly for the developer, since he holds the costs for both the investigation and waiting. The developer can also choose to ask (and pay) the local museum to screen the development area prior to development – this is typically the case. In that way, the developer has more control on the projects schedule and costs. The development must still stop if something is found later on, but the odds of finding something is significantly smaller. (Christensen 2008)

Figure 4.4.: The local museum's screening of the development area prior to development (own photo).

Pollution

Pollution in relation to a property's prior use often means polluted soil. Polluted soil is regulated in The Danish Act on Polluted Soil. It distinguishes between three different levels of soil; 1) Soil which is considered clean, 2) lightly polluted soil and 3) polluted soil (including soil mapped as polluted). The second level "lightly polluted soil" was added to the act in 2006 and consists of all Urban Zones that are not a part of level 3. All soil in the Urban Zone is in other words treated as polluted until proven otherwise. (Christensen 2008)

It is not allowed to move polluted soil from a property without permission from the municipality, who can also decide where the soil is to be brought. It is allowed to move "Clean" soil around, but the owner must document that it is clean. In urban development projects it is the developer/landowner who holds the costs for treatment of polluted soil, regardless if is moving, cleaning or containment of the soil on the site. (Christensen 2008)

Preparing the Land for Its New Use

When the property has been cleared from its Old Use the preparation for the New Use can start. This means that the physical infrastructure can be implemented. Or as (Needham & Verhage 1998, p. 26) puts it: *"...the activity of 'connecting' the area to be developed to the existing built-up area..."*. Beneath ground level, district heating, electricity, water supply, sewage systems are laid by the supply companies and the municipality, and on top the roads are made. (Christensen 2008)

Figure 4.5.: The supply of electricity, water, sewage and phone for a lot for single family housing (own photo).

4.1.5. The Supply of Land

In Denmark area for single family housing typically change hands when it has been prepared. The area will usually look as the area shown in figure 4.3., and it is often the municipality that act as developer and supply the community with prepared lots for single family houses. The developers buying and selling land – the supply of land – can happen in all the steps of the urban development process.

Developers get their land in two ways, through public procurement (meaning from the municipality) or by negotiation (meaning from private landowners). Developers in Denmark have estimated that about half of their land purchases are through public procurement, but developers prefer to find the land on their own and purchase through negotiation due to three reasons. Firstly, there is too much competition among developers during public procurement, where the developer puts in too much effort without assurance of results. Secondly, the municipality sets up to many demands, which make the development projects more troublesome and costly. Thirdly, it is possible to gain more profit through negotiation with a private than public landowner. (Bogason et.al. 2008, p. 90-91)

It is off course not the municipalities' aim to seem troublesome in the process of buying and selling property. The municipality is bound by a set of rules, which purpose is to ensure that the municipality spends its resources in the best interest of the municipality's population. This does for instance mean that the municipality cannot, as the developer and landowners, speculate in land, because this is not the municipality's task and would be intrusive on the private property market. The general rule is that if the municipality buy and sell property, it must be at Market Value. When the municipality enters the property market, it has to be with the intentions of managing their interest in planning, environmental and infrastructural issues. In other words, the purpose of the property purchase/sale must be different from earning money. Beside this, they must also follow the current legislation on public procurement, expropriation etc. (Sørensen 2007, p. 272-275)

When buying land, the municipality can either buy it like anyone else or through compulsory purchase. If the landowner does not wish to sell to the municipality, the municipality has the option to expropriate the land in order to implement the Local Plan (Sørensen 2007, p. 276-279). As long as the municipality buys the land at Market Value they can by land. Under some specific conditions, the municipality can buy land under "expropriation similar conditions", this is only possible when an expropriation otherwise would be possible.

This rule is interesting because the landowner is exempted tax of his profit[31] from the sale in this case. (Ensig 2007, p. 115-117) It does not change the price paid by the municipality, but gives the landowner a tax free profit, cf. (U.2008.1738V)[32].

With a few exceptions, municipal property sale, also to a developer, must take place through public procurement. The exceptions are mainly when the development in progress is partly public funded or when the sale is between municipality and region or state (Buch & Møller 2005, p. 84-88). If the municipality through a sale gets specific interest in planning, environmental or infrastructural issues secured, they can in some cases sell the property for less than Market Value, but it is only possible if it is helping the municipality in serving those interests (Sørensen 2007, p. 275).

4.1.6. The Financing

Both the purchase of land and the cost of developing the urban development area needs to be financed and if the developer does not have the money he will need to seek external funding. There are two sides to financing an urban development project; during the urban development process and when the project is finished. Regarding the latter, it depends on whether the developer is keeping or selling the development project after completion. If he sells the project to an investor, the investor usually arranges the financing (Buch & Møller 2005, p. 136). If the developer keeps the projects he will – unless he has deep pockets – need "end financing", and it is most likely that the costs are financed through some kind of mortgage.

The purchase of property and the following costs for construction of building etc. needs to be financed during the urban development process. (Ratcliff et.al. 2004, p. 349-350) calls this "Development Finance" and consists of short term loans of some sort. This can be done in different ways, but the bottom line is that it is a temporary financing until long term mortgage is possible (Buch & Møller 2005, p. 135-136).

Mutual for both types of financing is that the developer will have to pay interests. These interests are influenced by both the amount of loaned money, but also how long time it is loaned. The interest rate is also influencing on the size of paid interests.

31 The difference between the price he paid when buying the land and the price paid when selling the land.

32 The verdict is about a municipality that through compulsory purchase acquired a piece of land for a future residential area from a farmer. The Western High Court clearly stated that the landowner's tax exemption cannot influence the price that the municipality must pay.

4.1.7. The Construction of Buildings

The construction of buildings is the last step before the developer can – if he keeps the project – have the project long term financed. In this event, the new buildings are constructed and together with the preparation of land, it is the visible part of the process for the public eye. The developers make contracts with contractors, who do the actual construction. These contracts can either be small part-contracts or total contracts where the whole package is bought from one contractor. In the latter, case the contractor may make part-contracts with other contractors afterwards. (Buch & Møller 2005, p. 245-247)

Figure 4.6.: Construction of a typical Danish single family house (own image).

4.1.8. The Sale, Rent or Use of the Area

At the end of the urban development project, the new facilities are taken into use. However, before that happens, it is necessary to get an "Occupation Permit" from the municipality. The Occupation Permit can be seen as the control that ensures that the buildings are built in accordance with the building permit. When the Occupation Permit is given the buildings are ready to use.

If the future user is already the owner, he can start using it, but it can also be the case that the new buildings/properties are to be sold or rented. It depends on the developer and investors business profile, this is described further below.

4.2. Actors in the Urban Development Process

There are different actors involved in an urban development project ranging from developers, investors, landowners, the municipality to the users and neighbours, and they all have different points of view on urban development, and especially on the specific area which is being developed. In the following the roles of the developer, the landowner, the municipality and the investor are described as they are the most common actors in the process.

It is a common assumption that developers, investors and landowners in practice develop urban development areas. The municipality is to some extent also involved, for example to develop common areas, but also to build for own purposes. In the latter case, the municipality will take the role as developer. Mutual for those, who typical develop urban development areas, is an economic encouragement and expectation of economical profit. The exception is those who develop with expectation of "Use Value"[33] for either themselves or the community, for example a company who owns a property and is in need of a new domicile. Neighbours may think of the Use Value of their property and the areas Amenity Value[34], while the developer think of the profit that can be made from the property, when it is being sold at the end. The developer's, investor's, landowner's and the municipality's motivation for their actions is discussed further below

As mentioned in section 4.1.3., the municipality is the planning authority, but it is the developer that makes the development happen. In other words, the developers need the municipality to plan and the municipality need the developer to implement planning (Bogason et.al. 2008, p. 9). If the developer and investor are to engage in an urban development project, there must be a profit at the end, and if this is not possible they will develop somewhere else. This is the municipality's dilemma in relation to getting their planning and politics implemented in urban development areas and to get them developed from Old Use to New Use. The municipality's intentions with an area can be in the best interest of all, but that does not help if no one wants to develop the area.

33 Use value must be seen in relation to one who has a need. If a person lives at a place without public transportation then a car or a bicycle will have a big Use Value, because he cannot get to work without one of those. This does not necessarily make the car or bicycle expensive, but they would be worth more to him than to most people. (Lantmäteriverket & Mäklersamfundet 2004, p. 1-2 & 317)

34 Amenity value is a very soft term that includes things like sea view, clean air, nature surroundings etc. (Lantmäteriverket & Mäklersamfundet 2004, p. 65-66)

4.2.1. The developer

The developer and development companies make a living of developing areas. To do so, they need to make a profit throughout the urban development process and economical surplus is their primary goal (De Sousa 2000, p. 839; Bogason et.al. 2008, p. 6). The highest economical surplus is not necessarily measured on one development project, but can be on company level. It may be better for a development company to do a project that is almost profitable if the alternative is a group of employees without any work to do. However, it is in this project chosen to assume that the development project in itself is to be profitable.

As mentioned, the developer looks at a development project with expectations of economic gain, and this also influences the way that they evaluate a development project in the Concept Development step. The evaluation can be illustrated with the following equation, which in its essence is quite simple:

$$\textit{Property Market Value(or saleprice)} = \textit{Cost} + \textit{Profit}$$

Or as the developer more likely puts it: *"Value less Costs = Profit"* (Henneberry & Guy 2002, p. 77). Typically, it is described slightly more detailed as (Henneberry & Guy 2002, pp. 75-77; Kalbro 2007a, p. 191; Ratcliff et.al. 2004, p. 305-308; De Sousa 2000, p. 838 & 842; Bogason et.al. 2008, p. 9, 62-63 & 65):

$$\textit{Value}^{\textit{New Use}} = \textit{Value}^{\textit{Old Use}} + \textit{Preperations costs} + \textit{Constructions costs} + \textit{profit}$$

Although, it is a fairly simple equation, it can be hard to estimate the individual components. Developers use this method to get a rough overview of what they can afford to pay for a property, to calculate the expected profit and in general to ensure that a development project is feasible throughout the urban development process (Henneberry & Guy 2002, p. 75-77). The method or equation can be made more detailed when needed – in principle down to a level where each bathroom cabinet has its own post in the equation.

The developers differ in size from the small one man business to big development companies. Depending on the size, some developers have their own staff to do the actual construction, and others buy this service from contractors. Especially the big development companies have grown larger over the last years and begun constructing themselves. They have also started having land banks, meaning buying land for later use. (Bogason et.al. 2008, p. 61-65)

In relation to the discussion of how developers evaluate the value of the project, it is important to be aware that some developers wish a quick exit from the development project while others take on the role as the investor and keep the property as an investment. In this project, focus is on those who want a quick exit, because the Market Value, when the development project is finished, is the end value for both this research and the developers perspective.

It is a necessity for the developer to have close contact with the municipality in order to get at successful project (Bogason et.al. 2008, p. 7). The close contact is necessary because the municipality in the end are those who give building rights and the developer cannot develop without those.

4.2.2. The Municipality

The municipality is the local authority, and the lowest level of the public administration in Denmark. There are three levels: State, region and municipality and there are 5 regions and 98 municipalities. The municipality can have several interests in relation to the urban development process: They can take on the role as landowner, occasionally they can be developing an area for themselves, they are often responsible for part of the preparation of land and provide roads, sewage system etc. and they are responsible for planning and giving permits (Kalbro 2007a, p. 17). The municipality's planning must in accordance with the Danish Planning Act be with respect for nature, environment and people's living conditions. As a part of the municipal planning process, a plan must go through a public hearing phase where other authorities, owners, neighbours and the public in general have a chance to influence the planning (The Danish Planning Act §§24-29c). However, there is according to the Danish Planning Act very little focus on the developers and their interests although they implement the municipal planning. The dialogue between developer and municipality is therefore something the municipality – and developers – must work on in addition to the formal planning process.

The municipality does have an economical focus like the developer, because they need to balance the municipality's total economy. A development area can be costly for the municipality, because of the needed physical and social infrastructure. Some municipalities use the profit from selling land for development as funding for infrastructure (Bogason et.al. 2008, p. 44). However, as mentioned above, buying and selling land for development is restricted for the municipality – e.g. they must buy and sell at Market Value. Besides the municipality's actual costs when an area is developed, there is

also an impact on the rest of the municipality's economy. If a housing area, that for instance aims towards children families, is developed, the surrounding school will have more pupils (social infrastructure), and that also costs money. Therefore, the municipality also needs, when planning an area, to take the areas impact on the rest of the municipal economy into account – which they according to (Bogason et.al. 2008, p. 58) also do.

4.2.3. The Landowner

The landowner is the formal owner of property. Both the private developers and the municipalities can be landowners. If the property is situated next to the development site, the landowner is the neighbour.

The landowner has the legal right to the property, which among other things means the right to take out mortgage on the property, the right to let people rent the property and against compensation, in terms of money, hand over the rights to others (Eyben et.al. 2003, p. 195). When a property is developed, it is the landowner who has the formal responsibility for the development and the economical obligations (Buch & Møller 2005, p. 239).

A municipality can take the role as landowner as a way to manage their interests in planning, environmental and infrastructural issues and interest concerned to their role as public authority cf. Danish legislation (in a broad sense). The municipality can in other words be landowner without being in conflict with legislation. When a municipality is the landowner, their interest can be a mix of private like economic interests and the municipality's other interests, since the municipality will be interested in ensuring that the property keeps its value and at the same time be a public authority. For example, when preparing land for single family housing, the municipality increase the value of the property they own, and presumably sell it at a higher price than it was bought for. They have also given the required permits and adopted the necessary planning documents.

4.2.4. The Investor

Investors are those who buy the development project and are the future owners either as future user or as owner who rents to others. The investors can invest their money at various times in the development, and subsequently become owners at different points. They can invest when the project is on the drawing board, during the development or wait until it has been developed and users have started to pay rent – as the interviews in Interview Analysis II also showed. It

all depends on the investors, their need and their willingness to risk. There are different types of investors: Private people; future users, for example a company who needs a new domicile; pension funds; other funds and property companies. They all have different investment habits and views on risk. (Buch & Møller 2005, p. 38-60)

4.3. Distribution of Profit and Cost in Urban Development

It has been examined which steps the urban development process consist of and in especially the Planning and permits step and Preparation of land step the developer and municipality are key actors. It is here examined further who has the economical responsibility and gain in these steps. The municipality cannot, cf. the Danish Constitution § 43, take profit from the developer or impose costs on the developer unless it is an option given elsewhere in the Danish legislation. Regarding profit, it is not in Danish regulation allowed for the municipality to charge the developer for profit. The developer must pay tax of his company's earnings according to the Danish tax regulation like any other company. However, the municipality cannot get hold of the profit – unless they are landowner at the time, when the property value increases. (Sørensen & Christensen 2009)

The municipality has options to push costs onto the developer. In the planning process, the municipality can demand, cf. the Danish Planning Act §13 subsection 3, that the developer assists the municipality in the local planning process – i.e. help the municipality in producing the plan. The developer can also through a developer agreement, cf. the Danish Planning Act § 21b, pay the costs of the municipality's planning – see also section 4.1.3. The developer agreement can also be used to move the municipality's road costs to the developer's budget. On top of this, the municipality can use The Danish Road Levy Act to push road costs to landowners (Christensen 2008). As the interviews in Interview Analysis I also show, the municipality can, when they make the Local Plan, plan for private roads instead of public roads[35] and thereby push the road costs over the developer. Private roads are paid by those who develop the area or own the land. The remaining costs are in essence the developers as displayed in the table below (figure 4.7.). (Sørensen & Christensen 2009)

35 The public is allowed to use both road types. The difference is who owns the road and not who can use the road.

Who carries the costs?	Developer/ Landowner	Municipality
Planning	(X)	X
Preparation of land - Archaeological investigation - Polluted soil - District heating - Electricity - Water supply - Sewage systems - Roads	 X X (X)** X* X* X* (X)	 * * * (X) *** X
Social infrastructure****		X
Construction of buildings	X	

* The costs of the cables and pipelines in the supply network are financed through connection fees, but are at first paid and build by the utility companies.
**District heating is also paid through connection fees, but it is allowed to charge the developer a development fee (Christensen 2008).
*** Sewage systems are also paid through connection fees, but it is a fixed fee. This means that it does not match the actual costs, but the average production costs. Eventual gain/loss is the municipality's (Christensen 2008).
****Social infrastructure is not technically a part of the development project, but a service provided by the municipality as a traditional 'municipality task'.

Figure 4.7.: Table showing the distribution of cost in the urban development process between the developer/landowner and the municipality. Based on (Christensen 2008; Sørensen and Christensen 2009)

4.3.1. Costs in Urban Development

It has been shown that the developer at large holds all costs of developing of an urban development area, the interview analyses also point in that direction. It is interesting look further into the developers costs and see how the cost are spread out over the urban development process and tasks in it. As a tool for guiding and helping the municipalities, developers, and consultants in their planning and work with social housing, the Ministry of the Interior and Social Affairs has made a report "Nøgletal for alment boligbyggeri" (key figures for construction of social housing) (Socialministeriet 2006). Some of the key figures for 2005 show the cost for social housing (family dwellings), where the municipality takes the role as developer:

Purchase of land	8,8 %
Preparation of land	10,6 %
Construction of buildings	65,0 %
Financing and other expenses	15,7 %
Total costs	100,0 %

(Socialministeriet 2006, table 2.1)

The figures illustrate how costs are spread over urban development process and task in it and that the constructions of buildings are by far the most costly part of the urban development process. It is here assumed that costs are at large identical to construction for commercial housing projects. In relation to the discussion above on distribution of costs, which primarily relates to planning and the preparation of land, it becomes clear that the distribution of costs issue above only concern about 10 % of the total costs. However, one thing should be noted – the total cost of building a project is not by definition equal to the total value of the finished project. If they were equal, the developer would not get any profit; see also equation in section 4.2.1. in which production cost and profit is the total value.

4.4. Conclusion

In this chapter, the urban development process has been defined as a series of steps beginning with the Starting point and the development of concept for the project and ending with The sale, rent or use of the area. The steps are:

- Starting point
- Concept development
- The planning process and the permits
- The preparation of land
- The supply of land
- Financing
- The construction of buildings
- The sale, rent or use of the area.

Some of the steps have a natural order, meaning that it is natural that the concept is being developed before the planning foundation is produced and implemented which again is completed before the land is prepared and buildings are built. On the other side, the steps of supply of land and financing are not in the same way bound to a certain order. It would seem natural that the sale, rent or use of the area is the last step, but it is possible that especially sales and rent agreements can be made earlier in the process.

In the description of the Danish planning process, it was shown that the plans made by the municipality are the most significant ones in the context of the urban development process. The municipality produce a Municipal Plan and Local Plans. The possibilities given by the Local Plan are valid until they are changed in terms of a new Local Plan. This is different from the building permit which is only valid for one year.

Furthermore, it has been found that the main actors in the urban development process are the developer, the municipality, the landowner and the investor. As outlined, an interaction between the actors is unavoidable, partly due to the Danish Planning Act and partly because interaction is necessary to get things done. The latter mainly refers to the interaction between developer and municipality, who have a mutual beneficial relationship. The developer needs the municipality to produce plans and the municipality needs the developer to implement planning.

The municipality is in a special situation where they, unlike the developer's economical focus, needs to focus on the development of the whole community, the municipal budgets. Furthermore, the municipality can choose to buy land and become landowner and to some extent developer, which thereby puts them in a double role as both private part and authority. In their interaction with the developers, the municipality on the one hand give the land (and landowners) usage possibilities and they sometimes provide services in the area in terms of preparation of land. On the other hand, they can push costs on to developer and landowner, e.g. for the roads. In the big picture, it is a relative small part of the total costs (preparation costs) that the municipality can push over. The rest is already the developer or landowners costs.

In this chapter the urban development process has been examined, and together with the first analysis on value, this is foundation for analysing how value change in the urban development process. This is analysed in the forthcoming chapter, which is the third theoretical analysis.

5. Property Value Changes during Urban Development

In this chapter it is analysed which existing understandings and models there are concerning changes in property value throughout the urban development process. In the previous two theoretical analyses the value of property and the urban development process has been examined, and this understanding is used as a foundation for the present analysis. As mentioned in chapter 2., the purpose of this analysis is primarily an understanding of the subject, but also a first edition of a model that shows how value change throughout the urban development process – based on all three theoretical analyses. This first edition model is presented in chapter 6. It is not expected that the theoretical analyses can answer the research question and its sub questions satisfactorily – that is the main reason for also conducting the following empirical analyses.

How and why property value changes in the urban development process is the primary issue of this analysis and this is addressed in "The Changes in Value of Property When It is Developed – The Stair Step Model". In this section, a series of models, concerning this issue, are analysed. None of the models found address the Danish situation, and are instead focussed on other European countries – mainly in the northern part of Europe; justifications for transferring international models into a Danish context are provided as a part of the review. After this section, "risk" in the urban development process is discussed separately. It is an issue that has come up in both this analysis but also in the empirical analyses, and it is chosen to analyse this from a theoretical point of view as well. Finally, the findings of this theoretical analysis of changes in property value are summated in a conclusion.

5.1. The Changes in Value of Property When It is Developed – The Stair Step Model

In the following, the individual property – or urban development area – and its "value changes" throughout the urban development process will be in focus. Although this is very close to the research question's main issue, this analysis does not alone provide the answer and conclusion of the project. On the other hand, it is a description of an existing type of conceptual models, describing how property value changes throughout the urban development process – The stair step models.

The stair step model is usually used to describe the transformation of agricultural land into urban uses, as illustrated in figure 5.1., where land at the city limit (a Green Field) is transferred to the Urban Zone – the city limit is moved further out symbolised through the red arrow – and the land (orange) is being urbanised. This is also how the stair step model is introduced here. At the end of this section the model's usability within the urban areas (Brown Field) will be discussed.

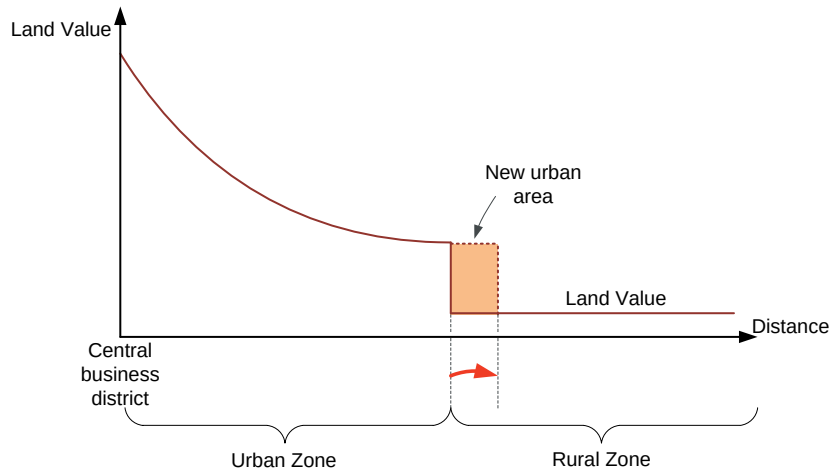


Figure 5.1.: New urban area at the city limit (Green Field) is taken into use for urban purposes. The stair step models below describe further what happens to the land and how its value changes. (own model)

5.1.1. When Areas are Developed

The stair step model, as it is shown in figure 5.2. has value on the y-axis and time on the x-axis. The urban development process, i.e. the land's transformation from agricultural land to urban use, is shown along the x-axis – starting on the left side and ending on the right side. The curve shows the value of the property at a given time in the process. The model shows the value first as agricultural land, then as agricultural land with expectations of future usage possibilities, as planned urban land, and finally as prepared land ready to be built upon; the same events as described in chapter 4. It shows the principle of how value changes during the urban development process, until the land is prepared, where value increases. A note must be made in relation to figure 5.2. The model is based on the Swedish planning system, which is a bit different from the Danish. Both countries have a "Municipal Plan" and a "Local Plan" (in Sweden called Översigtplan and Detaljplan, respectively). However, in Sweden the Översigtsplan is not legally binding whereas it is for the

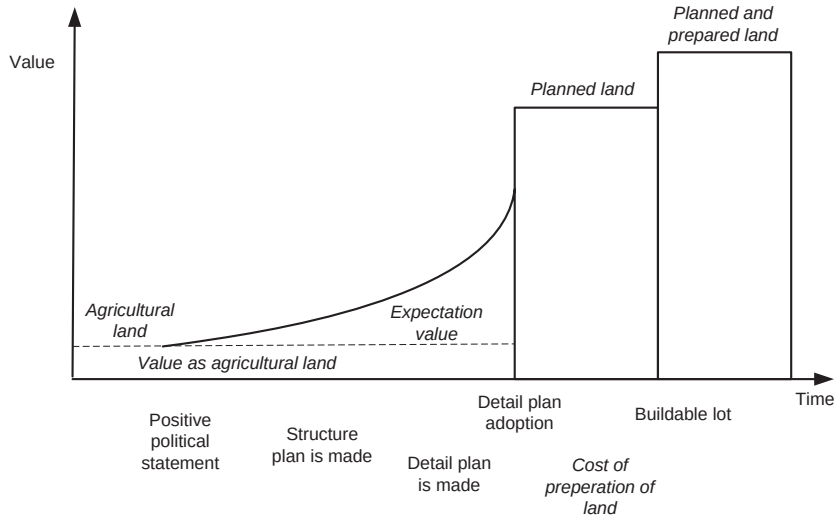


Figure 5.2.: Figure shows a swedish stair step model. Free after (Kalbro 2007a, p. 105)

municipality in Denmark (Kalbro 2007a, p. 32; the Danish planning Act § 12). This may seem like a tiny difference, but it may have influence on how much weight the plan has in the municipality's decision making. In other words, in Denmark the developer can be surer than in Sweden that the municipality will stick to the intentions of the Municipal Plan in their administration and decision making – meaning it is less risky for the developer to base decisions on for instance acquisition of land on the Municipal Plan in Denmark. (Larsson 1997, p. 209) – also Swedish – have a similar figure in which the construction of buildings is included as an extra step in the urban development process on the figures x-axis. As discussed in chapter 3., agricultural land will most typically have a lower value than the land for urban uses. This is also a precondition of the stair step model where value increase from the start to the end of the urban development process. The fact that value changes are shown as an increase also shows another precondition of the model – namely that everything in the urban development goes well. (Kalbro 2007a, p. 105) and its identical representation in (Sjödin et.al. 2007, p. 173) are theoretical principle models. It is not possible to see what lies behind "theoretical" in the textbooks, and it will be interesting to see if reality (Danish context) is significantly different from the theoretical view illustrated in these models – although nothing in the following empirical work suggests major differences. That the models are "principle" suits this context well, since it is attempted to make a conceptual model, which more or less is the same as principle.

The stair step model exists in several layouts and with content that reflects different countries' urban development process. Figure 5.2. – based on (Kalbro 2007a) and (Sjödin et.al. 2007, p. 173) – is Swedish and so is (Larsson 1997). The latter refers to (Dunkerley 1987) from England as a source for the model although the specific stair step model cannot be found in (Dunkerley 1987). Others like (Dransfeld & Voss 1993) represent a German tradition, referring back to (Bonczek 1970) and also a Von Thunen way of thinking. (Dransfeld & Voss 1993) include specific models for Germany, England, Italy, The Netherlands and France in their study.

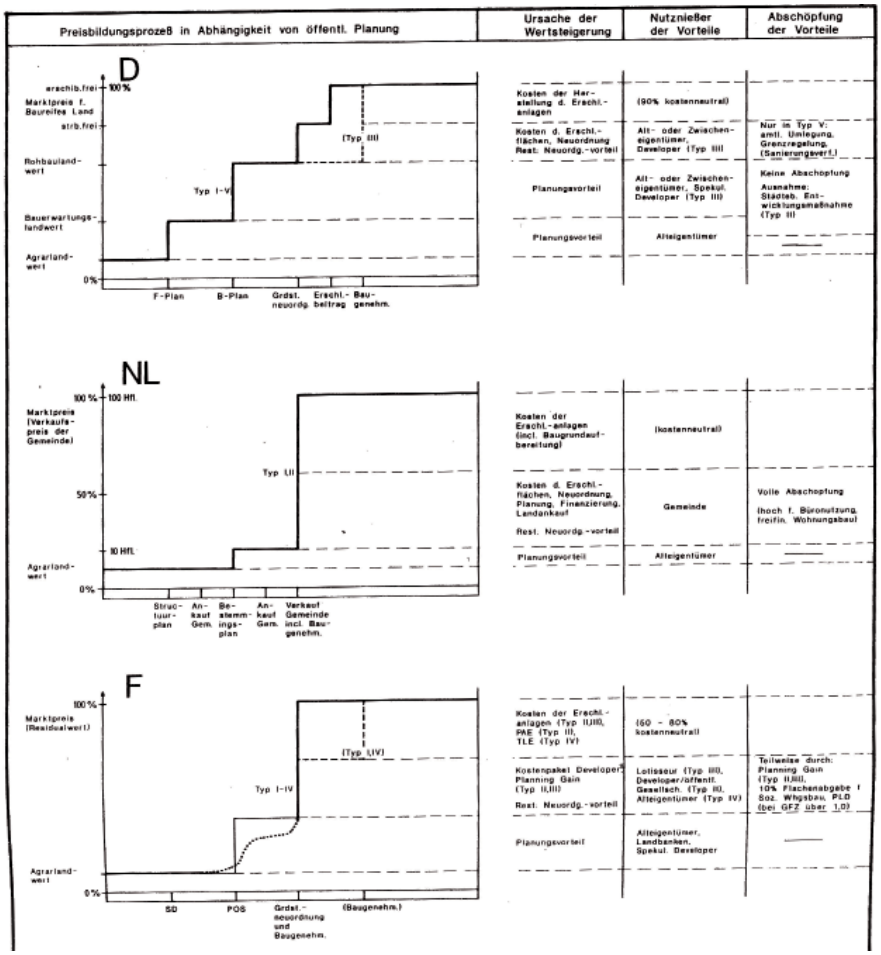
(Dransfeld & Voss 1993) have made a model for each of the above mentioned countries in their study – see figure 5.3. The purpose of the models was to show the market results of land development[36]. The purpose of the comparative study was primarily to evaluate German land development and to create knowledge of land development in the included countries. Just as the model developed by (Kalbro 2007a) these models show property value on the y-axis and time on the x-axis. However, the y-axis's unit is percent of the end value and not actual values.

One of the focus points in the models by (Dransfeld & Voss 1993) is the role of the municipality. In the models, there is a reference to five different types of processes (type I, II, III, IV and V). Type I has the municipality as developer, type II has a public/private partnership as developer, type III is with a private developer, type IV is when the municipality uses private agreements with landowners, and type V is when the municipality uses public power tools like compulsory purchase to acquire land (Dransfeld & Voss 1993, p. 141-142). By differentiating between these types the models and approach by (Dransfeld & Voss 1993) differs from the other models. The different types occur differently in different countries[37]; type I is common in the Netherlands, while type III is common in Great Britain. One of the points from the model is that value increases differently, depending on who the landowner is (private or municipal). When looking at the Market Value, as it is the case in this research, it is in the present research argued that it does not matter who owns the land when it is put for sale because private actors will most likely agree on Market Value in general, and municipalities in Denmark are normally obliged to buy and sell at Market Value. (Dransfeld &

36 Land development process is here thought of as the process from the starting point to a prepared building site cf. chapter 4. The expression is borrowed from (Needham & Verhage 1998) and the rest of the urban development process consists of the "building development process" – an expression also borrowed from (Needham & Verhage 1998).

37 This may be different now since new planning laws have been adopted since.

Voss 1993) point is that lands value increase is different due to who own it and that is here neglected. It may be the case that land is sold at different patterns depending on owner – for example, if the municipality is owner, it is typically sold as prepared land and only rarely as planned but unprepared land. It is however as indicated argued in the present research that the land will have a Market Value, also when it is not for sale.



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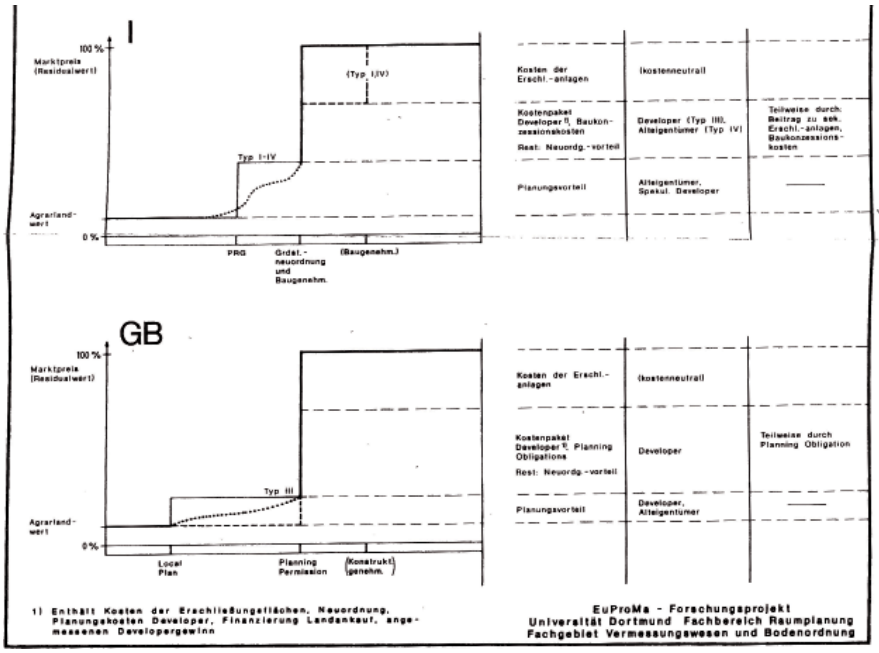

Figure 5.3.: Five stair step models by (Dransfeld & Voss 1993) for each of the countries Germany, The Netherlands, France, Italy and England. (scanning of (Dransfeld & Voss 1993, p. 160))

In the following, the similarities and differences in the found models are used to extract the principles behind the models to find how value changes throughout an urban development process. The issues found in the models on how value changes are described and discussed under the following headlines:

- The Actual Land Use
- Preparation of Land
- The Planned Use of Land
- Expectation Value
- The General Price Development in the Property Market.

The Actual Land Use

The models distinguish between the actual land use (current at the time), starting from agricultural purposes (Old Use) on to being an unprepared building site, prepared building site and ending as a finished newly built urban development area (New Use). (Kalbro 2007a, p. 105; Larsson 1997, p. 209) models are very clear in this division, but it is also implied by (Dransfeld & Voss 1993, p. 18 & 160). It is indicated that there is a value increase in each of these steps, which point towards the actual land use and changes of it being a value increasing factor.

Figure 5.4.: Green Field area in Aalborg Denmark. Both Old Use and New Use is present as actual land use. (Own picture)

Preparation of Land

There is a strong connection between the a property's actual land use and its physical state in relation to the future use, i.e. prepared land as an actual land use also has a different physical state – roads, sewage etc. are made – than an unprepared building site. (Kalbro 2007a; Larsson 1997; Dransfeld & Voss 1993, p. 18 and p. 160; Bonczek 1970)'s models distinguish between unprepared land, prepared land and land which has been built upon. Going from unprepared to prepared land includes both a change in actual land use and a significant change in the physical state – meaning roads, sewage and so on. (Bonczek 1970) also brings parcelling of new properties forth as a cause to value increase.

The Planned Use of Land

The models presented by (Kalbro 2007a, p. 105; Dransfeld & Voss 1993, p. 18 & 160; Bonczek 1970) are concerned with the issue of how the area is planned. The analyses in section 3.2. and 3.3. also suggests that it is an important issue. With the Danish planning system as reference, a model ought to distinguish between the Municipal Plan and the Local Plan, since these are the plans where land use is regulated (binding to either municipality or municipality and landowner).

(Dransfeld & Voss 1993) have analysed how adopted planning impacts differently in different countries – se figure 5.3. The analysed countries (Germany, The Netherlands, France, Italy and England) have different kinds of planning systems; ranging from Germany where planning has a major impact on value and onto England

where the building permit is decisive for value (see also figure 4.2.). Their study show that if the plan has a major influence on value, the building permit does not, and vice versa if the planning has a low influence, the building permit is essential (Dransfeld & Voss 1993, p. 98-109). The determining factor in relation to value seems to be building rights and especially when they are given (or to which extent) – this is also discussed further in the second interview analysis. Building rights have a major influence on investment risks, since those are minimised when the buyer of land (or existing landowner) is certain that he can develop the land in accordance with the adopted plan (Dransfeld & Voss 1993, p. 159).

Expectation Value

In some of the models – (Kalbro 2007a, p. 105; Larsson 1997, p. 209; Dunkerley 1987, p. 8) – expectation value is indicated on the curve showing value. Expectation value is closely related to planning and is a value increase caused by the expectation of future development and building rights. The value increases when development becomes more certain – if for instance an overall strategic planning is adopted by the planning authority. Expectation value is – as indicated in the models – not a term used only in Denmark. In Denmark, it is often used in the assessment of compensation when the municipality is conducting a compulsory purchase of land, see below.

Expectation values origin in the expectation of future development and especially the right to future development in Denmark (Friis Jensen 1992; Gustafson et.al. 2006). Expectation value is often connected to the transformation of agricultural land to urban purposes, and because of this, the expectation value is – in Denmark – often linked to the land's shift from Rural Zone to Urban Zone. To repeat, this shift is done through a Local Plan and it is also the Local Plan that gives the land its new usage possibilities. As described in section 4.1.3., building rights are more or less given in the Local Plan and the building permit is a confirmation of the specific project to ensure that it is in accordance with the Local Plan and the at the time appropriate building standards. The Municipal Plan is not without importance either in relation to expectation value, and sets the aims for the future development. It is also in the Municipal Plan that area's future use as urban area is indicated first time around. According to (Gustafson et.al. 2006, p. 56 & 76), expectation value is in Danish literature and in compulsory purchase decisions divided into the following subdivisions: *A limited expectation value* (en begrænset forventningsværdi), *some expectation value* (en vis forventningsværdi) and a *significant expectation value* (en betydelig forventingsværdi). This division indicates that there are different levels

of expectation value. The size of the expectation value is dependent on how near the future development is, how near the adopted planning is and in general, the property market's expectations to the property's opportunities. (Friis Jensen 1992; Gustafson et.al. 2006)

General Price Development in the Property Market

Some of these stair step models suggest that although the value increases in steps, it also increases continuously because of the general price development (Dransfeld & Voss 1993, p. 18; Dunkerley 1987, p. 8; Bonczek 1970). In some of the models, e.g. figure 5.6., the general price development is included as a slowly upward sloping curve. (Kalbro 2007a, p. 105; Dransfeld & Voss 1993, p. 160) has not included the general price development in their models. The graph in figure 5.5. supports that if the urban development process continues over a certain period of time, the general price development will be a factor, since the value of property changes over time. The figure shows the development of sale prices of single family houses in Denmark from 1996 and until 2008. The graph does however not show that the prices peaked in 2008 and went downhill for a while – how long is still uncertain. Nevertheless, property values are influenced by other things than the urban development process itself.

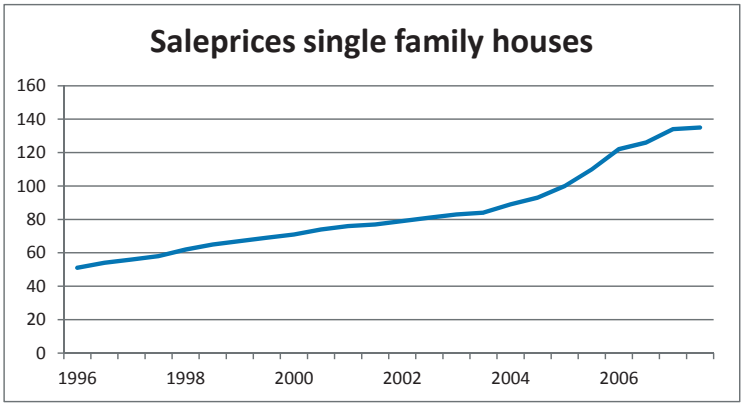

Figure 5.5.: The average sale price of single family houses in Denmark from 1996 and until 2008, as an index with 2005 as index 100 (own figure based on statistics from (SKAT 2008)).

5.1.2. When Areas are Redeveloped

Over a period of years, the developed urban land will become ready for redevelopment. In these years, redevelopment of harbour areas – Brown Fields – are very popular. The first time land is developed it is when agricultural land – a Green Field – is changed into urban land and at some point the developed urban land will become a Brown Field ready for redevelopment. (Dunkerley 1987, p. 8) has addressed this issue as illustrated in figure 5.6. The figure shows how property value increases during the first urban development process and how it increases again during the redevelopment to its second urban use. This spans over quite a few years – in the original figure, the time span is 40 years. This also implies that the stair step model can be applied to redevelopment of Brown Field areas.

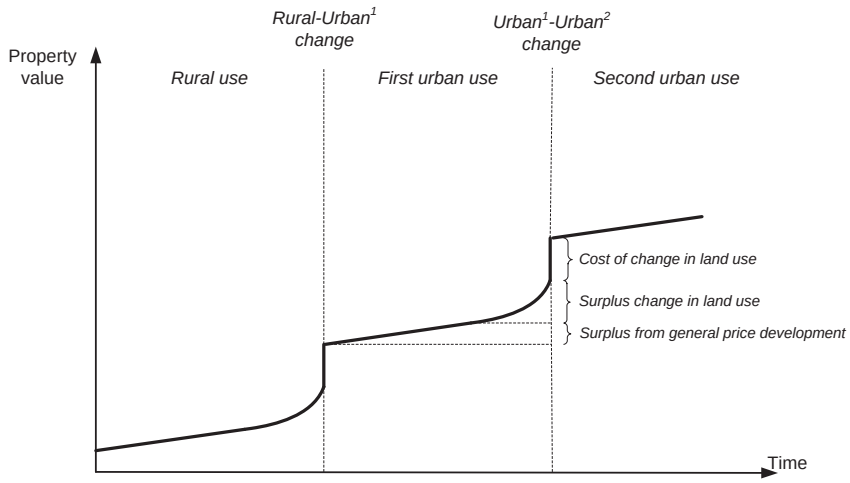

Figure 5.6.: A property's transformation to urban use and then after a few decades, it will be developed again into another urban use. Free after (Dunkerley 1987, p. 8).

5.2. Risk

Risk in urban development projects comes from uncertainty in the estimation of:

- *Production costs* – they may turn out different than expected;
- *Rent level* – that can be hard to forecast correctly;
- *Investments yields* – the investor's yield may change during the time of development; and
- *The time it takes to sell/rent the finished project* – the market situation may change during the time of development. Time becomes an important issue in managing risk, since a long time period makes the estimation of costs and different values inaccurate.
  (Henneberry & Guy 2002, p. 77-78; Ratcliff et.al. 2004, p. 335)

A fifth factor is mentioned in (Bogason et.al. 2008, p. 6) and that is the eventual resistance from the neighbours and citizens in general towards the projects. The resistance from e.g. neighbours can make a project politically impossible for the municipality to allow. This can be a risk factor to both the municipality and the developer, as one of the cases in chapter 10. also shows. The way projects are financed – short term during development and long term at the end – also reflects risk in the way that different degrees of risk provide different conditions for financing, which in the end means different rents and loan types. (Harvey & Jowsey 2004, p. 116-117)

A typical way of dealing with risk is according to (Henneberry & Guy 2002, p. 78; Ratcliff et.al. 2004, p. 335-336) to adjust the expected profit so that it includes a buffer for unexpected occurrences. The higher the risk, the bigger buffer is needed. (Henneberry & Guy 2002, p. 78) estimates that profit (including buffer) ranges from 5 %, if in principle no risk, to 15-20 % of the total costs, including land if there is no pre-lets or other arrangements to secure the developer. The 15-20 % can be reduced to approximately 10 % if there are some arrangements to secure the developer. In a Danish book (Buch & Møller 2005, p. 48) on urban development projects, the developer's profit is, due to his willingness to take a risk, estimated to be up to at least 20 %. In (Bogason et.al. 2008, p. 63 & 65), the author uses 15 % of the total cost as an estimate of profit in his hypothetical examples. It seems that the developer aims towards a profit in the range of 5-20 % of the total costs and if the risk increases so does the developer's demand for profit. In other words, the developer wants compensation for taking risks.

5.3. Conclusion

In this chapter it has been analysed how value changes in the urban development process by presenting a set of existing models of such. Like most other models that aim at representing reality, the stair step model simplifies and outlines some elements and neglect others – this is both the strength and weakness of a model. For a conceptual model, as the stair step model, this is the price to pay in order to get an overview of the whole urban development process. The principle of the model and layout clearly follows the flow of the urban development process. When comparing the model to the urban development process as it is discussed in chapter 4., the purchase of land and financing of the development is not included in the model. Perhaps nor should they be because, as discussed in chapter 4., the supply of land and financing are not directly linked to the other steps in the process, and can happen at any time in the process – meaning that they are not parts of the natural flow of an urban development process. It can also be argued that the model show the value at which the urban development area should change hands at any time during the urban development process. The models in the examples above are applied to Green Field situations, which raise the question; can it be applied on both Green Field and Brown Field areas. This is according to (Dunkerley 1987) possible and this is also assumed to be the case in this project.

As mentioned, a conceptual model cannot show everything and there are therefore also some underlying "all things being equal"-considerations that support the model: first, that the end property value is higher than the start value and secondly, that the urban development process goes well without any hindrances along the way. The analysis of the models also showed that the models are dependent on how the planning system works, meaning when do the developer have building rights and when his risk is high or low, respectively.

5.3.1. Influencing Factors

The following section has the purpose to summarise the factors, found in this chapter, which has an influence on how property value changes in urban development.

- **Planning**
  The models show that planning is a factor that affects the property value. This has been found to be an important factor, when allowing the future urban use and thereby giving building rights. The models illustrate a value increase for each planning document – in a Danish context that means an increase when a Municipal Plan and/or a Local Plan is adopted. Especially

(Dransfeld & Voss 1993) emphasise the weight of planning and building permits as a value increasing factor, but also that it is depending on the planning system and when building rights are manifested.
Expectation value is related to planning due to the fact that planning and building rights are connected. The size of the expectation value is dependent on how big the expectation of future development is, and this is manifested in the planning document or expectation of adoption of planning documents.

- **Actual land use and a property's physical state**
  A property's actual use is important for the value of the property, just as the state the land is in is important to for the value. The value of e.g. agricultural land and urban land are different as the theory in chapter 3. also suggests.
- **Preparation of land**
  The changes in the land's physical state that takes place when land is prepared and serviced with roads, sewage systems etc. is according to the models value increasing. This is a factor for which there is, like planning, a broad consensus about.
- **General price development**
  An urban development area is influenced by other things than just the developer's and municipality's actions. The society in general also has an influence on the value of the property, e.g. the general price development in Denmark.
- **Risk**
  Risk is an important issue for the developer, but also the municipality. It is a factor in the way that the developer's demand for profit is influenced by how risky the development project is. The developer's risk is one of the underlying elements in the models.

In the following in chapter. "6. A Model of Changes in Property Value during Urban Development – in Theory" a first edition model is presented, and it is based on this analysis and the previous two theoretical analyses.

6. A Model of Changes in Property Value during Urban Development – in Theory

This chapter has the purposes to describe and justify a first draft of a Danish model on how property value changes throughout the urban development process. As proposed in chapter 2., it will be attempted to make a conceptual model based on the theory analysed in the previous chapters. This first version of a conceptual model – as developed below – is also the starting point for the empirical analyses to come, and based on these analyses the model will be adjusted and improved further.

In the previous theoretical analyses, two types of models have been presented. The first type was in section "3.2. The Effect of Zoning - Specific Use Options for Land" and the second type was in chapter "5. Property Value Changes during Urban Development". The latter – the stair step model – shows how property value changes, where the former shows how different area types or geographical locations have different values, but a more "static" picture of an urban development area. Since it is one of the aims of this study to try and create a conceptual model that shows how the important factors cause the property value to change over time in the urban development process, it is chosen to use the principle of the stair step model as the foundation for the conceptual model in this project. There might be other types of models than the two types shown in the analyses above, but since they are unknown to the author, and since the stair step model is useful, other models are not pursued further. The model below (figure 6.1.) is the conceptual model based on the findings in the previous analyses. The x-axis is the urban development process measured in time, and shows an area's transformation from Old Use to the area's New Use. The y-axis measures the property value in Danish currency.

The model reflects the definition of the urban development process as defined in chapter 3. The urban development process consists of the steps: Concept development, The planning process and the permits, The preparation of land, The supply of land, The financing, The construction of buildings, The sale, rent or use of the area, illustrated as the grey boxes below the graph. The step "starting point" is literally the starting point in the intersection of the y-axis and the x-axis, and it is notable that the land has a value already at this point in the urban development process. The price that should

be paid (the Market Value) when getting the supply of land or sale of the project in general is the curve and should therefore not be a step in the model. Financing is according to the definition of Market Value in chapter 3. not a direct factor[38], and is not a step in the model. It is therefore chosen to put the supply of land and the financing at the side. The remaining five steps are placed in what appears to be their natural order – measured in time and not importance.

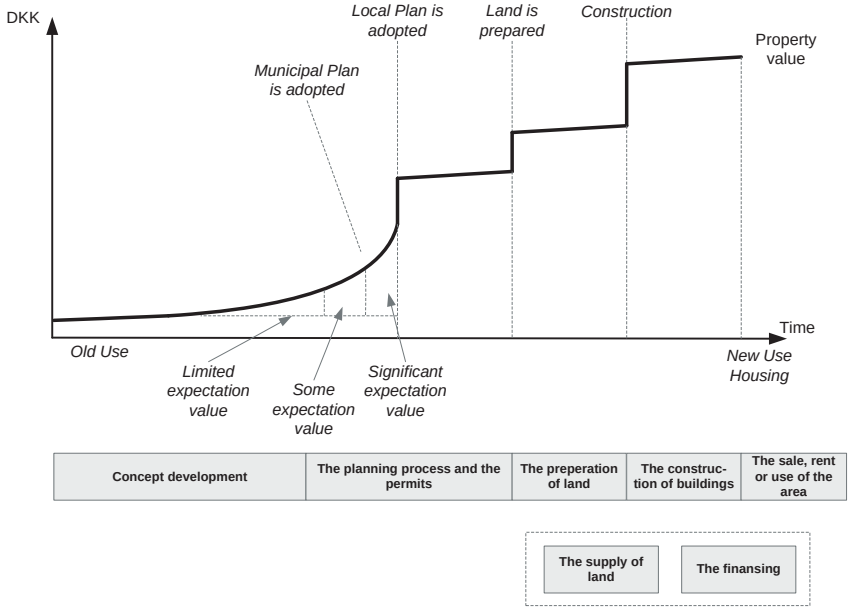

Figure 6.1.: The first version of a conceptual model, showing how property values generally change throughout an urban development process. It is based on the analysis in chapter 5., but also the description of value and the urban development process in chapter 3. and 4.

The curve in the figure above, shows how property value change throughout the urban development process, is based on the curve in figure 5.2. and alternated to fit a Danish context and the findings so far. This means that it is also in this model assumed that the urban development project goes well. It is chosen to keep the value increasing steps when the detailed planning (Local Plan) is adopted, and when land is prepared, since both adoption of a Local Plan and preparation of land are events in a Danish urban development process. A step when buildings are constructed has been added, so that the model includes the whole urban development process and not just the land development process. It is assumed that value of an urban development increases when buildings are being built, this is

38 However, it should be noted that the cost of financing – mortgage rents etc. – can influence the demand for land and thereby the Market Value.

supported by the fact that around 65 % of the total costs are used in this step, see section 4.3.1. The value increase up to the point where the Local Plan is adopted is chosen to be draw as exponential upward sloping curve. This upward sloping curve is caused by the usage options of the land becoming more and more real, meaning risk is diminishing when municipal planning is adopted and when Local Plan proposal is adopted. This is also supported by the tradition of expectation value given in compensation for compulsory purchase in Denmark. The Municipal Plan adoption is placed as a best guess in the figure, and this is one of the points where the empirical analyses hopefully can improve the model. It is also chosen to add the general price development in the figure, meaning that the curve is always upward sloping – even when nothing is happening. It is here assumed that there is an increase in value over time caused by the general price development, meaning without market slumps, which relates to the assumption in the model – that everything goes well[39]. In the time span of an urban development process, it is questionable how much the general price development means, but it is included to at least indicate that the area is also influenced by the surrounding society. Finally, the height of the value increasing steps is not supported by arguments or theory at all – hopefully, the empirical analyses can give some guidance on this issue.

39 Which may not necessarily be the case.

7. Empirical Methodologies

In this chapter, the methodologies to be used in the empirical analyses are discussed. In chapter 2., it was chosen to conduct two interview analyses and a multiple case study as empirical analyses to support the previous theoretical analyses. As shown in figure 7.1. the analyses are ordered in the way that the first analysis is an interview analysis, which is followed by the multiple case study and finally the second interview analysis. The first interview analysis and multiple case study focuses on revising the conceptual model, while the last interview analysis focuses especially on planning. In this chapter it is discussed how the analyses is carried out and the methods for the analyses is discussed below.

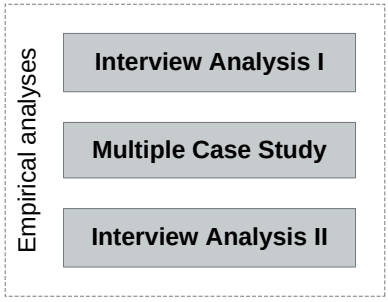

Figure 7.1.: Overview of the empirical analyses and in which order they are conducted.

The interview analyses and the multiple case study aim towards answering the three sub questions together with the theoretical analysis:

- *How does property value change throughout the urban development process?*
  - *When does the value change?*
  - *How significant is the change compared to other changes?*
- *Why does property value change as it does?*
  - *What or whom causes the changes in property value?*
- *How does municipal planning cause property value to change in the urban development process?*

As described in chapter 2., the purposes of the interview analyses and the multiple case study are to address the sub questions from different angles and with different aims as repeated below. This chapter is structured in the way that the methods for the interview analyses are discussed first and second the multiple case study.

7.1. Interview Analyses

To conduct an interview analysis with the purpose mentioned below, it has to be chosen which kind of interview to conduct, who and how many interviewees, what to ask the interviewees, how to handle the interviewees and finally how to analyse the gathered information. In other words, *how to ask, whom, what, and what to do with it afterwards*. The remaining issue of why to do the analyses is discussed in chapter 2. In the end of this section, under each interview analysis, it is furthermore evaluated how well the interviews went.

Aim and Purpose with the Interview Analysis I

In chapter 2., it was determined that the purpose of Interview Analysis I is to further develop the first draft of a conceptual and theoretically founded model and to set it into a Danish context by adding facts on how different actors in development projects perceive and understand value changes. Furthermore, the purpose of Interview Analysis I is to improve the understanding of the urban development process and through a bird eye view[40] find general knowledge. It is in this way sought to find information that is beyond the specific case and reflect the processes that occur in a general level.

Aim and Purpose with the Interview Analysis II

As described in chapter 2., Interview Analysis II – the third empirical analysis – zooms in on how planning in particular influence value changes and how the different actors use this. Thus the analysis focuses on especially the third sub-question – "How does municipal planning cause property value to change in the urban development process?" The analysis thereby zooms in on a part of the whole urban development process; the Planning and permits step, the Preparation of land step. Furthermore the purpose of the interview analysis is to confirm/disconfirm the conceptual model and provide the information needed for revising the model in accordance with the confirmation/disconfirmation of the conceptual model. Lastly additional related issues such as the time it takes to develop an urban development project has also been included in the interviews for this analysis.

The interviews are first discussed from a methodological point of view, in the sections "7.1.1. Types of Interview" and "7.1.2 How to Handle the Interviewees". After this, each of the two interview analyses and the choices made regarding the interviews are discussed. This is done in "7.1.3. Interview Analysis I" and "7.1.4. Interview Analysis II". Lastly it is discussed how to analyse the interviews, and this is done in "7.1.5. How are the interviews analysed?"

40 Meaning viewing the whole urban development process from an elevated point, looking for the overall picture and not the small details.

7.1.1. Types of Interview

Interviews are typically categorised by how structured they are. The categorisation scales from an open unstructured interview to a questionnaire, which is very structured. If the interview is very structured the questions will be detailed and the interviewer will stick to the questions, while in an unstructured interview the interview is only guided by prepared questions or subjects. Interviews are by (Yin 2003, p. 90-91; Andersen 2003, p. 211-214) divided into three main groups:

- *Open-ended interview / Open interview*
- *Focused interview / Semi-structured interview*
- *Structured interview (Questionnaire)*

The different types of interviews have different strengths and different weaknesses. Their differences make them suitable for different purposes. The three types and their characteristics are discussed below.

Open-ended Interview

The open-ended interview is an unstructured interview. It is unstructured in the sense that it resembles a dialog with a predefined subject. The topic, goal of the interview and questions are prepared before the interview is conducted, but the question are not necessarily asked in the prepared order and may be asked in another way. This kind of interview has a very explorative character. It is possible to ask for both facts and opinions and furthermore to ask elaborating questions to clarify without compromising a stiff structured set of questions. The result of an open-ended interview is typically qualitative data. (Yin 2003, p. 90; Harboe 1999, p. 27 & 81)

Focused Interview

The focused interview is very similar to the Open-ended interview, but the topics and line of questions are followed more systematically. This kind of interview is suitable when the interviewer has some knowledge on the topics that the interview concerns or wants to confirm a theory and get another opinion on. The result of a focused interview is also typically qualitative data. (Yin 2003, p. 90; Andersen 2003, p. 212; Harboe 1999, p. 27)

Structured Interview

Structured interviews are typically designed to produce quantitative data. If the purpose is to produce quantitative data, the questions must be formulated in a way that only gives a few possible answers. For example “Do you prefer black or brown shoes?” in contradic-

tion to “Which kind of shoes do you prefer?” The last formulation leaves the answerer with many possibilities, for instance “soft leather shoes”. An often used form of structured interview is a questionnaire. (Yin 2003, p. 91; Andersen 2003, p. 214)

The Chosen Interview Type

For interview analysis I it is chosen to do interviews that can best be characterised as open-ended interviews, although the interview purposes focuses on further developing the first version of a model and thereby suggest some prior knowledge by the author. But the focused interview does not leave enough space to follow the interviewee’s interests and special knowledge with improvised question. The starting point will however be questions concerning the first model and that part can be very similar to a focused interview.

Interview analysis II will also be open-ended interviews, since the purpose of the analysis is explore what happens with property value in the planning and preparation step. It is important in this analysis to be open for the possibility to ask elaborating questions, which suits open-ended interviews well.

7.1.2. How to Handle the Interviewees

A part of preparing and conducting the interviews is also to pass on the information that is necessary to the interviewee in order to get the most out of the interview. For example, what is the expected outcome of the interview and how is the gathered information to be used. In the following, it is discussed how the contact with the interviewees is handled. The choices made are inspired by (Andersen 2003, p 183-189).

To ensure that the interviewee was confident about being interviewed, a description of the project, the purpose of the interview and how it would be used in the project was sent to the potential interviewee when the first contact was established. Furthermore, an interview guide containing the questions and themes to be asked was sent beforehand to avoid an awkward situation in which the interviewee feelt uncomfortable and/or unprepared about the type of questions asked. The interview guides can be seen in the appendix A, B and C, where A and B are from Interview Analysis I and C is from Interview Analysis II. After the interview, detailed minutes of the interview were sent to the interviewee for commenting and correction of possible misunderstandings. Additionally, the project will after completion be made accessible for the interviewees as a way of showing how they have contributed with knowledge.

The hope was that if the potential interviewees knew what they were going to be asked, they would be more willing to be interviewed. At least, developers are known for keeping their cards close to their chest and therefore not necessarily interested in being cited for what they may consider as business secrets. But also consultants, planners and real estate agents might know something which they prefer not to be cited for. Therefore, it has also been chosen to anonymise the interviewees, and they are referred to by initials. It will not bring the analyses anything extra to use their full names – and identifying them – and since nothing is lost by anonymising them there is no reason to put them in an eventual awkward situation.

7.1.3. Interview Analysis I

This section describes the choices made regarding interviewees, the interview guide and evaluation of the conducted interviews in the first interview analysis.

Interviewees

First and foremost, the interviewees must be relevant to the interview analysis otherwise the interview would be meaningless. But there is still a broad range of people that know of or at least has an opinion on urban development and housing areas, and it is not possible to interview all. The number of interviewees needs to be narrowed down. This leaves two issues: Which parameters to use when selecting interviewees and how many interviewees.

The interviewees have been selected by three parameters: Geography, profession (and thereby specialist knowledge) and interest in the subject. The latter has made it easier to find and interview the interviewees; furthermore those with interest in the subject were significantly more interested in being interviewed. The geographical parameter is included to ensure that the housing market both around Copenhagen and in the remaining part of Denmark is included. It is assumed that there are some differences, even though they might not be significant. The profession parameter is included because it is chosen in this project to look at urban development from the developer's perspective. One way to go about that is to select only developers, but that has not been possible and could also give a biased perspective on the analysis. Instead, it has been chosen to have both developers and some of the other actors (consultants, municipal planner and real estate agent) in the process of developing housing areas among the interviewees.

Concerning the number of interviewees, it was chosen to do a pilot interview first to test both the interview guide and to get an impression of the possible outcome. After the pilot interview, additional four interviews were carried out. The number of interviews was also related to the profession parameter and would allow two consultants – one "landowner/developer"-consultant and one from a major consultant firm – a real estate agent, a developer and a municipal planner. After completion of the five interviews, it was clear, that the same answers were given by several interviewees to the same questions. This pointed towards that most of the aspects were brought forth and verified by other interviewees. More interviews would of course give more answer and still something new, but given the time effort by doing further interviews and time available it was chosen to settle with five. The six[41] interviewees are shortly described below:

- **"Landowner/developer"-Consultant**
  MT is chartered surveyor and part owner of a surveyor company. He produces Local Plans for developers and the local municipality, and he advises landowners and local developers on how to benefit most of their land. He typically works on Green Field projects. MT works on Zealand.
- **Consultants**
  AC and JT are from one of the biggest consulting firms within this line of work in Denmark. AC is working with planning, while JT is working with management and planning the process of building construction. They are mostly involved in Brown Field projects. Both of them are working in Aarhus in Jutland.
- **Real estate agent**
  LBH is a real estate agent and works in the Copenhagen area and in the northern part of Zealand. She often sells the developers products (apartments and so on). She is mostly involved in Brown Field projects.
- **Municipal planner**
  JUR is a municipal planner in the Northern part of Zealand. He is involved in both Green Field and Brown Field planning.
- **Developer**
  SL works at a development company in the northern part of Jutland, but their development projects are spread out over most of Denmark. The development company is one of the major companies in the area, and they develop the projects as well as doing the actual construction. SL is involved in planning and developing the projects. The development company does both Green Field and Brown Field projects.

41 See further below on how five interviews and six interviewees match.

The Interview Guide

In the interview guide for Interview Analysis I includes besides a description of the project, the purpose of the interview and how it would be used in the project also the questions for the interview – as mentioned above. It is chosen to use the first version of a model for value changes in the urban development process (created in chapter 6.) as a starting point for the interview questions. There are two reasons for doing so: Firstly, the aim of the interviews is to improve the model which therefore needs to be included in the interview somehow; secondly, it gives a concrete starting point to start a discussion from. The questions in the guide are divided into seven sections:

0. Does the model make sense to you?
1. The different steps of value changes in the model
2. Other factors
3. The property's location
4. The property's prior use
5. Costs to create the value increase
6. About profit and value increase in general

The first section ("0. Does the model make sense to you?") is a set of opening question and they did not exist in the interview guide. They were added after the interview guide was sent to the possible interviewees. The first section of question had the purpose of giving the interviewer and interviewee a good start. Beside this it is an easy way to test if non-academics think the structure of the model is meaning full.

The factors found in the theoretical analyses can roughly be divided in two groups: Those who are included in the model and those who are not, meaning factors that are found but does not fit in the model as for instance financing and location. A third group needs to be added in this context – unknown factors – since it would be unlikely that all factors were found through the theoretical analyses. The questions in section 1. and 5. aims to verify the factors that are included in the model. The interviewees, working with urban development, might perceive things very differently from theory and have a better understanding on how these factors relate to each other. It is therefore chosen to discuss the factors that are included in the model with the interviewees. The sections 2., 3. and 4. towards exploring the factors that are known, but not included in the model. It is necessary to know more about them to determine how they fit in. Lastly, the unknown factors are addressed in section 1. and 6. The questions under each section can be seen in the interview guides in appendix A and B. As a supplement to the interview questions,

the interviewees were asked during the interview to draw their own version of the model just as additional questions were asked as they arose during the conversation.

Because the questions were sent to the interviewee beforehand, they were formulated in a way that aimed to meet the receiver. Therefore, academic terms aimed at being avoided.

How Did The Interviews Go?

The five interviews conducted for the first empirical analysis can be divided into one "pilot" interview and four "normal" interviews. The only difference between them is that after the first pilot interview, the interview guide was evaluated and some minor changes were made. In essence, all the interviewees were asked the same. The difference between the questions concerns the questions on the number of steps in the model and the height of the step. They were rephrased in the interview guide after the pilot interview, because it showed that it was not possible to ask questions on these issues separately, and for that reason these questions were combined into one section and both issues addressed at the same time.

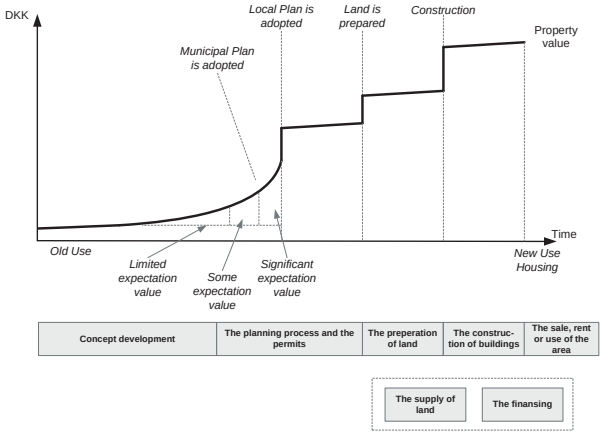

Figure 7.2.: The model that was included in the first interview guide – and identical with the model in chapter 6.

The "first" model that was included in the interview guide was also changed between the first and second interview – the two versions can be seen in figure 7.2. and 7.3. The changes were made for two reasons. Firstly, the costs were added in the model instead of explaining them to the interviewee in words. Secondly, two statements from the pilot interview were added to the model so that the following interviewees could give their opinion on the issues. The two

statements were; that the adoption of the partly binding Municipal Plan also caused a value increasing step; and the second statement addressed how the value of a property changes while it is being prepared/buildings being constructed. In other words, what is e.g. a property with a 25 % or 50 % etc. finished house worth?

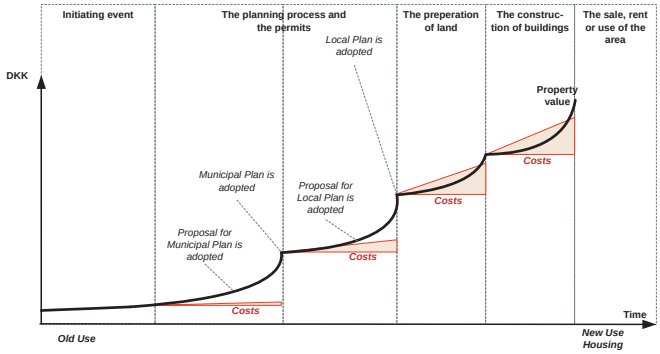

Figure 7.3.: The model that was included in the following four interview guides.

In general the interviews went as planned and there were a fruitful outcome of all the interviews. The interview with AC had an interesting development because JT joined in halfway through the interview arranged by AC during the interview. AC suggested this because some of the questions were out of his expertise, and he knew that JT could supplement on these issues. It was chosen to take this opportunity to include a second interviewee and improve the interviews possible (and actual) outcome. The analysis of the first round of interviews is in chapter “8. Interview Analysis I”.

7.1.4. Interview Analysis II

This section describes the choices made regarding interviewees, the interview guide and evaluation of the conducted interviews in the second interview analysis.

Interviewees

Taking the focus on interaction between developers and municipalities into account, it will be natural to interview representatives of both these actors. By interviewing people from both sides of the interaction the interview should be able to give a fairly varied picture of this interaction. Five interviews were conducted and the number seemed reasonable taking the time and possibility for triangulation of answers into consideration. The interviews are split between developers and municipalities in the way that three interviews are with developers, one from medium sized company, one from larger com-

pany and one that works with development for retail; and two interviews with municipalities. To avoid that the interviews reflect local customs in a small part of Denmark, some geographical broadness among the interviewees is sought. The five interviewees are shortly described below:

- **Developer**
  JW is one of the owner and founders of a developer firm that has its home base on Fyn. They work nationally with both housing and office projects.
- **Developer**
  MB is a part of a family owned developer firm that has its home base in the eastern part of Jutland. They work with both housing and office projects in both Denmark and Germany.
- **Developer**
  MS is a one man developer firm that has its home base in the centre of Jutland. He primarily works with development for retail.
- **Municipality**
  JN works in one of the bigger[42] municipalities in Jutland. He works in one of the sections in the Mayor's office that handles economic issues.
- **Municipality**
  BØ works in a municipality in the eastern part of Jutland. She works in a sections that has the task to attract developers and development to the municipality.

The Interview Guide

This second interview analysis is the last analysis in the project and an improved version of the conceptual model has been made since the first interview analysis. Although it is not the main purpose of this analysis, it is chosen to ask the interviewees about their thoughts of the model. There are two reasons for doing so; one – it can detect knowledge which can further improve the model and two – the first interview analysis showed that it is a good subject to open the interview with. The main focus of the analysis is as mentioned to look closer at the Planning and permits step, the Preparation of land step and the negotiation between the developer and the municipality during those steps. Furthermore, it is to improve the answer to the third sub question – "How does municipal planning cause property value to change in the urban development process". Taking the emphasis planning has in the research question into account, it is relevant to focus on planning in this analysis. The questions are grouped in the following four sections in the interview guide – see appendix C:

42 Measured in inhabitants

1. A model for value increase and value creating factors in the urban development process
2. Municipal planning's influence on a development area
3. The negotiation between the developer and the municipality
4. Time in the urban development process.

Regarding municipal planning, there seems to be, based on the previous analyses, a connection between the possibilities planning gives, the right to build, risk and the value of property. The potential correlation between them is therefore explored further having questions that relates to how municipal planning influences a development area. It is also interesting to go further into how significant the individual plan is – is the Local Plan for instance more important than the Municipal Plan? This is explored through the questions under section 2. A great deal of the choices and agreements that influences both the value of the development area, but also the developer's costs, are made during the Planning and permits step and the Preparation of land step, when the developer and municipality negotiate. This is not an issue that has been written much about in Danish literature, and it would be interesting to know something about how they agree on these issues, especially since some of choices have a significant economic impact. This issue is handled with the questions in section 3. Time is a factor which has not been given much attendance so far in this research, it has been an underlying element when discussing risk, financing and so on. It is therefore taken up with the questions in section 4.

How Did The Interviews Go?

The interviews generally went as planned and with a successful outcome. One of the questions on building rights in section "2. Municipal planning's influence on a development area" showed to be difficult. The question was about how sure a developer is when the different plans are adopted by the municipality. When turning the question more towards uncertainty and safety instead of how much building right[43] the developer has, the outcome of the question was still good. The questions on time in the urban development process gave very little info on how long time things take – it appears to be to context depended. Answers on this could have improved the model's scaling on x-axis. However, these questions on time were very valuable regarding why the urban development process in some cases takes longer time, and that is just as important as the pure descriptive element of how long time it typically takes. The analysis of the second round of interviews is in chapter "12. Interview Analysis II".

43 Meaning that if a building permit is given the developer has a 100 % building right and when no planning has been adopted he has 0 % right to build.

7.1.5. How are the interviews analysed?

Each set of interviews – one for each interview analysis – is analysed in the way that the bundle of statements by the interviewees are weighed against each other. When looking across the interviews: what do they agree on; what do they disagree on; what is the general opinion; what stands out; why does it stand out and are there issues that repeatedly pops up and so on. This has been done by literally putting the interviews up next to each other as illustrated in figure 7.4., in which the interviews for Interview Analysis II, is put next to each other and the different statements linked together across the interviews. This has been done for both interview analyses.

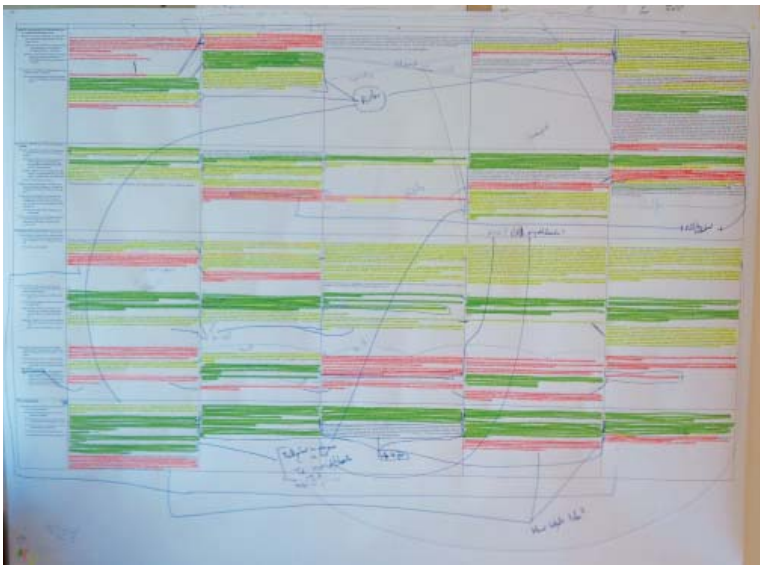

Figure 7.4.: The picture shows the interviews for Interview Analysis II on a piece of A0-paper. The markings are the initial work in finding the links across the interviews. (Own photo)

By doing this the points made in the forthcoming interview analyses are a triangulation of the different interviewee's statements. In continuation of this the points made in the forthcoming interview analyses are triangulated with the knowledge gathered in the other analyses in the research when possible.

7.2. Multiple Case Study

The second empirical analysis is a multiple case study cf. figure 7.1. The multiple case study takes – naturally – a case approach with a focus on the specific cases and the details in the cases. This is basically the opposite approach compared to the interview analyses that has bird eye view approach. The multiple case study's aim and purpose is as described below.

Aim and Purpose with the Multiple Case Study

The multiple case study's purpose is, as described in chapter 2., to map value changes in actual cases and see whether the values actually change as the result of the theoretical analyses and the first interview analysis suggests. Furthermore, the case study aims at supporting the interview analyses with illustrative examples. Through the cases it is sought to verify the model based on the theoretical analyses and the interview analyses.

It is necessary to design the case study in a way that suits the project and that enable relevant information about the research question to be unfold. It is chosen to use (Yin 2003)'s definition of a "case study design" as a starting point. A case study design is the bundle of choices and methodological considerations that needs to be made before the actual case study can start, or at least should start. Therefore, this section consists of first a description of a method for structuring a case study design, and secondly, the actual design for this case study.

7.2.1. A Case Study Design

As it was necessary with the interview analyses above to determine *"...how to ask whom what and what to do with it afterwards..."* it is also necessary to do so regarding the case study. This is typically called a case study design, which can consist of five components:

- *"A study's questions;*
- *Its propositions, (if any);*
- *Its unit(s) of analysis;*
- *The logic linking the data to the propositions; and*
- *The criteria for interpreting the findings."*
  (Yin 2003, p. 21)

These bullets are taken as a starting point for describing the content of a case study design.

A Study's Questions

As any other analysis, it must be formulated which knowledge/ results that is sought through the analysis, in order to focus the analysis and secure a useful result. One of (Flyvbjerg 2009) main points is that it is possible to generalise from case studies and create knowledge of more than the specific case.

Its Propositions, (if any)

The study questions are often necessary to elaborate and to set in a special context to focus the case study. There might be specific assumptions attached to the study.

Its Unit(S) of Analysis

It has to be clarified what the case is and what the units of analysis are. Regarding the urban development process this might be the boundaries of the case, e.g. from the process starts and until it ends, but also the case areas geographical boundaries can be relevant. The units of analysis are important in order to narrow down the need for information and finding the right information within the case. (Bryman 2008, p. 158-159 & 288) exemplifies this by the example of a study of cartoon characters, where the cartoon characters in this context would be units of analysis and the cartoon would be the case.

The Logic Linking the Data to the Propositions

When the purpose and aim of the case study is set and the cases are defined (and information gathered), it is time to set a strategy on how to analyse the gathered information in order to get a result from the case that can answer the study questions. (Yin 2003, p 109-115) describes three strategies:

- *Theoretical propositions* – To use a theoretical understanding/ theory as the explanation of what happens in the case and see if it is right.
- *Rival explanations* – Relates to the first one but upside down, meaning trying to find other explanations than the theoretical understanding/theory.
- *Case description* – Through a framework describe the case – maybe as some sort of sequence – and analyse the description.

The Criteria for Interpreting the Findings

If the aim of the study for instance is to analyse if urban development processes are successful – this is however not the issue in this case study – it must be discussed what successful is; is it when profit is made; if the area is constructed and looks nice; etc.? In other words, the criteria to measure the findings must be defined.

Case Study Design Applied in This Project

Although it is not explicitly mentioned earlier, it is intended to do a multiple case study, which makes it even more relevant to include a section "Selection of cases", in this section below the number of cases is also discussed. In large, the content of the case study design described by (Yin 2003) is used and the case study design in this study has the following structure:

- The Study's Questions
- The Study's Propositions
- Definition of a Case And Units of Analysis
- Analytic Strategy
- The Criteria for Interpretations
- Selection of Cases

7.2.2. Case Study Design

In this section the case study design for the multiple case study in chapter "10. Multiple Case Study" is described.

The Study's Questions

The case study aims together with the interview analyses at answering the three sub questions:

- *How does property value change throughout the urban development process?*
  - *When does the value change*
  - *How significant are the change compared to other changes?*
- *Why does property value change as it does?*
  - *What or whom causes the changes in property value?*
- *How does municipal planning cause property value to change in the urban development process?*

The Study's Propositions

The case study is not meant to stand alone, but as a supplement to the interview analyses and together with this be able to answer the sub questions above. This means that the purpose of the case study is to give input where the interview analyses lacks information. In general, this implies to map how property value changes in actual

cases in order to see whether the values actually change as the result of the theoretical analyses and the first interview analysis suggest. Furthermore, it aims at supplementing the interview analyses with illustrative examples that can strengthen the arguments from the interviewees and ultimately, enable the elaboration of a more comprehensive model.

Definition of a Case and Units of Analysis

The case must be an urban development area, where the dominating future use is private housing; private because it must be an area that has and will have a market based value[44]. The geographical limitation of the case is the urban development area itself, meaning that the surrounding areas are not included in the analysis.

The urban development process' time span is in this project defined as the time between the point in time where someone starts the urban development and until an "occupation permit" cf. the Danish Building Act is given by the municipality. In the case study, it might be necessary to widen this time span a bit in order to collect property values from the urban development process, but if necessary it will be in order to say something about the value changes within the original time frame.

Value changes, sales, valuations are essential to the case in order to create a picture of how property value changes along the urban development process. It is also interesting to see how the costs progress during the process. This can give information on how value changes, but to analyse why it changes, it is also necessary to be able to compare the value changes with a timeline that shows when what happened and if possible also who did it. The principle of this is also shown in figure 2.1. in chapter 2. Value changes and costs are the units of analysis in the case study – and especially their relation to events in the process.

Analytic Strategy

It is chosen to do a "Case description" for each case. This is due to that the answers sought are related to changes over time when different things happen, which is very context depended, and due to this, a case description approach is suitable. The framework for the description is the events that occur over time. The preliminary selection of events will be influenced by the theoretical knowledge gathered in chapter 3-5. This means that the chosen analytic strategy "Case description" also gets a touch of the strategy "Theoretical propositions".

44 Public housing do off course also have a value, but public housing is not free for sale in the same way as private housing.

The Criteria for Interpretations

In a case study like this, the property values presented will vary in accuracy, due to different origin and quality, and this need to be taken into account when analysing value changes. This means that small value changes can be caused by lack of accuracy. Furthermore, undetected influences from outside of the urban development area can also cause value changes. In other words, to conclude something about value changes, it would be best if the change is somewhat significant or the values presented are known to be fairly accurate.

Selection of Cases

"Every urban development is – more or less – unique…" (Kalbro 2007a, p. 20 – translated by the author), as the interviewees in Interview Analysis I also agree on. It can be a strategy to extract something general from a single unique case, something which (Flyvbjerg 2009) is a strong advocate for. Alternatively, a larger number of cases can be selected. If choosing only one case in this context, it would however mean that it should be a case where it is possible to estimate the property value all the way through the urban development process, which demands full access to data about all the events in the given urban development process. A larger number of cases does not separately need to show the whole process – but may if possible. On a practical level, the latter type of cases is significantly easier to find and the case material is more accessible. By choosing multiple cases, it is also possible to compare the findings between the cases. Thus, it is chosen to have a multiple case study, where the cases do not need to show the whole process, but should if possible.

The selection of cases must meet the demand from the definition of cases and analytical strategy discussed above. It still leaves a questions unanswered: Which cases and how many? It is relevant to aim towards a selection of cases as "representative as possible"[45] instead of just a random selection of "the first and best". The selection of cases will not be totally representative that would in principle require all urban development projects in Denmark to be selected. One of (Flyvbjerg 2009) points is furthermore that one case can be representative in the sense that that it is possible to generalise from one case. The new and future use of the development area is given – residential – but the Old Use is not. In the previous chapters, Old Use has been divided into Green Field and Brown Field, and in line with this, both Green Field and Brown Field cases are to be represented among the cases. In chapter 4., it is mentioned that the municipality can take on

45 Meaning that the selection of cases will not be totally representative, but include a meaningful variety.

the role as developer/landowner. The landowner is therefore either private or municipal. This may not change much, but when looking at the distribution of costs and profit in the urban development process, it cannot be assumed that the type of ownership does not impact in some way. It is also indicated by (Kalbro 2007a, p. 20-21 & 211-223; Dransfeld & Voss 1993, p. 160) that ownership changes the urban development process a bit. One of the interviewees in Interview Analysis I even thought that ownership is more important than whether the area is a Green Field or Brown Field area. This gives two parameters for selecting the cases – see also figure 7.5.:

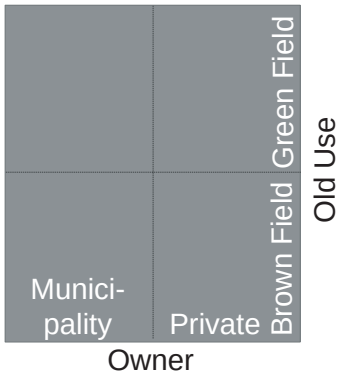

Figure 7.5.: The cases are selected through two parameters, which give eight cases if all are to be included separately.

- Owner (private – municipal) and
- Old Use (Green Field – Brown Field)

The cases that are selected do not all concern the whole process, meaning that some can only give input on specific parts of the urban development process. There is however a good differentiation between owner types and some differentiation between the Old Use. Four cases are selected, and the number is mainly four because it was the number of cases with sufficient material that was assessable at the time. They are presented shortly below:

- **Green Field with municipal ownership**
  This case is an urban development project for single family housing with 52 units spread over an area of 7,5 ha.
- **Green Field with municipal ownership**
  This case is an urban development project for single family housing with 35 units spread over an area of 3,9 ha.
- **Green Field with private ownership**
  This case is an urban development project for single family housing and double houses[46] with 105 units in total spread over an area of 19 ha.
- **Brown Field with private ownership**
  This case is an urban development project that aims for 620 m^2 flats on 473 m^2 of land placed in between existing blocks.

46 Two dwellings in one building – in principal two single family houses build together.

In this chapter the methodologies for the following empirical analyses has been discussed. There are three empirical analyses which can be found in the next three chapters – first Interview Analysis I, second a Multiple Case Study and third Interview Analysis II.

8. Interview Analysis I

In this chapter, the information gathered through the first round of interviews is analysed with the purpose of developing the first edition of the model based on the theoretical analyses further, to set it into a Danish context and improve the understanding of the urban development process in Denmark. The interviews and choices made regarding the interviews are described in chapter 7. The interviews for this analysis focus on the model of how the property value changes in the urban development process, displayed in figure 7.2. and 7.3. The following analysis is structured in the way that it starts by looking at the model in general and afterwards deeper into the individual steps in the model, in order to analyse all elements of the model. This is followed by a number of different topics that in one way or another came up during the interviews.

Interviewees	
Consultant	*(MT)*
Municipal planner	*(JUR)*
Real estate agent	*(LBH)*
Developer	*(SL)*
Consultant	*(AC)*
Consultant	*(JT)*

The interviewees are in this chapter referred to by initials, and their functions are shown in the textbox.

8.1. The Model in General

In this section the interviewees general comments on the model is analysed. All the interviewees found the model (figure 7.2. and 7.3.) meaningful. They did however also add a "but". MT said that the model is somewhat black'n'white and does not take the individual project into account. LBH said that there will be individual circumstances in each development project that causes fluctuations in the "value curve" in the model. This supplements the points in the previous chapters that urban development is very context depended. SL thought that the model was very theoretical, but in principle right – if assuming that it is a good project and it is developed in a good way. The consultant AC said that in real life some of the steps in the process will be parallel rather than one at the time. The municipal planner JUR said that the number of steps and their height depends on the actual project. This shows clearly that a conceptual model, as this project is set out to create, is only possible to make if it shows the principle of how value changes throughout the urban development process and not how the individual projects actually increases in value, due to its actual context-dependency. All the interviewees, in one way or the other, said: "...but it depends on the individual

project". It will be necessary to address explicitly what the model shows and what it does not show, in order to handle that value changes in urban development process is so context depended. One way of dealing with this is to apply a set of "all things being equal"-assumptions that supports the model, as it was also indicated in section 2.1.1. An example of such a consideration could be that it is assumed that the developer is able to sell the development project when it is developed – in contradiction to e.g. the market slump situation they are dealing with in the moment (2009), where some developers are having trouble selling their projects. SL also adds "if assuming that it is a good project and it is developed in a good way" which is yet another two "all things being equal"-considerations.

> *"What you are doing there (read: the attached model in figure 7.3.) is correct in principle - provided that you (read: you as the developer) do it right and that it is the right process. It is a question of creating value."*
> *(SL) – Translated by author*

The fact that the interviewees find the model meaningful does not necessarily mean that it has the best possible layout or that the content is perfect. It is more likely that it means that it is simple enough to be understandable without a long explanation and that the presented model is "not wrong". "Not wrong" does however not necessarily mean "all right". Based on the answers given – especially the interviewee's supplementary comments, it is believed that they actually thought that the model was understandable.

8.2. The Value Changing Steps

In the following, each step in the urban development process (as they are shown in the model in chapter 6.) are analysed based on the information gathered through the interviews.

8.2.1. Concept Development

When the interviews were conducted this step was called "Initiating event", and it was by the consultant AC suggested that the first step was renamed. AC did not have a concrete suggestion, but used words like "Development of business plan" and "Concept development". By developing a "business plan" or the "concept of the development project", he meant the economical calculations, marked evaluation, legal investigations, tax calculations and evaluation of financing options that takes place, when the developers decides on a project. As the headline of this section also shows, it was chosen to change the name because the new name fits the content better than the previous title. "Initiating event" was, as mentioned in the theoretical analyses, meant as both the starting point and the devel-

oper's planning and preparations of his development idea. Furthermore, it is in this step the making of drawings of potential future urban development projects take place. By splitting the initiating event into a starting point of the development and developer's preparations, the name "Concept Development" seemed to be a more fitting name for the step.

According to JUR, the costs in this step are limited to the costs of project drawings, typically made by architects. The costs and dimension of drawings are roughly speaking related to the size of the project; a big project is more costly than a small project. In some cases, these drawings are also used as sales materials. AC's description of the tasks in this step is more than just drawing sketches as mentioned above, and this might indicate that the costs are slightly higher that JUR suggests. However, it is still "man hours" put in either by the developer themselves or by different consultants hired for the job.

Based on the interviews it is chosen to name this step Concept development and understand it as the step were the developer develops his idea for the urban development area.

8.2.2. The Planning Process and the Permits

All the interviewees believe that there is a possible value increase in the planning process, both instant and future value increase. The real estate agent LBH frames the future value increase by saying that it is in the planning process that the possibilities of future value increase of the property is determined. In other words, if the usage options given in the adopted plan are right for the property, it can increase a lot because the possibilities are right. On the other hand, if they are wrong it might even decrease. LBH's sketch on how value increases in the urban development process also address this comment, see figure 8.1.

MT suggests that the planning process has two instant value increasing steps: One when the Municipal Plan is produced and one when the Local Plan is produced. Since MT was the first interviewee, the other interviewees were asked about their opinion on that matter. No one disagreed, but JUR and AC had some elaborating thoughts. JUR, AC and MT emphasise the politicians' decision making as important. AC explains this by saying that, the value increase happening during the planning and permit step does not occur until the politicians approve the project. JUR – municipal planner – said that, in his experience, the "trigger point" is the developer/land-

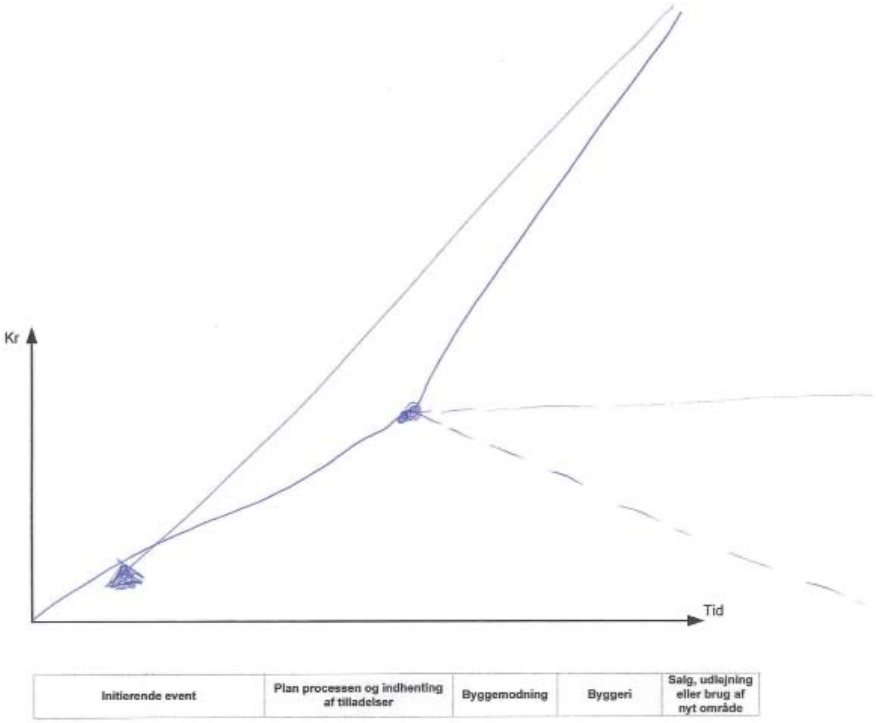

Figure 8.1.: Drawing by LBH – created during the interview. The drawing shows the adoption of planning documents as the point when the possibilities of future value increase are made. If good choices are made, it opens the possibility that the value can increase a lot but the opposite can also be the case. This is illustrated by the three lines to the right from the point where planning documents are adopted (the dot in the middle). The arrow drawn from the top of the curve and down towards the start of the curve represents LBH's statement that the initial project or development of concept must take the users at the end into account. Otherwise the project will not be a success.

owners uncertainty about what is being allowed in the area, when the plans are being adopted and how much certainty the planning give their project. The political decisions in the process are in other words quite important and a point of uncertainty for the developer. As an extension of this, JUR thinks that the adoption of a plan proposal is more significant, measured in a property value increase, than the adoption of the final plan. He puts more weight to this than the other interviewees. JUR argues that when the proposal is adopted, the usage options, which the future plan gives, is traded up among the politicians and usually only minor changes will occur in the process of the final adoption. However, as the Brown Field case in chapter 10. will prove, there are exceptions to this. This issue has been brought up in Interview Analysis II as well. In other words, a big part of the uncertainty concerning planning and political decisions is settled by the adoption of the proposal although nothing is

certain at this point in the planning process. Therefore, JUR suggests that the adoption of a plan proposal has higher weight. Consequently, this entails that the step is divided into a number of small steps rather than just one step at the final approval. In relation to the politicians' decision making, it is so that the Danish politicians approve first the proposal and then later the final plan. JUR's sketch on how value increase in the urban development process also address this comment, see figure 8.2.

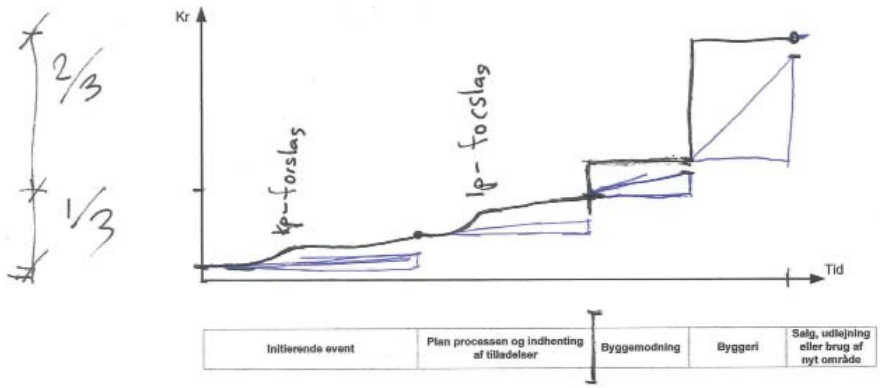

Figure 8.2.: Drawing by JUR – created during interview. In his drawing, JUR highlights the adoption of the Municipal Plan proposal and Local Plan proposal as the most value increasing parts of the planning process. Furthermore, he estimates that the value increase, occurring during the first two steps is 1/3 of the total value increase, meaning that the remaining 2/3 of the value increase occur during the preparation of land and construction step. The costs are also drawn – as blue triangles – and in the way that there is room for profit in all the phases.

AC argued that smaller development projects might follow a planning process as it is shown in the model, but in larger development projects, a change in the Municipal Plan is often needed to make the project possible. Municipal Plan changes in these large projects are often done as a parallel process to the Local Plan process – in other words, simultaneously as "one" process and not two processes as the first draft of the model assumes.

Furthermore, AC thought that for the property value to increase, the planning process must be a success – meaning if it stops on half way, the value does not increase. For example, if the Local Plan proposal is adopted, and the value increases because of this, the value will fall again if the final Local Plan is not adopted. When the value increase due to adoption of the plan proposal it is therefore with the expectation that the plan is also adopted finally. This emphasises the condition for the model; that everything goes well.

It was also suggested by AC to consider if an "Environmental assessment"[47] step should be added in the planning process. "Environmental assessment" is here thought upon in a very broad sense and includes: Environmental issues, traffic and traffic safety, biology, landscape protection, cultural heritage, archaeology, accessibility, urban structure, pollution, health and other socio-economic issues. Similarly, MT talks about a value increase in between the municipal planning and local planning that is not just expectation value, but also clarification of geological issues, pollution issues, nature protection issues, archaeology issues and so on. From the above, it seems likely that the "planning process and the permit" step can be split up in two or three "sub"-steps. Firstly, the planning process can be split into the Municipal Plan process and the Local Plan process. This is meaningful because they are two individual processes and plans, furthermore because it appears that both of them result in increased property value, at least when everything goes well. A split up into three steps is to have planning (Municipal Plan and Local Plan) on one hand and "Clarifying investigations and permits" on the other. AC referred to this as an environmental assessment in a broad sense. Some of AC's issues in his categorisation are however partly covered by planning already, e.g. how the urban structure is and should be in the future. The idea of having a step with clarifying investigations and permits to cover investigations on e.g. pollution is however meaningful. Based on the analysis above, it is chosen to split the "planning process and the permit" step into three "sub"-steps; "Municipal Plan", "Clarifying investigations and permits" and "Local Plan" in the second version of a conceptual model which is presented in chapter 9.

According to MT and JUR, the costs in this step are related to either the production of the Municipal Plan or Local Plan or to "Clarifying investigations and permits". Both MT and JUR estimate the costs of a Local Plan to be up to 100,000 DKK – JUR states between 50,000 and 100,000 DKK. This indicates that it is not one of the costly steps in the urban development process.

8.2.3. Preparation of Land

There seems to be a general consensus amongst the interviewees that preparation of land increases the value of the land being developed. However, the profit is perceived to be limited, and the increase is, according to the developer SL, equal to the costs of preparing the land. In contrast, MT, JUR and JBH are familiar with examples,

47 This term can be mistaken as the Environmental Impact Assessment and Strategic Environmental Assessment from the Danish Planning act. It is here not thought of terms from the Danish Planning act.

where it has been possible to create profit on the land preparation itself, which also is in line with the following multiple case study.

The value of a prepared piece of land is according to JUR primarily determined by the market, and not the production costs. This means that the developer needs to adjust his production costs so that they are covered by the potential sales price. AC and JT said that the preparation of land is mainly controlled by the Local Plan and the planned buildings, leaving only few possibilities for adjustments of how to do the preparation of land. By this is meant that the Local Plan usually sets the standard of the area and the layout, further framed by the planned buildings – all buildings need road access and other services. One of the adjustable factors is the "quality" of the preparation of land. "Quality" is here mainly thought of as more road accessories like sidewalks, street lights and trees in the road side or a higher standard of these; assumed that at lower quality is less costly than a higher quality. MT indicated that a typical price for preparing a lot for a single family house (in an area with 50-100 lots) is from 275,000 DKK to well over 300,000 DKK. Unlike the Planning and permits step this is a more costly step in the process. There seems to be a relation between the costs for preparing the urban development area and the value increase, although they are both from a theoretical point of view[48] and stated by JUR independent variables. The property value is determined by what it can/should be sold for and not the production costs. The multiple case study and second interview analysis can maybe clarify if there is a connection.

In the interview with MT, he raised an interesting question: Does a half-finished preparation of land – or half-finished construction – have a value that equals the costs spent on it (in principle half of the costs)? This question was by MT raised along with the assumption that it is not the case. MT has also sketched this as in figure 8.3., were the curve is bending downwards during the preparation of land and construction. Since MT was the first interviewee the other interviewees were asked this question. The real estate agent LBH and the developer SL both said that if a half prepared piece of land or a property with half constructed buildings is to be sold, it will be worth less than the costs of producing it. They both used the current market situation – slump – as an example of a situation where this had occurred and where the prices in some cases were zero or symbolic values like 1 DKK. Even if this is slightly exaggerated it seems clear that MT was on to something and that the curve should be bending downwards during the steps Preparation and Construction.

48 See chapter 3.

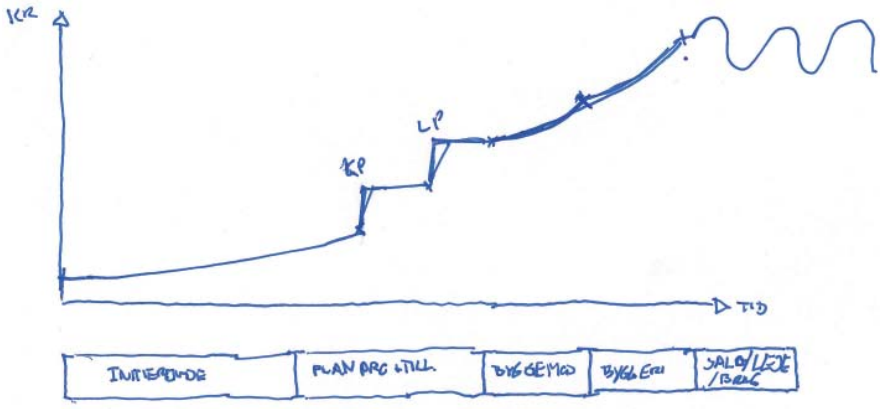

Figure 8.3.: Drawing by MT - created during interview. MT has drawn planning as two steps; a Municipal Plan process and a Local Plan process (the model in his interview guide – figure 7.2. – had planning as one value increasing step). The value increase in between the two step is caused by clarification of geological-, pollution- and archaeological issues and nature protection etc. The value increase during the preparation of land and construction is drawn as a soft curve that increases more in the end than in the beginning. This relates to the question MT raised – whether a half-finished construction is worth less than half of the costs. Although drawn partly as a joke the curls at the end of the curve represents the marked mechanisms where prices sometimes increase and sometimes decrease, depending on the economic situation at the time.

When a property that was worth millions suddenly is worth significantly less – and sometimes only a symbolic value – and later in the same process is worth millions again, it raises the question of why? Market Value is as described in chapter 3. at an overall level, determined by the demand for and supply of properties. If looking at the supply side of a half-finished project on the market, it is reasonable to assume that the supply of half-finished projects is a very limited. Presumably, a developer starts the preparation of land step or the construction step with the intention of ending it as well, and this means that this type of property is in general only offered on the market in cases where the developer for some reason needs to sell the property before finishing it. When looking at the demand side for this type of property, the question is; are there buyers for this type of property? Besides furniture from IKEA and similar, where you are meant to assemble yourself, there is in general not a demand for something half-finished. This seems to apply for half-finished urban development projects as well. When developers in general only offer half-finished project for sale, if something has not gone as originally planned, it can also influence the demand side in the way that half-finished projects are viewed upon as risky – "there must be a reason for things to go different than planned". Risk is according to chapter 5. something that lowers the value of property. Therefore, this is a situation with a very low supply and not really an associated de-

mand. In chapter 3., it was also shown that, fundamentally, value is a combination of three factors: Use, need and limited supply. In this situation, there is only a limited supply, which is likely to be very limited. Furthermore, there is not really a use for or need of half-finished projects. This means that the fundamental elements for half-finished projects, having a Market Value, are not present and it is therefore questionable if it is meaningful to claim that a Market Value can be determined in this situation. However, a principle line can be drawn as e.g. drawn by MT in figure 8.3.

8.2.4. Construction

The interviewees generally agree that a property's value increases during the Construction step and that it is possible to make a profit by constructing buildings. JT (consultant within the field of the construction of buildings) comments that it is during the construction step that the highest value increase occurs, but it is also where the biggest investments are. This indicates that there is a big value increases in this, whether it also is the step that can provide the big profit is unknown.

JT says that to reduce construction costs, it is necessary to optimise the project by standardising, using as few special solutions as possible and to break the projects into bits that the contractors can easily understand (if the job seems unclear to the contractor, extra will be added to his offer to ensure a profit – considerations similar to those described on risk in chapter 5.). SL comments that the construction costs are very sensitive in the way that not much can go wrong before the actual costs deviates from the estimated costs. It would seem that, when going beyond key figures like the average building costs per square meter, construction costs are very complex and a big post in the budget. According to JT, the total project value can be divided in the following way as a rough estimate: 60-65 % of the total value is used for construction and preparation costs and 35-40 % of the total value is used for land acquisition, financing and profit. When comparing JT's statement about using 65 % of the total value on construction and preparation with JUR's estimation that 2/3 of the total value is created during these steps (see figure 8.2.), two things can be learned. Firstly, that there is something about this "2/3" of the value being created during the preparation and construction steps. Secondly, that SL's is correct about his comment that not much can go wrong before the costs exceeds the value increase. JT's thumb rule on costs resembles the costs' distribution as described in chapter 4., where it should be noted that profit was not included. The discussion above on the value of a half-finished project is, according to the interviewees, applicable to this step as well.

8.2.5. Sale, Rent or Use of the Area

The end users are very important for the success of an urban development project, which is reflected through the following statements. MT says that the project has to match the users, because the property will otherwise not increase significantly in value. JUR says that there has to be a market need for the project, which is similar to LBH's statement that the end users demands are crucial to the project's success. LBH's comment can also be linked to Supply and Demand where it is necessary to have a demand to have a (higher) value. SL says that the primary link to success is the end users – the better the projects is adapted to the potential users the bigger success and thereby possible greater profit. AC says that the end users are the foundation – if they are not there, the project does not make sense to even develop. LBH stresses that the developers in her experience are not properly aware of this, although the interviewed developer seems to be. Furthermore, she adds that the end users are consumers who react differently than professionals – this is further discussed in section 8.5.

> *"... If it is a good project - there will be a subsequent value increase which is above the average increase. (Read: average in the area)" (SL) – Translated by author*

As mentioned above, it is SL's experience that a good project will make the development area increase in value even after the project is finished and the users have moved in due to its increasing popularity, which will pull the prices further up. This increase often ends in the hands of the first users because they are the owners, when the land is increasing in value.

As AC has drawn in figure 8.4., he believes that there is a value increase in the last step "Sale, Rent or Use of the Area". Not for the same reason as SL, but because a lease or rent contract with the end users in itself also creates a value increase. The reason for this relates to the issue of risk, discussed below, where less risk is worth more than high risk. A property with a 10 year rental contract is for instance worth more than just the property itself, because the investor is guaranteed rent in the following 10 years (assuming that those who lease do not go bankrupted etc.). The investor, thereby, has known income and does not need to add "risk profit" to his normal profit in order to be able to withstand possible vacancy, and when he does not need to do that he is able to pay more for the property. Presumably, the same can be said about development projects where some of the housing units are sold before the construction starts to ensure that the projects are profitable for the developer.

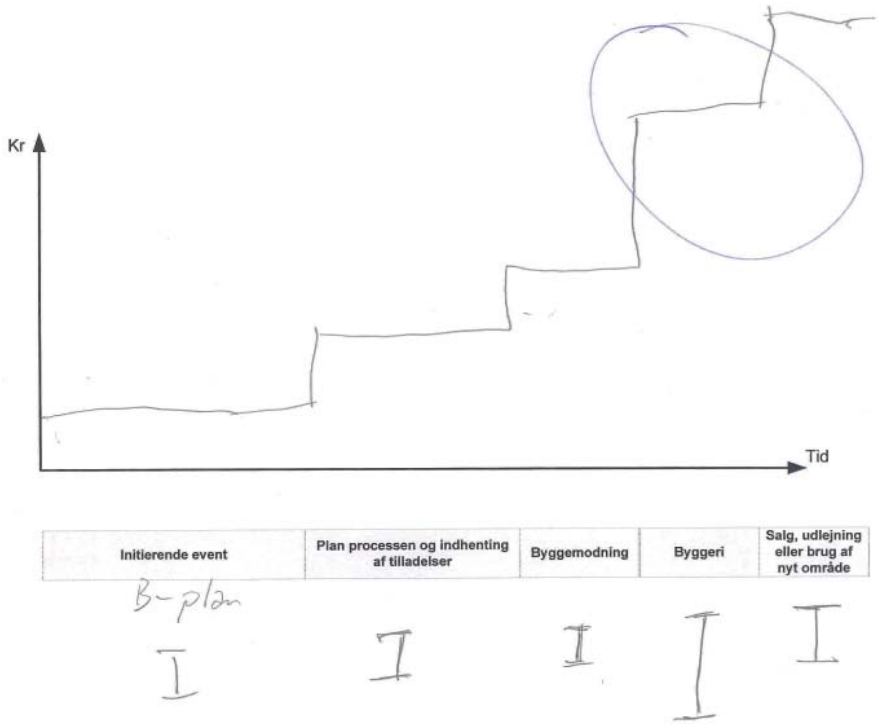

Fig 8.4: Drawing by AC – created during interview. In AC's drawing, the construction step is drawn as the most value increasing step. In the bottom of the drawing the heights of the different steps are roughly sketched. Unlike the drawings by the other interviewees, AC has added a value increase during the "Sale, Rent or Use of the Area" step. This is due to the fact that lease or rental agreement with the future users also adds value in the urban development project. Furthermore, AC indicated a name change of the first step, which was changed to Concept Development.

8.3. Distribution of Costs between Municipality and Developer

It is MT, JUR and SL's impression that the municipalities push as many costs as they can onto the developers. According to JUR, who is a municipal planner, the municipalities' budgets do not leave the municipalities with other options – although he has heard of exceptions. Some of the ways to push costs onto the developers are, according to MT and JUR; to let the developer pay the planning costs for producing the Local Plan; let the internal roads in the area be private instead of public and in the Local Plan; let green areas be a prerequisite for getting an "occupation permit" when the area has been built[49]. The latter means that to be allowed to build and use the area, the developer has to make the green areas at own expense.

49 C.f. the Danish Planning Act § 15

Furthermore, there is the Danish Road Levy Act, which gives the municipality some options to push costs for public roads onto the landowners. The maintaining costs are handled by homeowner's association, which can be made obligatory in an area through regulation in the Local Plan[50].

8.4. Location

All the interviewees agree on that location is an influencing and important factor in an urban development project, and the effect shows in different ways. There is a general consensus that location changes the "start value" in the model. A good location is worth more than a poor location. It also means that the end value is higher, because the location is still good respectively poor, when the project is finished.

> *".. What it all comes down to:*
> - *it's that you buy a well located property - this is the entire main thesis of this (read: urban development)*
> - *and you do not buy it too expensive*
> - *and you can afford to keep it.*
>
> *So at some point you will make money...(Read: when the time is right for developing the bought location)"*
> *(SL) – Translated by author*

The interviewees are more divided when it comes to how the property value increases between the start value and end value in different locations. The planner JUR, the developer SL and the consultants AC and JT do not think that the value increasing steps change in size because of location, and neither significantly the costs. In other words that location only changes the start and end value. However, SL did point out that development sites with good locations often have limited space for building materials, equipment etc., which makes these sites more costly in transportation costs during the preparation and construction phase, simply because it is not possible to have all the building materials and equipment on site as often the case with Green Field projects. The consultant MT and the real estate agent LBH believe that the size of the value increasing step can be greater in development projects with a good location. MT says that especially in Green Field projects, the Concept development step and the Planning and permits step can be higher due to a good location.

It was also commented by JUR that there might be a difference in building quality depending on how good the location is, meaning that a higher building quality is often chosen in well located areas. A consequence of this is also that if the quality is high, the costs will likely increase and most likely also the value of the project. In other words, a good location may beside a high start value also cause a high build-

50 C.f. the Danish Planning Act § 15

ing quality, which then again causes a further value increase. Furthermore, AC says that many projects are designed to fit a specific location, and are therefore only implementable at that specific location. As an extreme example, an architectural landmark designed to fit the water front in a big city would not work in a small city in a rural area. This means that it may be true that location in itself only effects the start and end value, while it is the increased quality in good locations – or higher density – that causes a higher value increase throughout the urban development process (and end value).

In JUR and SL's experience, it is also possible to improve a location through planning and investments by both developer and municipality. The site's geographical location cannot be changed, however the things that surrounds the area and the accessibility to/from the area can be improved. By adding recreational areas, shops or plan residential areas towards a certain target group may have an effect on how good the location is.

To summarise, the location play a significant role on a property's value, but mainly for the start and end value, respectively.

8.5. The Prior Use

The development site's prior use can be both an advantage and a disadvantage for the developer. It is an advantage when e.g. old buildings have enough architectural or historic value to be reused. However, it is by MT and JUR not perceived as something that has a big effect on the property value. When the prior use is a disadvantage, it is often polluted soil that remains from different kinds of activities on the property. According to LBH, SL and AC, it is a manageable but a costly problem for the developer. In LBH's experience – that daily meets the end users as a real estate agent – the future users are reluctant when it comes to live on previously polluted soil. In other words, it may be manageable for the developer to bring the pollution level of soil below the limits, according to the The Danish Act on Polluted Soil, but e.g. parents may still be reluctant to buy a home on soil that has been polluted or is slightly polluted (below limits) even though it is without danger to their children or themselves. This is an example of end users acting as costumers and not as professionals – as LBH pointed out.

8.6. Risk

Although risk was not something that was asked about specifically, it frequently came up throughout the interviews. If risk is uncovered and end users has a demand for the urban development project, then the success rate is good (LBH & SL). One way of handling the end user issue is, for example, to sell some of the apartments before the land preparation and construction starts. In that way the developer is sure that at least some parts of the project is sold before he starts, which as also mentioned in section 8.2.5. means less risk.

> *"In such a project, and the developer perspective, there is always the risk that this will come to nothing - in other words, once you have something in place (read: clarified an uncertainty factor), then it (read: property value) takes a jump."*
> *MT – Translated by author*

The municipal planner JUR and the consultants MT and AC emphasise that one of the biggest uncertainties (and thereby risks factors) is the political decision making, which is a part of the planning process. This part of the urban development process is something that the developer only to some extent have influence on, meaning they cannot avoid this risk factor totally through planning or preparations. The developer cannot decide what the politicians should decide – they can propose and lobby as neighbours, local communities and local branches of The Danish Society for Nature Conservation, amongst others, also can.

JUR commented – in relation to the differences between Green Field and Brown Field projects – that the difference between who owns the property has a bigger influence on the project and the development of value than whether it is a Green Field or a Brown Field project. If the municipality owns the land they are both planning authority and owner – but do not have to share the same risks as private developers in relation to the uncertainty with planning decisions, they make the planning decisions themselves in this case.

8.7. The Five Most Important Factors in Relation to Success and Failure

The previous sections have analysed the most important factors, influencing a property's value, and four of the interviewees responded to the questions on; which are the five most important factors causing success and failure, respectively? Not everybody gave five suggestions to both questions relating to either success or failure. Their answers – both regarding failure and success – has been assembled in one list, since the answer where either the positive or negative of a factor, for example "good location" regarding success and "poor lo-

cation" regarding failure. The top six list when all the answers where combined is (those with more than one vote)[51]:

1. Uncertainty caused by citizens and politicians
2. Good location
3. The project needs to fit in with the rest of the area
4. Good idea/plan
5. Adopted planning and permits
6. Nature, soil, pollution and so on.

Uncertainty caused by citizens and politicians (which relates to the planning process) was according to the interviewees the most crucial element. In section 8.6., this is also emphasised as one of the major risk factors.

LBH only pointed out one thing as a reason for an urban development project's failure – "greed"! Not exactly the expected answer, but by greed she meant when developers tryes to gain as much profit as possible instead of trying to build the best project possible on the property. This also links to number three and four on the list.

8.8. Conclusion and Influencing Factors

In the following, the results and factors found in the above that influence property value in urban development are shown.

- **Planning**
  Planning is value increasing if the usage options given are good, meaning giving better options than the existing options. This subsequently means that planning can also decrease value if the usage options are worse than they were before the planning was adopted. It is in other words not enough with a plan – the adopted plan must give usage possibilities which are better (higher potential economic value) than the existing usage possibilities.
  The different elements of planning, *Municipal Plan, Local Plan* and *other permits*, are each value increasing factors in the urban development process.
- **Political decision making in the planning process**
  The political decision making has shown to be a major uncertainty factor in the urban development process and one of those that the developer cannot control. The uncertainty is minimised when planning is adopted, because the political decision making is at large over at this point in time.

51 The six bullets are highly correlated. For example, a good municipal and/or Local Plan includes a possibility for a project that fits the area, and adopted planning minimises the uncertainty in the political process. Those are nevertheless the points mentioned by the interviewees.

- **Preparation of land**
  Preparation of land is value increasing, but according to the interviewees not some that in itself is especially profitable and it is not value increasing until the preparation is completed. During the process of preparing the land, the area is actually decreasing in value if it even has a value. This temporally drop in value is due to lack of willing buyers and seller – there are in other words not a market for this kind of half-finished property.
- **Construction**
  The construction step is the most value increasing step, but also most costly. The possible value increase caused by this factor is however limited by the possibilities given in the Local Plan. Construction is not value increasing until it is completed and during the process of construction, the area is actually decreasing in value if it even has a value, as it is the case the preparation of land.
- **Presale and rental contracts**
  Presale and rental contracts can influence the price paid for a project if they are present during the urban development process – meaning before the project is finished – because the reduce uncertainty.
- **Location**
  Start and end value: The effect of location on the urban development project is primarily that it changes the start value of the urban development project. This of course also changes the end value that will be correspondingly high or low. In principle, it does not change the development of the property value during the project.
  Effect on and of building quality: If the location is good, it is likely that the "quality" or "exclusivity" of the buildings on the good location might be higher, which then again influence on the potential property value, since the buildings then will have a higher "quality" or "exclusivity".
  Changing location: It is possible through planning and investments of the developer and the municipality to change the location towards the better.
  Changing location when the project is finished and in use: When the urban development project is finished and in use, the perception of how good the areas location is does not necessarily stop changing. If it is a good project the location – and thereby also value – can change towards the better beyond the date of completion of the project.
- **Old Use**
  The prior use is not a big factor, but still a factor. The costs fixing the negative effects like soil pollution of prior use can be high.

Concerning costs concept development and planning are low cost steps were the primary costs are plans, drawings, and different kinds of clarifying investigations. It is suggested that approx. 1/3 of the total value increase is during the first two steps; i.e. Concept development and Planning and permit step. Preparation of land and Construction are more cost heavy and are said to be around 60-65 % of the urban development projects total value. Especially the construction step is both cost heavy and value increasing. The remaining 35-40 % is cost for land, concept development, planning, financing and profit. Concerning the distribution of costs, there is in general a movement towards a situation where the municipalities push as many costs onto the developers as possible.

Besides the found factors it is also relevant to evaluate whether the model created in chapter 6. can be improved due to the results from this analysis. From the bullet points above and the analysis in general, it is clear that this analysis can add knowledge about the property value in at least the Planning process and the permits, the Preparation of land, the Construction of buildings and the Sale, rent or use of the area steps in the model. Furthermore, it adds to the general knowledge concerning how value change in the urban development process. A revised model is created and described in chapter “9. A Revised Model of Changes in Property Value during Urban Development”.

9. A Revised Model of Changes in Property Value during Urban Development

In this chapter, the second version of the model of how property value changes throughout the urban development process in Denmark (see figure 9.2.) is presented. It is an improved version of the model constructed in chapter 6., and it is supplemented with the knowledge gathered in "Interview Analysis I".

The first version of the model, which is based on the theoretical part of the research, was by the interviewees perceived to be right, but also with room for improvements. They stressed that the model is based on a series of assumptions:

- that the urban development project goes well;
- that it is a good project;
- that the expected end user(s) actually exists; and
- that the steps in the model do not overlap, which they are most likely to do in reality.

It is an important point that the model is based on a series of assumptions, and in addition to the assumption above the assumptions from chapter 6. were:

- that the urban development project goes well;
- that the market situation is positive and stabile.

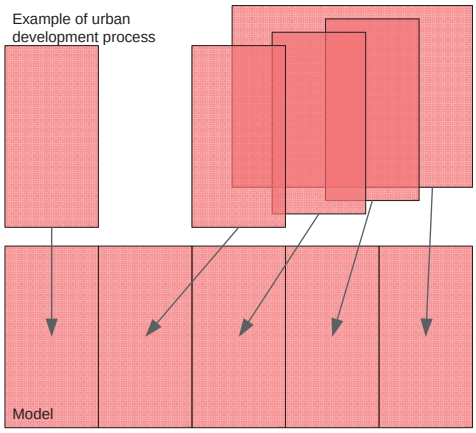

Figure 9.1.: Visualisation of potential differences between the model and the actual urban development process' (illustrated by a hypothetical example - own figure).

The assumption regarding non-overlapping steps has a big influence on the model, because although urban development process' steps may be overlapping in reality, it is chosen to stretch the process in the way that each step is completed before the next starts – illustrated in figure 9.1. This was also the case with the first version of the model. In this way, the visualisation of value increase within each step becomes as clear as possible.

It is decided to split the step "Planning process and permits" into three sub steps; "Municipal Plan", "Clarifying investigations and permits" and "Local Plan". A discussion of whether the plan proposals or the final adoption is the most significant one as factor for the property value's increase is investigated further in the case study and interview analysis to come. It is chosen to keep the line at the Municipal Plan and Local Plan step as an exponential upward sloping curve, but with the plan proposal close to the final adoption. The "Clarifying investigations and permits" is drawn as a straight line since it represents not one, but a series of investigations equally important.

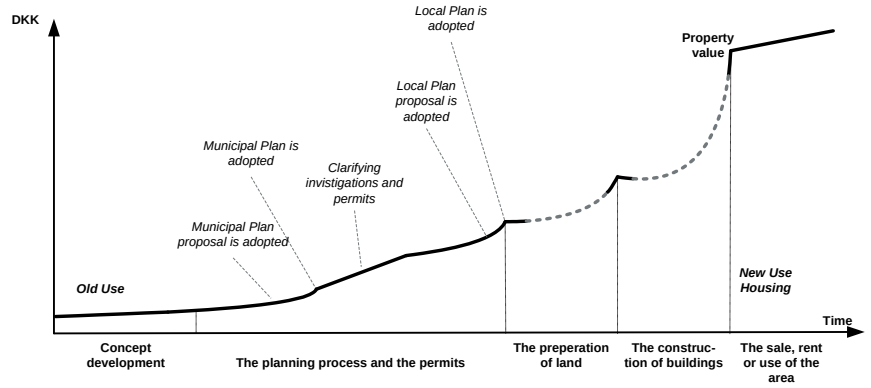

Figure 9.2.: The second version of the model, showing how a property's value changes throughout the urban development process.

As opposed to the first version in figure 6.1., it is chosen to draw the Preparation of land and Construction steps as exponential upward-sloping curves. This is directly linked to the point that a half-finished step (either preparation of land or construction) makes the project worth less than the cots, but potentially also less than the start value before the steps started. It is drawn as a dotted line because it is questionable whether or not it has a Market Value, since there is neither real supply of nor demand for half-finished projects.

A value increase in the step the Sale, rent or use of the area has been added to indicate that the area can increase in this step as well because of further changes in location. However, the potential size of this increase is unknown.

The height of the different steps can to some degree be adjusted on the basis of the first interview analysis. The Preparation of land and Construction step is indicated to be 2/3 of the total value and by another it is said that these steps are representing costs equal to 60-65 % of the total value. To the latter must be added the potential profit that can be made in these steps. It is chosen to use the

thumb-rule 2/3 as an indicator. Furthermore, it is indicated that the greatest value increase is in the construction step, and most of the 2/3 is put there. Nothing indicates that the first step of the urban development process – the Concept development – is particularly value increasing to others than the developer who invests the initial preparations. As planning is indicated to be value increasing, the remaining 1/3 of the total value increase is primarily placed on the Planning process and permit step. Hopefully the Multiple Case Study and Interview Analysis II can add to this.

Location influences the model by determining the start value of the properties in the project, which again influences the end value – the location is also good afterwards. The location can also influence the property value during the urban development process because different areas are suitable for different projects, qualities etc. In the model in figure 9.2., this is not included since location effects indirectly as one of the things that make urban development projects different and context-depended.

10. Multiple Case Study

In this chapter, the multiple case study is conducted. The prerequisites for this case study are described in chapter 7., where the case study design is described. To shortly recap the purpose of the case study, it is to supplement the interview analyses and together with these be able to answer the research question and its sub questions. This means that the case study is to give additional input where the interview analyses lacks to benefit and in general to map how property value changes in actual cases in order to see whether value changes as the result of the theoretical analyses and the first interview analysis suggest. Many of the results of the case study will properly be known at this point of the research, but new elements will presumably be found and already found factors will be confirmed/verified. The possibility to have some of the found factors confirmed is important in order to validate the findings in this research. The interviews will to some extent represent how the interviewees subjectively perceive urban development processes, while the figures in the case study are more objective[52]. If they are corresponding – the interviews and case study – it can be assumed that the interviewees' answers and case study results are valid.

The property values presented in the case study are normally the area's total value in DKK and in principle the amount of money the developer would have in his hands if he sold the whole area at a given point in time. The total value is chosen instead of DKK/m^2 in the area, because DKK/m^2 leaves too many possible interpretations; is it DKK/m^2 of the whole area or is it DKK/m^2 of the area that can be sold as building lots. If DKK/m^2 is used, it is stated if it is of the whole area or of the amount of buildable land that is used. The shown costs are from the developer's perspective, meaning that possible municipal costs (or other actors) are not shown. It is in the case study aimed towards finding the Market Value of the urban developments, but if this is not possible the Market Price is used. When Market Price is used, it is done with caution, so that individual factors have as low an influence on the property value as possible.

52 It is important to note that some values are estimated, which means that the objective perspective on the research should not be taken too literally.

The four cases, which were chosen in chapter 7. and analysed below, are three Green Field cases and one Brown Field case with different types of ownership; first two Green Field cases with municipal ownership followed by a Green Field and a Brown Field case with private ownership. In the end of this chapter the results of the case study are summated in a conclusion.

Each case starts by giving an introduction to the development project followed by a description of the sequence of events, occurring in the case with the purpose of providing an overview of the urban development process before the size of the property value and when it changes is identified. Finally, each case is summated to point out what additional knowledge that has emerged during the study of the case.

10.1. Green Field Case with Municipal Ownership

This case shows how a municipality through compulsory purchase and normal negotiation acquires about 7.5 hectare land with the purpose of providing the community with 52 new parcels for single family housing. The "developer" in this case is therefore the municipality, which is quite typically, when it comes to the production of parcels for single family housing in Denmark.

The main part of this case is documented through a ruling (U.2008.1738V) from the Western High Court in Denmark, where the question of compensation of the part of land acquired through compulsory purchase has been brought forth. The development project itself went as planned, only the compensation that the municipality had to pay to one of the previous owners was problematic. The question was not whether the municipality should pay compensation, but what amount they should pay.

Description of Case Area

The development area (see figure 10.1.) is a Green Field area at the fringe of a city with close to 8,000 inhabitants. The city is within commuting distance from one of the larger Danish cities. At the east side of the development area, opposite to the city, is a green area with a stream (H Kommune 2005). Before the development started, the area was agricultural land, and except for some smaller areas, the land was previously owned by three private owners (here referred to as A, B and C). Each owned about a third of the total area.

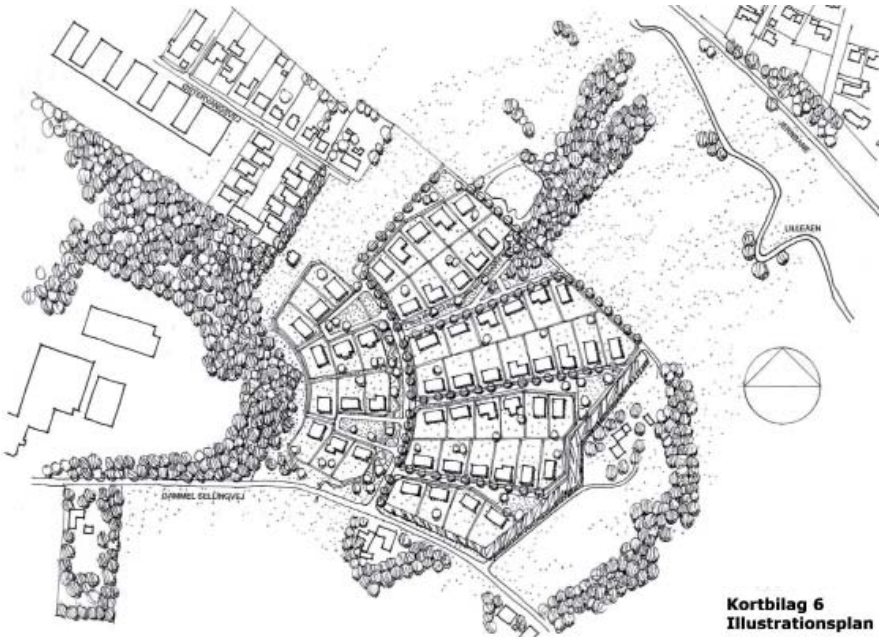

Figure 10.1.: An illustration of the urban development area as it is planned to look when fully built. The illustration is from the adopted Local Plan (H Kommune 2005).

The aim of the adopted Local Plan is to determine: The area's use as "open-low[53]" residential and to create an attractive residential area (H Kommune 2005, §1). The Local Plan permits 52 single family houses to be placed in accordance with the development plan presented in the Local Plan – shown in figure 10.1. The plot ratio and the building height may not exceed 25[54]% and 8.5 m, respectively. The latter is further regulated since the area has some terrain-differences that needs to be taken into consideration (H Kommune 2005).

According to the Danish Cadastre, the development area is 74,957 m^2 in 2010. In addition, 6,178 m^2 has been turned into "public road". The road – that is now a public road – was road before as well and the road area was some of the smaller areas owned by others than A, B and C mentioned above. The size of the development area as it is registered today compared to the area that was bought differs with around 300 m^2 and in the text below, the area, as it is registered today, is used to illustrate the size and change of the property value. This minor error can be caused by three things: Some of the bought areas might have been transferred to public

53 "Open-low" is an expression often used in Denmark for an area for single family housing.

54 It means that within the lot, designated for one single family house, the density may not exceed 25 % - so if the lot is 1,000 m^2, it is allowed to build 250 m^2.

road; some smaller areas (already owned by the municipality) other than those who were bought from owner A, B or C might be included in the project; and finally, a better measurement of the land during the process of parcelling out may have given at better estimate of the area's size. An error of 300 m^2 which is either road or green area is compared to the total area considered as insignificant for estimating the property value. Of the 74,957 m^2, the 48,047 m^2 is used for residential purposes and 16,279 m^2 for private roads in the area (U.2008.1738V). This adds up to:

52 parcels for single family houses	48,047 m^2	64 %
Private roads	16,279 m^2	22 %
Green areas etc.	10,631 m^2	14 %
Total	74,957 m^2	100 %

Sequence of Events

In 2003, the municipality zoned the development area as a future residential area in the Municipal Plan. At this point, the municipality did not own the urban development area. The Municipal Plan regulated the land further than just the zoning and set the plot ratio to 25-35 % and building height to maximum 8.5 m (H Kommune 2005). These regulations indicate that the future dwellings are to be single family houses, since these regulations are standard regulations for this type of housing. Furthermore, the area must have at least 10 % green area (H Kommune 2005).

Later same year, the municipality began to buy the development area that until this point was privately owned by at least three different owners. In September 2003, the municipality bought about one third of the area (28,971 m^2) from owner A. Later same year, the municipality contacted owner C and they met briefly in the beginning of 2004 and again during the summer; however, owner C was not interested in selling. In February 2005, the municipality bought another third of the area (27,605 m^2) from owner B. This meant that only owner C's land was missing. (U.2008.1738V)

A month later – 30th March 2005, the municipality adopts a Local Plan proposal and a proposal for amendment to the Municipal Plan (U.2008.1738V). The Municipal Plan amendment included the future access road in the urban area, since it was to become access road for the area (H Kommune 2005). The urban development area had, besides the inclusion of the access road, not changed its borders or the regulation that was adopted on it. On the same day, as the proposals were adopted, the municipality acquired owner C's

land (18,100 m^2) through compulsory purchase (U.2008.1738V). The municipality and owner C did not agree on the compensation and that started a parallel process to the development of the area, where owner C used his given right to appeal (on the size of the compensation) (U.2008.1738V). This parallel process ended with a ruling from The Western High Court 22nd April 2008 (U.2008.1738V). The Local Plan and amendment to the Municipal Plan were finally adopted 30th June 2005 (U.2008.1738V).

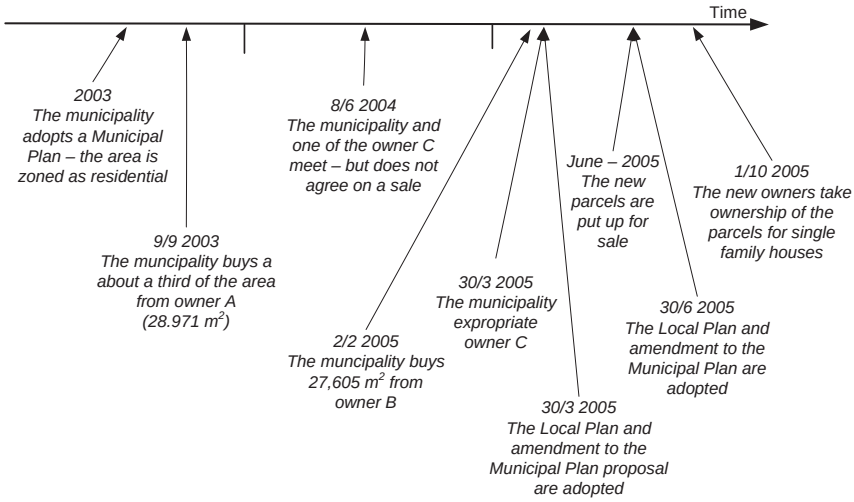

Figure 10.2.: A timeline of the urban development project.

The future parcels were put up for sale in June 2005 and they were all sold with handing-over on 1st November 2005 (U.2008.1738V) – see also figure 10.2. Since the parcels were sold as prepared land, it is assumed that the land was prepared summer/autumn 2005. The municipality's engagement as developer ended with the sale of the new parcels. Until the homeowner's association takes over the green areas and the internal roads the municipality still owns these areas, but according to the Local Plan the areas will be taken over by the homeowner's association.

Value Changes in the Development Project

In this case, it is possible to say something about how the values change from the point in time where the municipality buys the first land in 2003 (as land with an adopted Municipal Plan) and until they sell the 52 new parcels for single family houses. In the ruling from the Western High Court, the value of agricultural land in the area is discussed as well. Agricultural land in the development area was assessed to 18 DKK/m^2 in 2004 (and 20 DKK/m^2 in 2005) (U.2008.1738V). This gives an indication of what the value of the

urban development area was before the municipality planned the area. If the 18 DKK/m^2 is used as an indication, the value of the development area was 1,337,382 DKK before the area was planned (18 DKK/m^2 * 74,299 m^2). As described above, the area is 74,957 m^2 big, of which 658 m^2 were road (U.2008.1738V). Road areas are normally considered, in rulings on compensation for compulsory purchase, to have no value – especially when they will continue to be road and the road areas are therefore subtracted from the 74,957 m^2 in the calculation. The area's start value is therefore considered to be 1,337,382 DKK – see also figure 10.3. in which this is illustrated together with the other values in this case study.

In 2003, the municipality bought the first part of the development area (28,971 m^2). They bought it for 34.59 DKK/m^2 plus "land tax payable when land is freed for development[55]" (U.2008.1738V). According to (U.2008.1738V), the sale price equalled 60 DKK/m^2 when the tax has been taken into account. The value of the development area is – if 60 DKK/m^2 is taken as Market Value – 4,457,940 DKK (60 DKK/m^2 * 74,299 m^2) when the Municipal Plan was adopted. This implies a property value increase of 42 DKK/m^2 where the only thing that has happened is that the land has been zoned for residential purposes in the Municipal Plan.

The municipality paid – as mentioned – 34.59 DKK/m^2 for the 28,971 m^2 land. Because of the changed tax rules, the municipality never paid the land tax (U.2008.1738V). Their costs at this point were therefore 1,002,107 DKK (34.59 DKK/m^2 * 28,971 m^2).

In June 2004, it is also possible, because of valuations in the Western High Court ruling, to estimate the property value of the development area. It is around the time where the municipality and owner C met and discussed a possible sale, but without any positive outcome. The municipality claimed that a suitable price was 50 DKK/m^2 while the owner C claimed that 70 DKK/m^2 was the right price (U.2008.1738V). In the ruling from the Western High Court, a court-appointed expert estimated the value to be 85 DKK/m^2 (U.2008.1738V). The value of the development area was then 6,315,415 DKK (85 DKK/m^2 * 74,299 m^2). The value per m^2 has increased by 25 DKK/m^2 within a year (from 60 DDK/m^2 in 2003). This increase can be explained by two things; the General market price was in rise at that time – see also figure 5.5. – and when the municipality started to buy land they had also increased the expectation of future development in the area.

55 This tax was abolished 1st January 2004. Roughly explained, it was a tax paid of the difference between purchase price and the sale price of the property at the time of the sale. It was paid by the landowner when the land was transferred from Rural Zone into Urban Zone.

In March 2005, when owner C had his land expropriated, the property value was assessed again. As mentioned above, the size of the compensation was the issue of a longer appeal. The municipality still thought that a suitable price was 50 DKK/m^2 while the owner C claimed that 100 DKK/m^2 was the right price (U.2008.1738V). The owner C was given 65 DKK/m^2, but appealed (U.2008.1738V). In the ruling from the Western High Court, the owner C was given a compensation of 100 DKK/m^2 instead of 65 DKK/m^2 (U.2008.1738V). A statement from a court-appointed expert, who estimated the value to be 100-110 DKK/m^2, was given big importance in the ruling (U.2008.1738V). It is here chosen to use 100 DKK/m^2 as an estimate of the property value of the development area – this gives at total property value of the development area to be 7,429,900 DKK (100 DDK/m^2 * 74,299 m^2). The value per m^2 has again increased by 15 DKK/m^2 within a year. This increase can also be explained by the same two things; the General market price was in rise at that time and that a proposal for a Local Plan had been adopted, which made a future development of the area even more realistic.

The municipality bought/expropriated the remaining 44,705 m^2 from owner B and C for 100 DKK/m^2. This adds up to 4,404,700 DKK (100 DKK/m^2 * (44,705 m^2 – 658 m^2 road)). The sales agreement with owner B said that he would get the same price as owner C (U.2008.1738V). The municipality's costs for land purchase add up to 5,506,807 DKK. This can be compared to the development area's property value at the time 7,429,900 DKK, when the last land was bought. It shows the benefit from an early purchase of land – and a bit of luck concerning the changed tax rules.

At this point, the area has only been planned. When the first land was bought, there was only adopted a Municipal Plan and when the last land was bought a proposal for the Local Plan had been adopted. According to (U.2008.1738V), the marked prices generally increased from 2004 and through 2005 and 2006. This also indicates that a part of the increase here is caused by the general marked situation.

The municipality started the preparation of land in the summer/autumn 2005, and according to (U.2008.1738V), the costs of the internal preparation of land were 12,092,000 DKK. Moreover, a cycle path and a tunnel were made – the costs of this were 1,907,000 DKK, and finally, an upgrade of the existing access road at the costs of 3,209,000 DKK. In total 17,208,000 DKK.

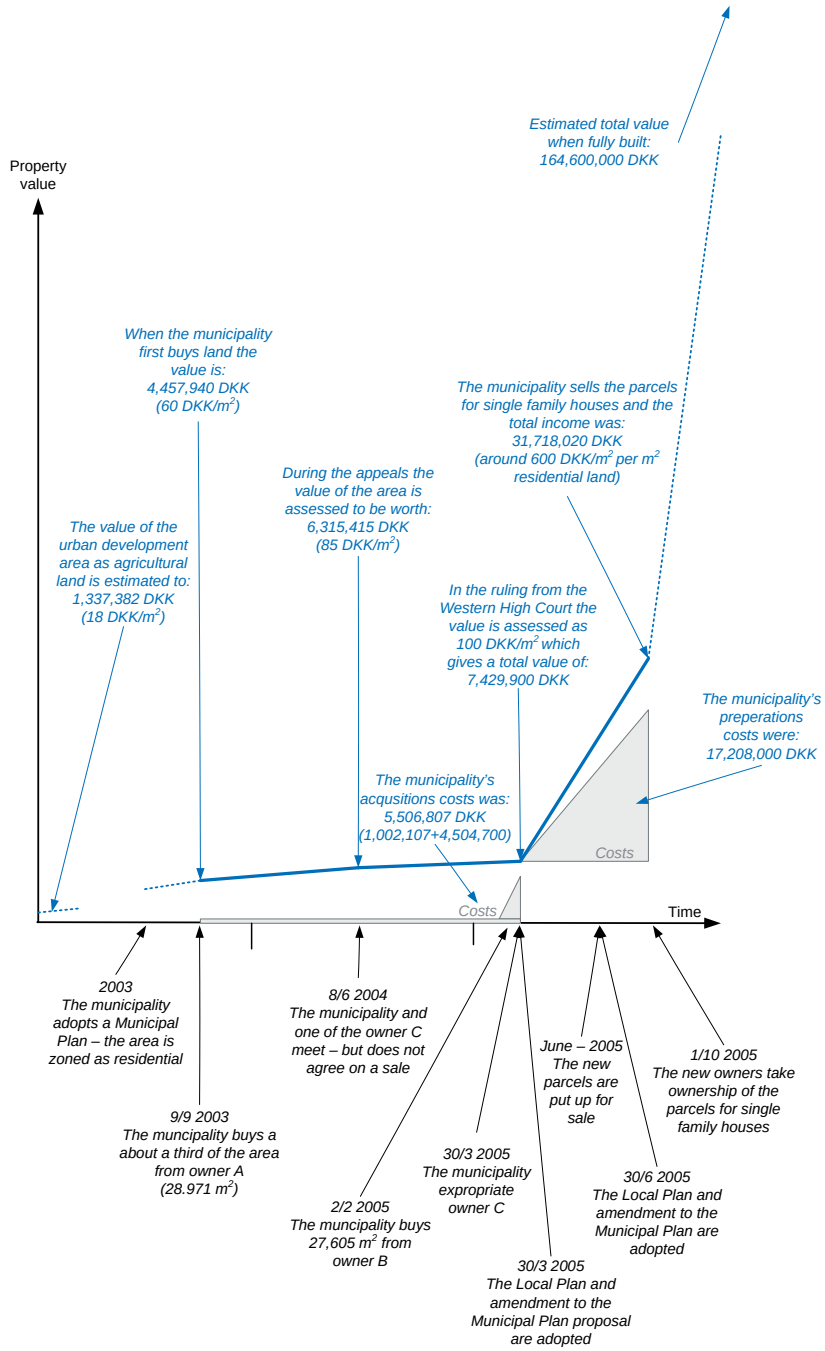

Figure 10.3.: A timeline for the urban development project and how the value increases during the project. The dotted line represents a rough estimate of the urban development areas value fully developed.

It has not been possible to find any indication on the property value of the development area when the Local Plan was finally adopted. The sale prices of the 52 parcels for single family houses are however known. They were put up for sale with a minimum bid of 500,000 DKK per parcel, but the actual sale prices were closer to 600,000 DKK per parcel. The total sale price for the 52 parcels was 31,718,020 DKK. (U.2008.1738V)

The development area's further increase in value – when buildings have been constructed – is hard to estimate precisely. In November 2009, there were four properties for sale in the area[56]. The "asking price"[57] was between 2,850,000 DKK and 3,998,000 DKK, the houses were between 153 m^2 and 200 m^2 and build in the period 2006-2007. The average price was 3,459,500 DKK and assuming that some negotiation takes place, a rough estimate could be 3,200,000 DKK per dwelling in average. With 52 lots, this gives a total value of 164,600,000 DKK of the development area when it is build. The houses in the area are not identical, which add further complications to this estimate – and the total value can only be used as an indication.

What Can be Learned From the Case?

In this case, it seems that the Municipal Plan, Preparation of land and the General price development have caused the property to increase in value. There are some indications that the Local Plan also causes the property value to increase, but it has not been possible to identify specifically. In the first interview analysis, it was assumed by the interviewees that the adoption of a Municipal Plan proposal and Local Plan proposal would increase the Market Value. The adoption of the Local Plan proposal did not in this case cause a significant increase in value, but this does not yet falsify the interviewees' statements. However, the value of land did increase from about 18 DKK/m^2 to around 60 DKK/m^2 when the Municipal Plan was adopted and that indicates that the Municipal Plan is an important factor.

This case clearly shows that the municipality made a profit from developing a piece of land from agricultural land to residential use. When the costs are subtracted from the income through the sale, it shows that the profit was 9,003,213 DKK (31,718,020 -

56 Four properties shown for sale at www.boligsiden.dk 19th November 2009, (www.danbolig.dk, a, b; www.nybolig.dk, a, b).

57 The price at which the seller offers to sell the property. It is normal in Denmark to have some negotiation between the seller and buyer about the actual sale price, which due to this is often lower than the asking price.

(5,506,807+17,208,000)). This means that 28 % of the income from the sale of the urban development project was profit. If the 52 parcels had been sold at the minimum bid of 500,000 DKK per parcel (26,000,000 DKK), the development project would still have produced a profit of 3,285,193 DKK (26,000,000 - (5,506,807+17,208,000)). However, a major part of this profit would have been caused by purchasing the land early at a good price, but the preparation of land would also produce a small gain. The 28 % profit must also be seen in relation to the fact that the municipality acts as both developer and authority, which means that some of the costs could have been a municipal costs even if the area was developed by a private developer. Nearly 30 % of the costs (5,116,000 DKK) are costs regarding improvement of access roads, cycle paths and tunnel, while only 70 % is costs of preparation within the area. Nevertheless, the case shows that it can be quite profitable to develop building lots for single family houses, especially during this period where Market Prices were rising.

As mentioned, the case shows what early land purchase does for the total costs – or can do at least. In this case, the municipality acquired land at two different prices, an early purchase and when the Local Plan proposal was adopted. Whether the increase in value is due to general price developments or planning, it does in this case still imply larger prices when land is purchase late.

It has previously been noted that not all steps are finished before the next starts. In this case, the sale of building lots starts before the preparation of land was finished.

In the next case, which also is a Green Field case with municipal ownerships, the municipality postpones the Local Plan due to problems with land purchase.

10.2. Green Field Case with Municipal Ownership

This case shows how a municipality buys up land with the intention to prepare the land and sell lots for single family housing.

The main part of this case is documented through a "valuation decision[58]" in connection to expropriation. The argue was about the amount of compensation, which the municipality should pay the landowner.

Description of Case Area

The development area is a Green Field area at the fringe of a city with 6-7,000 inhabitants. The area was in 2008 not yet been developed, but the municipality has bought the land. The surrounding area (north of case area) has been prepared for single family housing and sold, and the construction of houses in the neighbouring area is well underway, see figure 10.4.

Figure 10.4.: Photo from 2008 of the area (red marking), the area just north of the case area is now being build. (Copyright COWI)

In the beginning – 2005 – the case area was a part of a bigger potential development, but the municipality choose to split the area in two and take the case area out of the original plans and move forth with the case area at a slower paste – see further below on this. The case area is 39,300 m^2 and is in the Municipal Plan designated for residential use. There is an understanding between the municipality and landowner that the usage possibilities gives space for 35 parcels for single family housing when 70 % of the land us used for parcels whereas the remaining 30 % should be left for roads, green area etc. (MAD2007.2123AN) This gives the following sizes of land:

35 parcels for single family houses	25,510 m^2	70 %
Private roads, green area etc.	11,790 m^2	30 %
Total	39,300 m^2	100 %

58 Taksationskendelse

Sequence of Events

The municipality started the urban development process by designating the case area – and some of the surrounding areas – for residential purposes in their Municipal Plan in 2005 – see also figure 10.5. Same year, the municipality tried to buy the case area from the current landowner but they could not agree on a price or the conditions of the sale. (MAD2007.2123AN)

In October 2005, the municipality adopted a Local Plan for the surrounding area, which permitted single family housing (Kg kommune 2005). In the first proposal of the Local Plan – which was not yet adopted – the case area was also included in the surrounding area, but since the municipality could not buy the area they decided not to include the case area and change the proposal for the Local Plan (MAD2007.2123AN). The neighbouring area, for which there was adopted a Local Plan, is now prepared, sold and the single family houses are under construction. However, the municipality still wanted to develop the case area, but had to go about it in a slower paste due to the landowner.

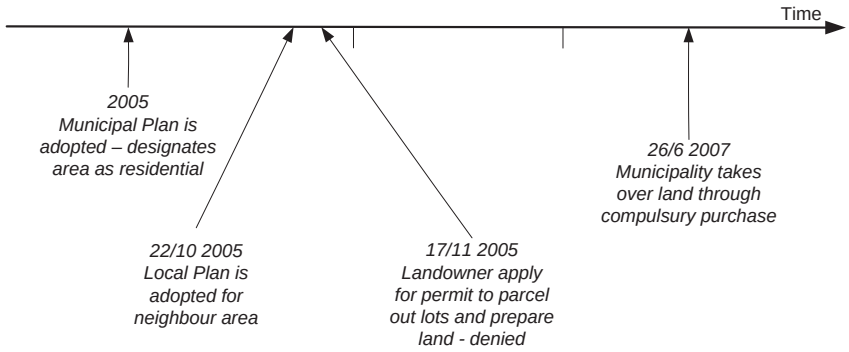

Figure 10.5.: Timeline of the urban development.

In November 2005, the landowner made an application to the municipality, applying to parcel his land out in lots for single family housing and prepare the land. The landowner did not get this permit, because the municipality claimed that there was no intention to develop the case area, and justified the decline with this argumentation. Besides this, the municipality has a policy not to let private developers prepare land for single family housing[59] (MAD2007.2123AN). In June 2007, the municipality decided to take over the case area through compulsory purchase based on the Mu-

59 It is questionable if this is a legal policy for the municipality to have, a municipality can only use compulsory purchase if the owner does not wish to develop himself – in other words the owner is first in line to develop (Boeck 2002, p. 357).

nicipal Plan as a mean for enabling the municipality the development of land for single family housing (MAD2007.2123AN).

Value Changes in the Development Project

The property value of the case area as agricultural land – meaning before the Municipal Plan was adopted – can be determined on the basis of the general price for agricultural land at the time. The value of agricultural land was between 10-15 DKK/m^2, and the average 12.50 DKK/m^2 is used to determine the property value before the development. This gives a start property value of the case area of 491,500 DKK (39,300 m^2 * 12.50 DKK/m^2). (MAD2007.2123AN)

Two years after the Municipal Plan was adopted, the municipality acquired the case area through compulsory purchase. They ended up paying 100 DKK/m^2 in compensation to the private landowner, which was more than the municipality wanted to pay and less than the landowner wanted – they offered 29 DKK/m^2 and wanted 400 DKK/m^2, respectively (MAD2007.2123AN). If the 100 DKK/m^2 is taken as the Market Value of the land, when the Municipal Plan is adopted, the value of the land is 3,930,000 DKK (39,300 m^2 * 100 DKK/m^2) – see also figure 10.6. This is as far as actual prices can show the value of the urban development area in this case.

Both the municipality and landowner had considerations on the future value of the prepared land and how much the costs are of producing this. The municipality claims that the value of land for single family housing would be 700 DKK/m^2, since the neighbour area had been sold for this. The landowner compared the land with other surrounding areas and claimed that 1,300 DKK/m^2 were a more appropriate size of the expected value (MAD2007.2123AN). Since the value of lots for single family housing in the neighbour area was 700 DKK/m^2 and because the market was beginning to slow down in the area at that time, 700 DKK/m^2 is estimated to be Market Value in these calculations. This gives an estimated Market Value of the prepared land of 19,257,000 DKK (39,300 m^2 * 70 %* 700 DKK/m^2)[60].

60 The area is multiplied with 70 % because it was estimated that 70 % of the urban development area could be sold as building land.

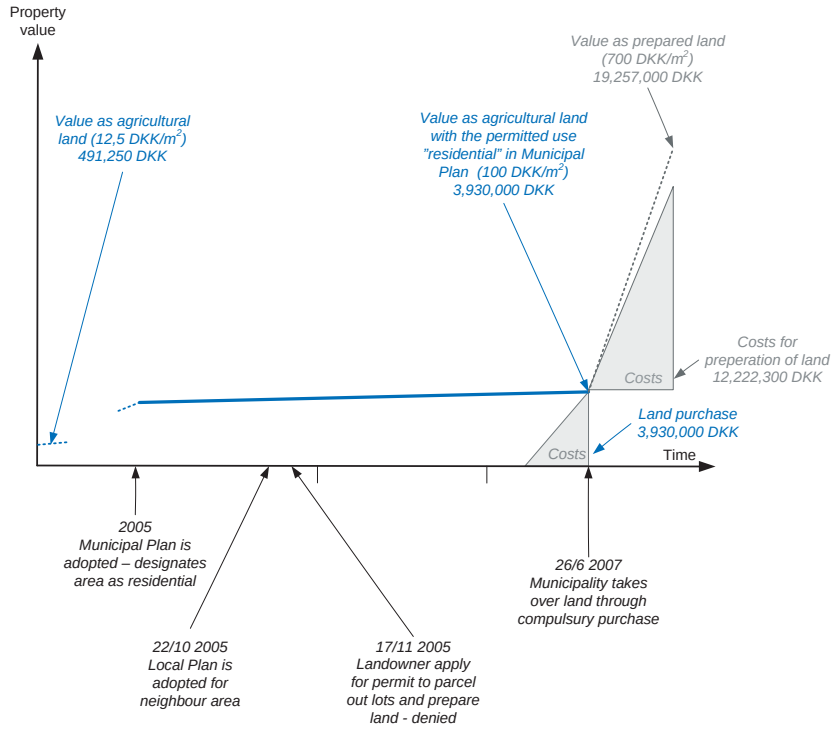

Figure 10.6.: Timeline for the urban development project and how the property value increases during the process. The dotted line to the right represents a rough estimate of the urban development areas value when it is prepared.

The costs of preparing the land were estimated to be 311 DKK/m^2 (and 445 DKK/m^2 with value-added tax included)[61] (MAD2007.2123AN). It is chosen to assume that the municipality – as a private company – can deduct this tax and therefore normally use prices without tax. The preparation costs are therefore 12,222,300 DKK (39,300 m^2 * 311 DKK/m^2). On top of this, the municipality also have the acquisition costs, which are 3,930,000 DKK.

What can be Learned from the Case?

The case shows that the Municipal Plan does influence a property's value – at least when the future development is soon to come. It is hard to say whether the expected value increase up to the point where the land is prepared is caused by the preparation of land alone or also the adoption of the Local Plan.

61 It must however be noted that the Danish "moms" equivalent to Value-added Tax/Sales Tax is 25 %, which is not the difference between 311 DKK and 445 DKK. It has not been possible to clarify this differens.

The case gives some insight in the municipality's potential double role in urban development since they in this case could not succeed as landowner/developer and therefore changed their planning which is within their role as planning authority. The municipality's statement – that they do not let private developers prepare land for single family houses – can also be seen as a policy from the municipality in the role as landowner/developer that affects their role as planning authority. This is so because the decision to say no to the developer is within the municipality's role as developer, but the decision is formally taken as a planning decision and that is within the municipality's role as planning authority. The case does furthermore show that a troublesome landowner cannot stop urban development, but only delay it.

10.3. Green Field Case with Private Ownership

This case illustrates how a private developer buys around 19 hectare planned Green Field land and develops it. The case was brought forth during the interview with MT (from Interview Analysis I), hence the coming references to MT. The adopted planning gives options for a new residential area with 105 dwellings. The developer prepares the land and builds part of the area himself, the remaining part of the area is sold as building lots for single family houses. The developer is a small/medium sized company and they have contractors in house.

Figure 10.7.: Illustration of the development area from the adopted Local Plan. *(S Kommune 2007)*

Description of Case Area

The area is a Green Field area at the fringe of a city with a bit over 30,000 inhabitants. The development area is surrounded by a future "bypass road" and the existing city (S Kommune 2007). In figure 10.7., a plan of the urban development area is shown, and it can be seen that the area consists of a residential area, a green area and roads/cycle paths. Before the urban development project began, the area was used as agricultural land and a small part was (and still is) protected nature. The protected area is partly a lake and has been incorporated in the new area as a green area. The area as it used to look can be seen in figure 10.8.

Figure 10.8.: Photo of the area before the development started (S Kommune 2007).

The adopted Local Plan has four purposes: Allowing a residential area with single family housing; determining the road system within the area; designating a green, recreational area; and setting the standard of the buildings in the area. (S Kommune 2007, §1) The Local Plan permits 57 parcels for single family houses and 48 lots for double houses (a double house is two single family houses build together – in this case 48 dwellings in 24 buildings). The minimum lot size is 700 m^2 for single family houses and 400 m^2 for each dwelling in a double house (S Kommune 2007). The construction of green areas and roads are a precondition for utilising the new homes in the area (S Kommune 2007). This means that the developer must construct these before the new homes may be used by its future users. The costs of making the green areas and the roads in the area belong to the developer (MT).

According to the Danish Cadastre, the area, that the developer bought, was 193,928 m^2. Of this, 51,370 m^2 can be used for 57 lots for single family houses and approximately 22,423 m^2 for 48 double houses (The Danish Cadastre; MT). The 22,423 m^2 is for some part estimated since only the first 28 double houses (of 48) have been parcelled out at this point (2008). The lots for these 28 double houses have an average of 467 m^2 and a total area of 13,083 m^2 (The Danish Cadastre; S Kommune 2007). The area of the remaining 20

double houses is estimated from this average (20*467 m^2 = 9,340 m^2). The total area for double houses thereby estimated as 22,423 m^2. This adds up to:

57 parcels for single family houses	51,370 m^2	26 %
48 lots for double houses (partly estimated)	22,423 m^2	12 %
Green area / roads / etc.	120,135 m^2	62 %
Total	193,928 m^2	100 %

This means that 38 % can be sold as building land, when the development is finished. In comparison to the two previously cases, were this number was 64 % and 70 %, respectively, it is significantly lower in this case.

Sequence of Events

The planning of this area conducted by the municipality started already in year 1969, where the development area became classified as an urban development area in the Municipal Plan. This was under a different set of planning regulations than those prevalent today. This is not the place to go further into these rules and the bottom line is merely that the area has been classified as an urban development area for a long time. The development project itself does not start until after the Municipal Plan from 2001, and the Local Plan is adopted in March 2007 – see figure 10.9. When the Local Plan process of this area started, the development area was the last remaining area in the municipality that was classified in year 1969 and not already built. (S Kommune 2007)

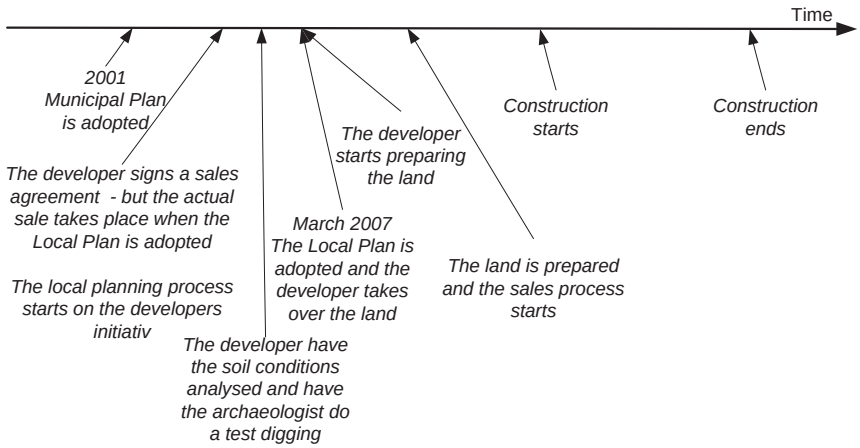

Figure 10.9.: Timeline of the urban development project.

In the Municipal Plan, the area was designated for: Residential use, public purposes, grocery shops or other business purposes if they could be incorporated without inconvenience for the remaining area. The plot ratio of a specified area within the area was not allowed to exceed 30 % and the building height could not exceed 1.5-2 floors (S Kommune 2007). The Municipal Plan was open to other uses than residential, but it is seems clear that residential purposes was the main intention due to the stipulations regarding the buildings. Besides designating the area for residential purposes, the Municipal Plan concentrated on building lines from a future "bypass road" and a green zone/park area which passes through the development area and must be implemented in the area as well (S Kommune 2007). This green zone/park area is parallel to the "bypass road" and includes the area between the road and the buildable land that cannot be built upon, due to restrictions caused by the road.

When the developer bought the land, it was only the Municipal Plan that had been adopted. It was however "bought" in the way that the sale agreement was made before the Local Plan was adopted, but the "final buy"-date was not until the Local Plan was adopted (MT). The price paid was for land with an adopted Local Plan. In the time between the sale agreement was made and the Local Plan was adopted, the developer had the soil conditions analysed and had the archaeologist do a test digging (MT).

Besides these expenses for different investigations, the developer also had the Local Plan made. In the municipality, where this development project is situated, it is practice that the developer makes the Local Plan and pays the costs. The planning process still follows the normal procedures and the Local Plan is still adopted by the municipality. In this case, the adoption ended a bit special since the city council as a last minute decision added a second exit road to the area and a roundabout – see bottom of figure 10.10. – at the developer's expense. (MT) When comparing figure 10.7. and 10.10., it is

Figure 10.10.: The final plan for parcelling out the area. (MT)

evident that, besides the extra roundabout, the number of double house dwellings went from 50 to 48 dwellings due to the additional access road.

After the adoption of the Local Plan, the developer started the preparation of land and got the area parcelled out. The developer had the area parcelled out in steps and the northern part is not yet prepared (spring 2009). According to (MT), the developer had sold the first 12 lots for single family houses when the preparation of land started. He also started building the double houses and had the first 12 dwellings built (MT). At this point, the market went into a slump, which entailed that some of the building lots are not yet sold and the developer stopped building the planned double houses. Figure 10.11. shows which parcels for single family housing that have been sold at the end of April 2009 (market with S by the real estate agent).

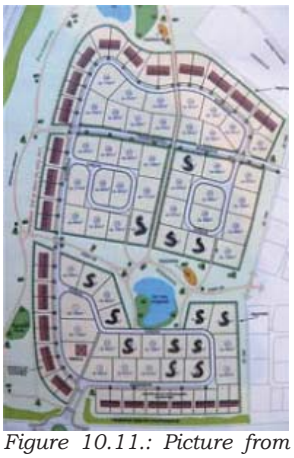

Figure 10.11.: Picture from the real estate agent's advertisements of the lots for single family houses. ("S" means sold. (www.boligeksperterne.dk)

Value Changes in the Development Project

It is possible to estimate the value of the development project from the point in time where the developer bought the land and forward. The changed market situation, which went into a slump during the project period, makes it hard to estimate the property value at the end of the project. It is best shown by estimating how property value could have evolved if the market situation had not changed and by showing an estimate of how the value did evolve. The two scenarios will be presented in that order because the expected outcome without a slump can be used as a reference to explain how things did happen.

In reality, the construction of buildings often starts before the preparation of land is finished. In this context, it is however shown as if the land is fully prepared before construction starts. This is done to avoid a blurred picture and to make it possible to present the found values individually. The same applies for the sale-process which started a long time before the preparation ended. In this case, 12 single family house parcels were sold before the preparations started. These two steps are however also divided in the presentation.

The values presented below have a limited accuracy since they are estimated and in some cases, it has been necessary to make an assumption. In those cases, the calculations behind the choices and assumption are shown clearly.

If Everything Had Gone as the Developer Hoped

The starting point for the development is the developer's acquisition of land. Since an adopted Local Plan is a prerequisite for the acquisition, the value of 300 DKK/m^2, that he paid, is assessed as the value for land with an adopted Local Plan (MT). This argument is also supported by the fact that the normal value of land with an adopted Local Plan, permitting residential use in the region, at this point in time was 225-300 DKK/m^2 (MT). The developer buys 193,928 m^2 which adds up to a property value of 58,178,400 DKK (193,928 m^2 * 300 DKK/m^2) of the urban development area. This is the first value of the property that can be definitely determined and it is entered in figure 10.12., illustrating the urban development process.

As a comparison to the above, the value of the development area as agricultural land at the time would be 4,484,200 DKK (25 DKK/m^2) (MT). This illustrates the previously mentioned idea that the property value changes when zoning appears in a Municipal Plan and Local Plan. The actual starting value of this area (when it was still used as agricultural land) is not possible to determine since the area has been classified as an urban development area in the Municipal Plan for 40 years. It is therefore hard to identify a possible value increase caused of the Municipal Plan, but the value of agricultural land in the area gives an indication that the value increase caused by the whole Planning process and permits step is around 275 DKK/m^2.

The developer's costs, besides the acquisition costs, are for analyses of the soil conditions, the archaeologist's test digging and the Local Plan. This is estimated to be 645,000 DKK (MT). The costs at this point are 58,823,400 DKK (645,000 DKK + 58,178,400 DKK).

The value of the development area, when it is prepared, consists of three parts: The value of land for single family housing; the value of land for double housing; and the value of green area and roads. The green area and roads do not have a Market Value, since it only has one forced future owner – the homeowner's association (cf. the Local Plan) – in other words, it cannot be sold or used for other purposes than green area and road. The homeowner's association also holds the future maintenance costs of the green area and roads. The value of prepared land for single family housing is estimated to be 995,000 DKK per parcel (connection fees not included) before the market went

into a slump (MT). There are 57 lots for single family housing. The value of land for double houses has to be calculated/estimated since the developer keeps this land and sales prices are therefore not available. It is chosen to use the value of parcels for single family housing as a basis, but adjusted because of the different allowed plot ratios. This is chosen because it was found in chapter 3. that density is a significant factor. This adds up to the following equation.

(Value of land for double housing) =
*(Value of land for single family housing)/(area for single family housing)**
*(Plot ratio for doublehousing area)/(Plot ratio for single family housing area)**
(doublehousing area)

From the calculation below, the value of the whole urban development area, when it has been prepared, is 86,422,310 DKK, which is around 445 DKK/m^2 (when using the whole development area). The area has increased the value of the development area with around 145 DKK/m^2 from being just planned and to prepared land, which is an increase of almost 50 % due to the preparation of land.

(Value of land for single family housing) +
(Value of land for double housing) + (value of green area and roads)

*(57*995,000DKK)+*
*((57*995,000DKK)/(51,370m^2)*(30 %)/(25 %)*22,423m^2)+(0)*

The preparation costs were budgeted to 23,434,332 DKK (connection fees not included) by the developer. Connections fees were estimated to 7,479,848 DKK. As mentioned above, the city council decided – during the final Local Plan approval – to add a roundabout at the developer's expense. According to (MT), the costs of this were 6-7,000,000 DKK, here set as 6,500,000 DKK. In total, a preparation cost of 29,934,332 DKK (connection fees not included), but the value increase was only 28,243,910 DKK.

After the developer had prepared the land, he started the construction of double houses, while the land for single family housing was set for sale. The construction costs of the double houses are unknown, but the developer advertises the sale of double houses on his website (Appendix Q). The "cash price" was 2,100,000 DKK per dwelling. This is a fictive price since they are sold as housing co-operatives[62] and have a different ownership construction than nor-

62 In a housing co-operative, a set of dwellings are owned by a co-operative of which the residents are members. This means that the future residents do not buy the house, but a share or membership in the co-operative. On top of this comes a monthly fee that covers maintenance of buildings and some utility expenses.

mal privately owned single family houses. However, the cash price is useful in this context. There are 48 dwellings at a price of 2,100,000 DKK which in total is 100,800,000 DKK. The value of one double house – 2,100,000 DKK – had been advertised on the developer's website when the market was in a slump (spring 2009), and it is unknown if the value was higher before the market situation changed.

To calculate the total value of the development area in the developer's perspective, the value of the land for single family houses must be added. This was estimated to be 57,715,000 DKK (995,000 DKK per parcel). In total, this is 157,515,000 DKK (calculation). At this point, the developer would have left the area, and have sold both the lots for single family housing and built double houses. To calculate the total end value of the area, when also the single family houses have been built, the value of the single family houses still needs to be added. Only the potential sale price of a dwelling in a double house is known – 2,100,000 DKK – and since both lot and house is usually bigger in single family houses, it is assumed that the price is higher as well. If a slightly pessimistic value of 2,500,000 DKK[63] is used as value of a single family house in the area, the value of the area, when everything has been build, is 243,000,000 DKK (48 * 2,100,000 DKK + 57 * 2,500,000 DKK). It must however be added that this is a very rough estimation, that only gives some idea of the total value.

Figure 10.12. illustrates when and how much the property values changed during the urban development process if it had gone as intended according to the developer.

63 According to (www.boligsiden.dk), the average price for a villa in the municipality in 2008 was around 2,000,000 DKK, it is in this case assumed that the prices for new houses are a bit higher than average.

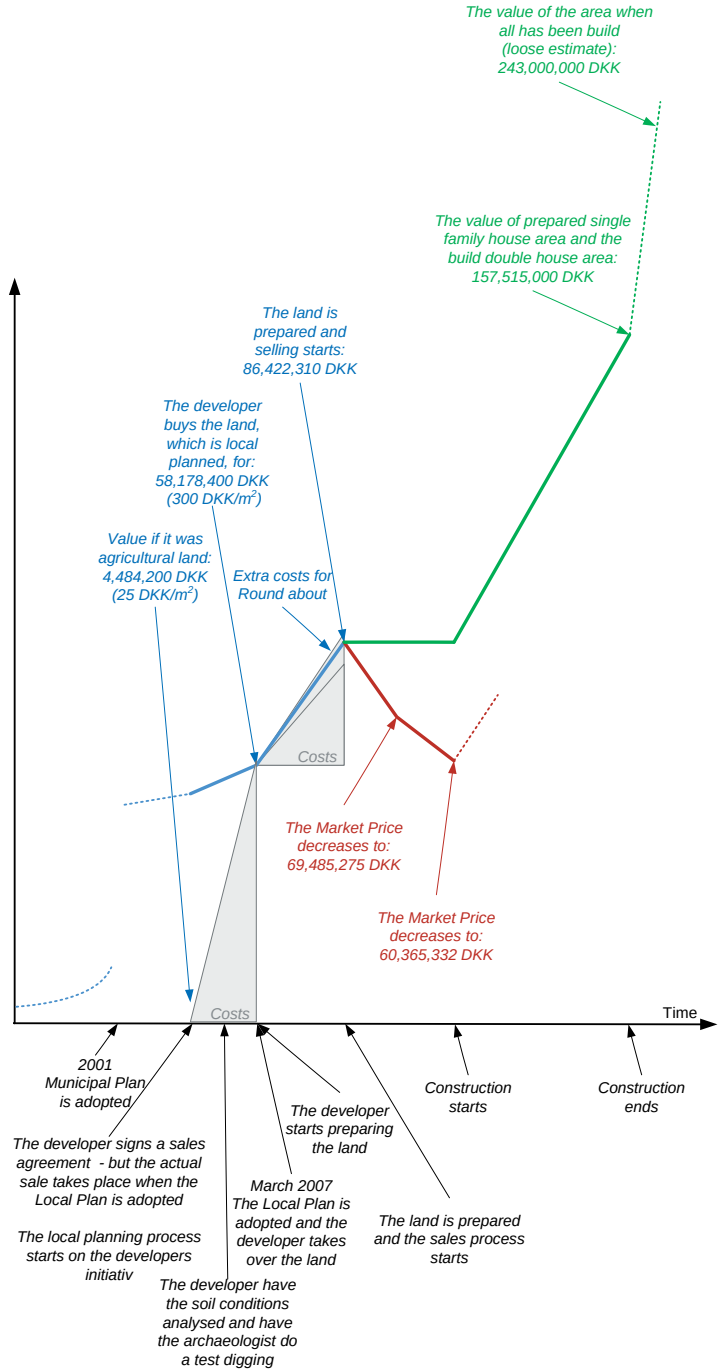

Figure 10.12.: Timeline for the urban development project and how the value increases during the projects.

As Things Happened When the Market Went Into a Slump

Until the development area was prepared, the project went as the developer could wish, and therefore this part of the description of the case does not start until the end of the step in which the land was prepared. This is shown in figure 10.12. as a blue line until the actual value increase deviates from the planned value, and at that point, the actual property value follows the red line while the planned value increase follows the green line.

The developer was not able to sell the land for single family housing at the expected price. At the developer's website (Appendix R), the price started at 800,000 DKK per parcel (with takeover from 1/7 2008), and at that price the 57 parcels are worth 45,600,000 DKK. When adding the land for double houses (using the equation above with another value for single family housing land), the total value of the land is 69,485,275 DKK. In spring 2009, the real estate agent offers parcels from 695,000 DKK. At that price, the 57 parcels are worth 39,615,000 DKK. When adding the land for double houses (using the equation above with another value for single family housing land) the total value of the land is 60,365,332 DKK. This means that the value of the land has decreased about 26,000,000 DKK or 30 % just because of changed market conditions compared to the previous example.

What can be Learned from the Case?

This case clearly shows how a market slump can change the possible outcome from a developer's perspective dramatically, and it emphasises the assumption for the conceptual model in this project – that the market situation is stable and positive. The developer in this case ended up with a lot of money tied up in a project, taking a while to get sold. Wisely enough, the preparation of land and construction of double houses has been divided into smaller pieces and only some at a time. The developer has thereby minimised the amount of money tied up in the project.

When looking at the preparation of land, it is clear that the municipality succeeded quite well in pushing costs onto the developer – even more than the possible profit[64] could justify. One of the reasons for the cost to exceed the value increase might also be the relatively low share of building land (38 %) where the remaining 62 % does not have a Market Value, though the green area probably has a positive effect on the value of the buildable land, as also discussed in the theoretical analyses. It leaves the open question why

64 The amount of profit that was expected at that time.

the developer still had a wish to engage in the project, when the costs seemed so high. One of the reasons could be that the developer was the constructer as well and not buying others' service in the preparation process and construction process – in other words, the developer could earn money on the project as contractor as well as a developer.

In this case, it is – with some loose ends – possible to get an overview of the whole urban development process and the change of property value. In the graph in figure 10.13., the property value of the urban development area is shown in relation to the different steps in the urban development process. It is the value after completing the step that is shown. It is quite clear that the planning process and permits as a whole has an effect. The preparation of land is, as Interview Analysis I also put forward, not the step that increases the value the most. The construction step is said to be the most value increasing step and that is clearly also the case here even though the estimation of property value of the finished single family houses is low. The value increase during the construction is more than five times larger than the value increase caused by the preparation of land. In Interview Analysis I it was found that about 2/3 of the total value increase is caused by preparation of land and construction together – in this case it is around 75-80 %

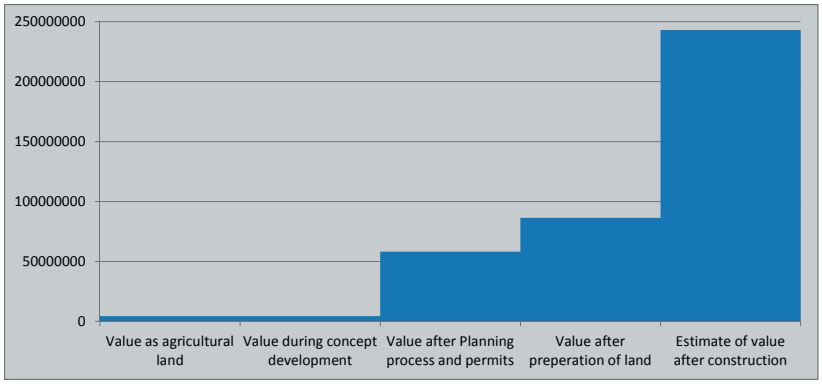

Figure 10.13.: The development of the property value of the urban development area in the case is shown in relation to the different steps in the urban development process.

In this case, 38 % of the area could be sold as building land. In the two other Green Field cases (see section 10.1. and 10.2.), the amount of buildable land were 64 % and 70 %. To see how important this difference is, a small illustrative example is made in figure

10.14., with the case area, from this case as example. The allowed plot ratio[65] within the property boundaries is the same – but in the example three different amounts of buildable land are used: 38 % as in this case, 50 % and 70 % as in the other cases. The property values used are 25[66] DKK/m^2 for agricultural land, 225-300[67] DKK/m^2 for land with an adopted Local Plan, 750[68] DKK/m^2 for prepared land for housing, and 14,000[69] DKK/m^2 residential space for the finished property. The difference – or effect of changing the amount of buildable land – is very clear. It shows that the choices made when planning is done might change the value of the land instantly, but the big effect does not come until the property is developed – in other words, the real estate agent's point when she draw figure 8.1.

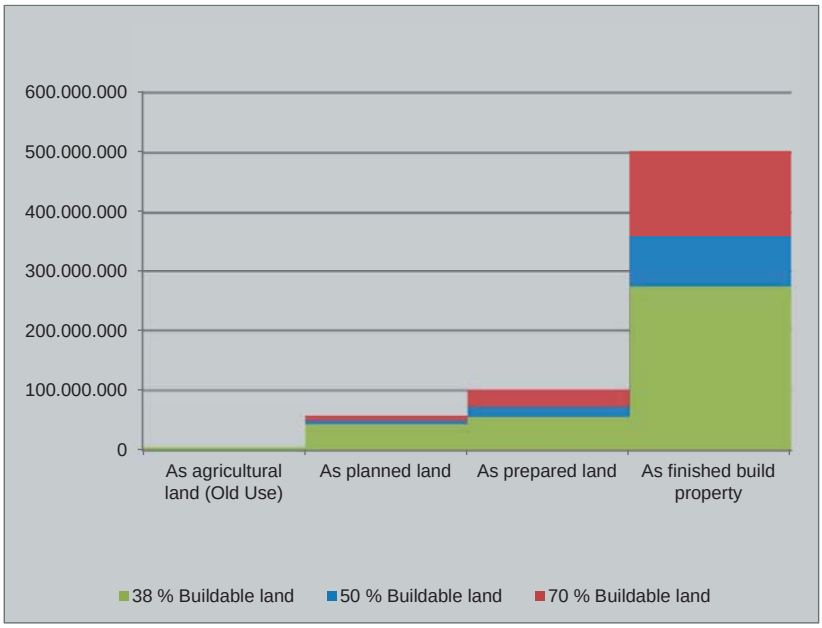

Figure 10.14.: The development of the property value of the urban development area in the case is shown in relation to the different steps in the urban development process with different amount of land which can be sold as building land.

65 The combination of single family houses and double houses within the case area gives an average plot ration of 27 % within the buildable land. The allowed plot ratio was 25 % on land for single family houses and 30 % on land for double houses.

66 As used in the case.

67 As used in the case, but it is assumed that 225 DKK/m^2 is the value when the amount of buildable land is low (e.g. 38 %) and 300 DKK/m^2 is the right amount when the degree of buildable land is high (e.g. 70%). This is lower than in the case, but the other prices are 2008 figures which are also lower than when the developer bought the actual land (in 2007).

68 C.f. (www.boligsiden.dk) – 2008 figures (roughly average) for the municipality

69 C.f. (www.boligsiden.dk) – 2008 figures (roughly average) for the municipality. It is assumed in this calculation that people build as much as it is allowed with the allowed density.

in Interview Analysis I. She emphasised that the effect of the options planning gives is not only on the value of land but also the potential future value. Bottom line, the Density (amount of buildable land in combination with plot ration) in the urban development area seems to have a dominant influence on the property value.

10.4. Brown Field Case with Private Ownership

This case shows how a developer buys a piece of land in the central part of a large city with the intentions to build dwellings, but ends up with a worthless property that is taken over by the municipality.

The main part of this case is documented through a "valuation decision". The argue was about the amount of compensation, which the municipality should pay the developer when taking over the property and not if the municipality was obligated to take it over.

Figure 10.15.: Photo of the block that the urban development area is a part of. Urban development area is marked with red. Photo from (Kb Kommune 2005).

Description of Case Area

The development area is a Brown Field area, consisting of two properties in an area with blocks – see case area as the red square in figure 10.15. The buildings, which were on these properties, were demolished in the 1980's. One of the buildings was occupied by a garage that fixed cars and the other was an apartment building where the

apartments were no longer liveable. (Kb Kommune 2005) The development area is relatively small; only 473 m^2 (The Danish Cadastre).

The Local Plan that was adopted for the area did not allow any building in the development area, but this was not the intention when the urban development process started. The municipality and the developer agreed upon that if the Local Plan in its final version, designating the area to green area, had not been adopted, it would have been possible to build 620 m^2 residential space in the development area. In the Local Plan proposal, three sketches of how the development project could look were presented, and one of them is shown in figure 10.16.

Figure 10.16.: One of three sketches of the developer's project.(Kb Kommune 2004)

Sequence of Events

The developer surfaces around 2003-2004, where the land is bought from another developer, who is in financial problems (MAD2007.817OTK) – see also figure 10.17. The planning process, and therefore also the urban development process, started earlier than this. In 2000 and 2001, the municipality did an urban renewal project on the block and improved the backyard. On the sketches for the urban renewal project, the urban development area was included temporally as a part of the green area in the yard, but the plans showed that future residential buildings were to be expected in the urban development area. In 2001, a new Municipal Plan was adopted. In this plan, the urban development area was also designated for residential use. (Kb Kommune 2005)

It is on this basis the developer make his evaluation of the development area's potentials. Before the developer buys the land from the first developer, he is in contact with the municipality which decides that it is necessary to produce a Local Plan, because there are some protests among the local citizens against developing the development area for housing (Kb Kommune 2004). This must mean that the municipality is interested in the project, since the Local Plan process is initiated by this urban development project and the intention with the Local Plan is to allow the developer's project. The developer has sketches made of the projects – one of them is shown in figure 10.16. – and he buys the land from the first developer. In November 2004,

the Local Plan proposal is adopted together with an amendment to the Municipal Plan. The change in the Municipal Plan is an increase in the allowed plot ratio for the block. (Kb Kommune 2004)

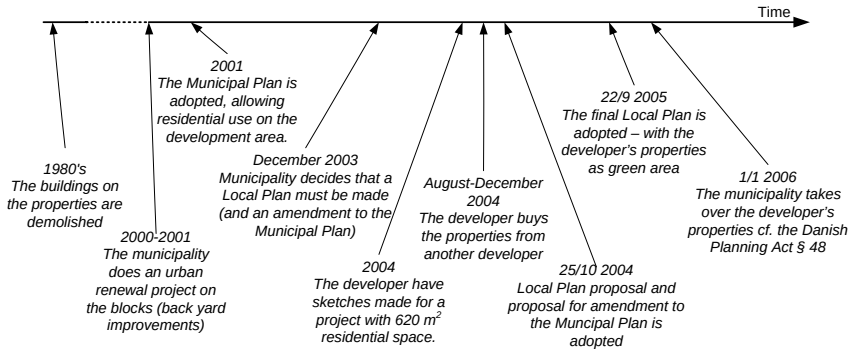

Figure 10.17.: Timeline of the urban development process.

After the Local Plan proposal is made, it starts to go wrong for the developer. Because of protests from the local citizens, the municipality decides to change the content and purpose of the Local Plan proposal before the final adoption. The adopted Local Plan designates the urban development area to "public use" (green area as the area's current temporary use) instead of residential use as in the proposal. (MAD2007.817OTK) The effect of this – from a developer's point of view – is that the properties were useless because they became unbuildable. In the period of time between the adoption of the Local Plan proposal and until the adoption of the final Local Plan, the municipality goes from being positive about the project and to not allowing the development project. The only thing that has happened in the meanwhile is the protests from the citizens and neighbours, which apparently have been enough to change the minds of the politicians. The planning and its intention are summed up the following table (figure 10.18.):

	What are the intentions with the urban development area?
Urban renewal plans	Residential use Temporally use – green area
Municipal Plan	Residential use
Local Plan proposal	Residential use
Final Local Plan	Green area

Figure 10.18.: The table shows the different plans – the oldest plan first – and what the intentions with the urban development area are.

The Danish Planning Act § 48 gives the owner of a property, which through planning becomes designated for public use, the right to have his land taken over by the municipality in exchange for compensation. That is what happens in this case. (MAD2007.817OTK)

Value Changes in the Development Project

When relating to the whole urban development process, it is a very limited interval where this case can show something about value changes – namely during the local planning process. Only two values are known; that the developer buys the land at a price of 2,300,000 DKK, which by all implicated parties is considered cheap; and the compensation the developer was paid. The compensation was 8,100,000 DKK. (MAD2007.817OTK) The compensation represents the potential sale value of the finished project subtracted expected profit and all costs except for land purchase – in other words the value of the land. As input to the valuation decision a real estate

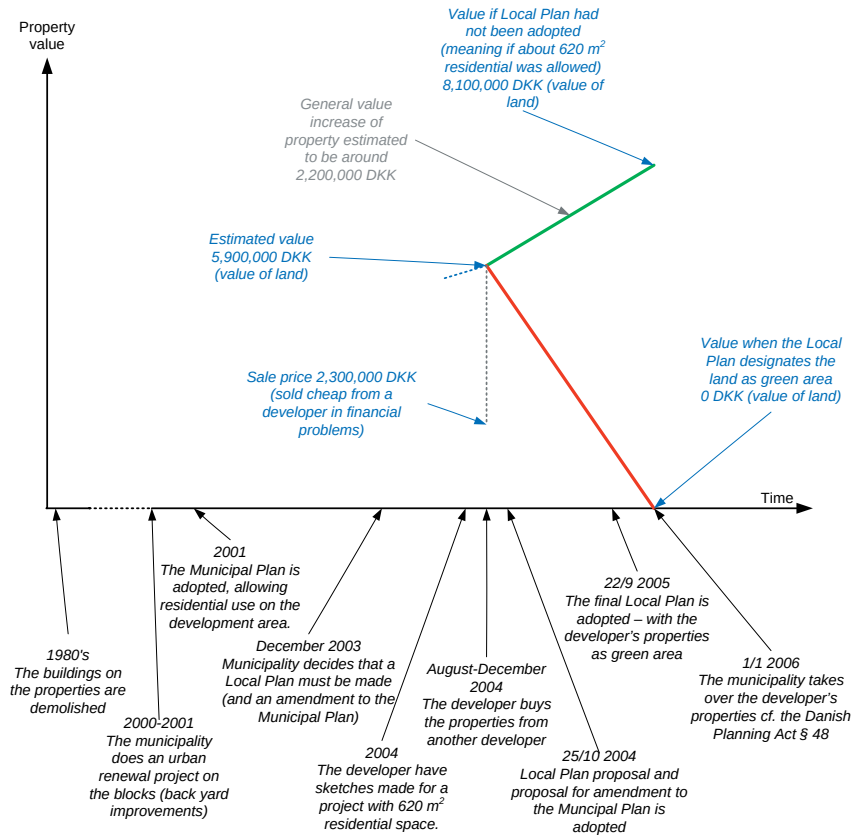

Figure 10.19.: Timeline for the urban development project and how the value increases during the projects.

agent valuated the properties land value (equal to the property value since there are no buildings on the properties) at 7,400,000 DKK (MAD2007.817OTK). It is here assumed that the 8,100,000 DKK is the Market Value of the urban development area 1st January 2006, since the real estate agent's estimation was a part of the material at hand when the compensation was estimated – se also figure 10.19.

The Market Value, when the developer bought the land, must, since the sale price was considered low, be higher than the sale price. The municipality estimated that the general price development in the period of time were the developer owned the development area was about 2,200,000 DKK for the development area. Subtracting this from the Market Value of 8,100,000 DKK (being the value after the price had raised 2,200,000 DKK) the value would be expected to be 5,900,000 DKK. This leaves quite a big gap between the price paid and the potential Market Value; a gap that can only be explained by the seller's bad financial situation or risk due to a planning process with potential problems from neighbours. However, the 8,100,000 DKK is assessed on the options given in the Municipal Plan, which are the same options at hand when the developer bought the land. It is chosen to estimate the value of the development area as 5,900,000 DKK, but it must be noted that it is a rough estimation.

The value of the development area when the final Local Plan was adopted and the designated use was "public use" is in principle 0 DKK. At least from the developer's point of view, if he should sell it on the market.

What can be Learned from the Case?

First of all, this case shows that planning is not always value increasing. In this case, the options given in the Local Plan decreased the value of the urban development area to – in principle – nothing. That planning can decrease or at least limit the potential value increase is something to be aware of. Figure 10.14. also supports this, since it shows how the choices made in planning can influence the potential value of an urban development project.

Secondly, the case emphasises the points made by several interviewees during the interviews: That the political process during the adoption of planning is a risk factor and that the local citizens' protests are something that the developers can rightfully perceive as a risk factor. In this case, the citizens succeeded in making the municipality go straight against their first opinion. It does happen that municipalities decide to change the Local Plan proposal, so that the new construction, which the Local Plan are to allow, must be a little

lower to accommodate the protests of neighbours and citizens in the community. The municipality has the right to adopt any Local Plan they want – meaning that they are not obligated to follow the citizens' opinions. The point is that the choices of the municipality also change the potential value of the future project as well. This is investigated further in the forthcoming interview analysis.

The case also shows that there has been a period where the general price development has been high and in this city it has been very significant.

Furthermore, the case properly shows how individual factors likely financial problems can influence the sales price. In this case, the first developer must have been in a hurry to get the property sold since the price was so low. One could also wonder if the first developer had figured out that the protests from the citizens could be a problem and sold cheaply to get rid of the property without too big a loss.

10.5. Conclusion and Influencing Factors

In the following, the results and factors that have been found in the above on factors influence on the property value in urban development are described.

- **Planning**
  The cases have shown that planning can both increase and decrease the value of property, and that planning influences both the value of the property when a plan is adopted and the potential value when the project is finished. In relation to the potential value, it has also been shown that the chosen *Density* of the urban development area has a direct influence on the potential value of an urban development project. The results of the cases are however not sufficient enough to test the theory that it is possible to build so dense that it decreases the property value (see figure 3.13. and 3.14.).
  It has been found that the *Municipal Plan* has an effect on the value of an urban development project, which also surfaced during Interview Analysis I. There are some indications that a *Local Plan* can increase the property value as well, and it has been shown that it can decrease value. In other words, the Local Plan can have an effect on property value.
  It has not been shown that the property value in an urban development area change significantly when a plan proposal is adopted, and on this point, the case study could not support

the results of Interview Analysis I (neither confirmed nor rejected). This is investigated further in the forthcoming interview analysis.

- **Preparation of land**
  Preparation of land is a value changing factor, and it has been shown that the preparation of land in some cases are profitable and in other cases, costs are higher than the value increase they produce from the developer's perspective. This is also in correspondence with the interview analysis in chapter 8. If the developer wants to sell his development area as building land or as a finished project, he has to prepare the land even if it is not profitable in itself, and that may be why he will still prepare the land in the cases where it is not profitable.
- **General price development**
  It has been shown that throughout an urban development process, the value of the project can both increase and decrease because of the general price development, meaning that the Market Prices fluctuate on a regional and national scale, influencing the individual development project as well.
- **Political decision making in the planning process**
  Protests from the citizens can make the politicians change their opinion and thereby make the political decision making in the planning process quite unpredictable. For the developer, this means that it can be hard to predict the future usage possibilities of his property if it becomes a political issue where citizens and neighbours protest. The developers' calculations and budgets become hard to balance when the potential income (which is depended in the future usage possibilities) and the costs (which depend on both the future usage possibilities and the municipality's costs strategy in preparation of land) are uncertain.
- **Actor behaviour**
  The developer can have other reasons than just profit for engaging in the urban development; for example, to have projects for the construction part of the company, which then makes a profit on a project that from a pure developer point of view is not profitable.
  Landowners might have other plans than the developer or municipality; for example, to continue the existing use although it might be profitable to sell the land and develop it.
  The municipality has a potential double role as both planning authority and potentially landowner/developer in which their decision making as landowner might affect their decision making as planning authority. The municipality is however limited by regulation on this and is not allowed to misuse its power.

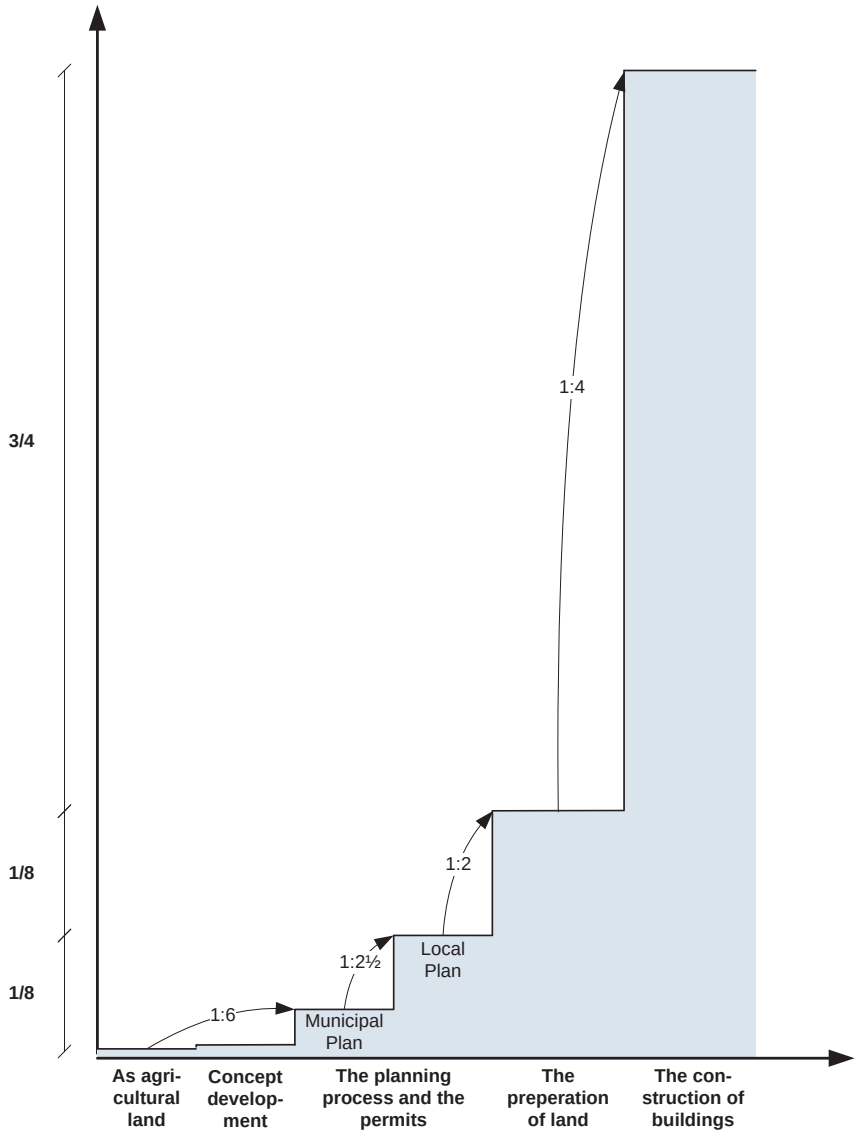

Figure 10.20.: In the Green Field cases, the value has increased roughly as sketched in this figure. 1:6 from agricultural land to land with an adopted Municipal Plan means that the value has increased 6 times the value of the land as agricultural land. 1:4 from prepared land to finished project means that the value has increased 4 times the value of the land as prepared land[70]

70 From the cases the following can be extracted:
From agricultural to adopted Municipal Plan, the value has increased with a factor 4-8.
From agricultural to adopted Local Plan, the value has increased with a factor 13.
From adopted Municipal Plan to prepared land, the value has increased with a factor 5.
From adopted Local Plan to prepared land, the value has increased with a factor 1.5.
From prepared land to finished project, the value has increased with a factor 3-5.

The size (measured in value) of the different factors influence

The cases analysed in this case study can give some indications on how much the property value increases during the urban development process, but it must be emphasised that these figures are very depended on the individual project. In the analysed cases, the value has increased, on average, as indicated in figure 10.20.

Validity

Viewing down upon the present case study, it can be argued that the number of references is kept at a minimum, which raises the question: How reliable are the results? Three of the four cases are based on verdicts (or similar) where both parties can present their arguments and the arguments are weighed against each other. Although a single source, it includes information from multiple sources. Furthermore, it must be expected that the information presented in such a situation are truthful to its possible extent[71]. Regarding the verdicts and similar, they are here viewed upon as a collection of information from different sources, presented without intentions of presenting things different from how they are. Sources like this can however not be used without caution, anything else would be naive. One case is based on an interview with one person and planning documents. Here it would have been appropriate with supplementary sources, which was not available with the present resources. To accommodate the slim use of sources, it is only attempted to conclude on the basis of multiple cases. In other words, triangulate the information from the different cases as much as possible.

Can the multiple case study with four cases stand alone? No, if they were to do so, the use of sources and the depth of the cases should have to be increased. However, the case study is not meant to stand alone, but as a combination of two interview analyses and the present multiple case study. Also in this context, the aspect of triangulation of information is in play. The purpose is as mentioned in the beginning to supplement and especially add information on how property value actually changes.

To summate how the case study turned out, it is interesting to discuss whether the multiple case study met its purpose. At large, it is argued that it does, but it would have been good if it would have been possible to track the development of value better in the cases. Especially concerning value changes around the adoption of the Lo-

71 Note that opinions etc. are subjective of nature.

cal Plan. This has however not been possible. It is chosen to bring this issue on local planning forth in the coming interviews to accommodate this lack.

11. A Revised Model of Value Changes in Urban Development – Version Three

Two temporary versions of a model, showing how property value changes during an urban development process have been presented so far and in the following, a third model is introduced and discussed. The model is displayed in figure 11.1. The model is an improved and revised version of the previous models. The multiple case study in chapter 10. – with four cases, both Green Field and Brown Field cases and with different types of ownership – is the foundation for revising the model.

The findings in the case study were very similar to the findings in the previous analyses and thereby at large verifying those. It was found that Planning, Preparation of land, General price development, Political decision making in the planning process and Actor behaviour are factors influencing property value, but it was furthermore possible to identify a "typical" size (measured in value) of the different steps in the urban development process. The individual case will of course always have special conditions making "typical" only guiding. Especially the findings on the size of the steps make it relevant to revise the model before the following interview analysis and forthcoming conclusion where the final conceptual model is presented.

The model's preconditions have not changed, the case study only emphasises the importance of them. First of all, it is in the model assumed that the development project goes well and that the end value is higher than the start value. This is not necessarily always the situation, which the cases also showed. The same cases also emphasised that a stable market situation as in the model, where the Market Prices in general are rising, is not the situation in all the cases. It is also assumed that the urban development project is sold to its new users, and that the end users actually exist, this is also not the situation in all the cases.

The Scale of the Model

The revised model – figure 11.1. – is to a wide extent scaled accordingly to the model shown in figure 10.20. There are not arguments for a different scaling of the model than found in the multiple case study, even though figure 10.20. is primarily influenced by Green Field cases. The Preparation of land and Construction steps have higher weight than it was suggested in the first interview analy-

sis, where it was suggested that 1/3 of the value increase was due to planning and 2/3 was due to construction and preparation of land. In the present model, around 12.5 % of the value increase is created during the planning step, 12.5 % of the value increase is created during the preparation of land step and the remaining 75 % is created during the construction step. It is here assumed that the calculated scaling is more accurate than the thumb-rule found in Interview Analysis I. The proposed scaling between the steps in the model also fits fairly well with how the costs are distributed throughout the urban development process – see theoretical aspects on costs in section 4.3.1. and 5.2.

The Municipal Plan's influence on the properties' future usage options suggests it should have an influence on property value. The interviewees in Interview Analysis I was of the same opinion and it has also been possible to find such value increases in the case study. Roughly, one third of the value increase created during the Planning and permit step is created during the Municipal Plan process. If it is possible to determine that the soil is not polluted or that there are not archaeological issues on the urban development area, the risk of obstacles during the later process is minimised. Less risk makes the urban development area more attractive and worth more. It has not been possible to determine how much value these clarifying studies contribute with, since they are done simultaneously with the planning. In other words, they are in principle value increasing, but not visible in the cases in the Multiple Case Study. The Local Plan is also value increasing and it is here the land is given its new usage options. This makes the land worth more. The Local Plan contributes with about two third of the value increase during the Planning and permit step. It is however one of the weaker statements that can be made through the case study, since only few of the cases are broad enough to support this, hence this is investigated further in the forthcoming interview analysis.

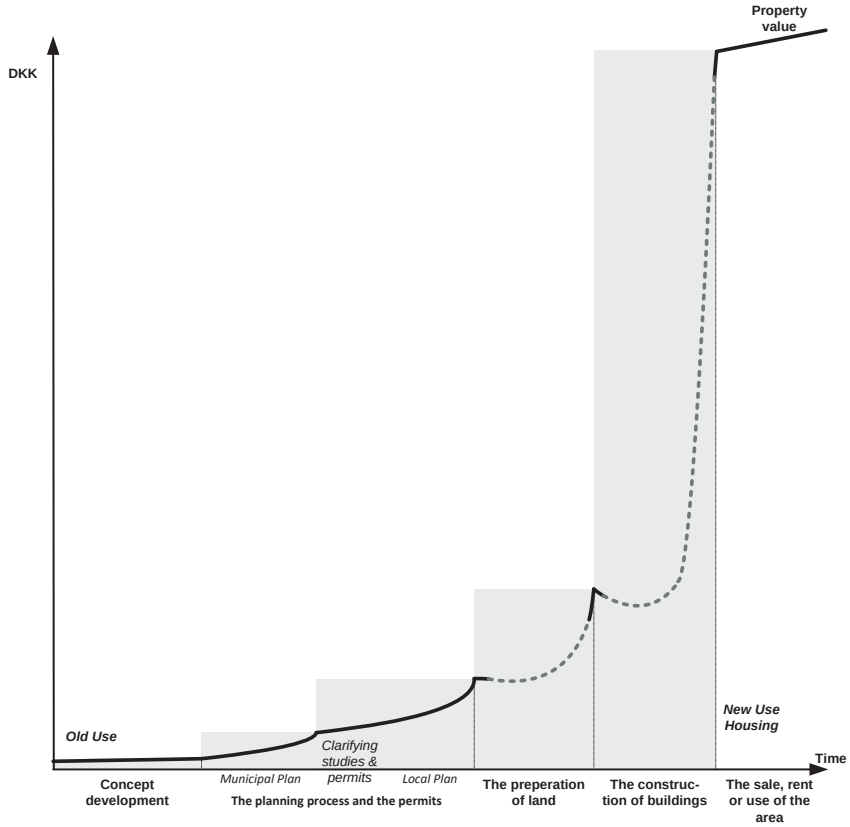

Figure 11.1.: The revised conceptual model – version three - showing how property value changes during an urban development process in Denmark.

In the following chapter, the last empirical analysis, "Interview Analysis II", is presented. The model presented here and the knowledge gathered so far is used as a starting point for the analysis, which zooms in on the Planning and permits step and the Preparation of land step.

12. Interview Analysis II

This second interview analysis is the last in a line of three empirical analyses, consisting of Interview Analysis I, a Multiple Case Study and the present Interview Analysis II. In the present analysis, the five interviews from the second round of interviews are analysed. The interviews are based on the already gathered information and the latest version of the conceptual model showing how value increase in urban development, which is presented in chapter 11.

Interviewees	
Developer	*(JW)*
Developer	*(MB)*
Developer (retail)	*(MS)*
Municipal employee	*(BØ)*
Municipal employee	*(JN)*

The interviewees have been presented in chapter 7., and they are in this chapter referred to by initials. Their initials and functions are shown in the textbox here. The interview guide can be found in appendix C, and the resumes from the interviews in the Appendix Report I-M.

Purpose of Interview Analysis II

This Interview Analysis II zooms in on how planning in particular influences value changes and how the different actors use this. Thus, the analysis focuses on especially the third sub-question – "How does municipal planning cause property value to change in the urban development process?" – and it thereby zooms in on a part of the whole urban development process. Furthermore, the purpose of the interview analysis is to confirm/disconfirm the conceptual model and provide the information needed for improving the model. Lastly, additional related issues such as the time it takes to develop an urban development project has also been included in the interviews for this analysis, since these issues have come up in the previous analyses, but have not necessarily been analysed profoundly enough at this point.

The analysis is divided into sections based on the themes that were found in the results of the interviews, and the sections are:

- 12.1. The Model in General,
- 12.2. Risk and Uncertainty,
- 12.3. The Interaction between the Developer and the Municipality,
- 12.4. Location, and
- 12.5. Conclusion.

12.1. The Model in General

None of the interviewees thought that the model was wrong, and in general, it was perceived as right. For example, MB said that the model looks realistic and JN said – generally speaking it looks reasonable. MS, who primarily works with development for retail purposes, said that the Market Value of a development property for retail purposes increases after the same principle as residential purposes in the model. When working with development for retail purposes, the model will however be squeezed a bit in height, so that the increase in value will be lower, but it is still a good business to develop for retail (MS). If the principle of value increases in urban development (with minor modifications) is the same regardless the future use, it indicates that the model – and results – has potential to be generalised to not only apply housing, but in principle all urban uses. The discussion on Planning in the face of Risk and Uncertainty in section 12.2.1. indicates that there are some differences between the future uses, and because of this, it is here not assumed that the model, just like that, can be generalised to match all future uses. It can, however, be assumed that the main principle of the model is the same – that the value of the property increases in different steps in the urban development process due to a number of key factors.

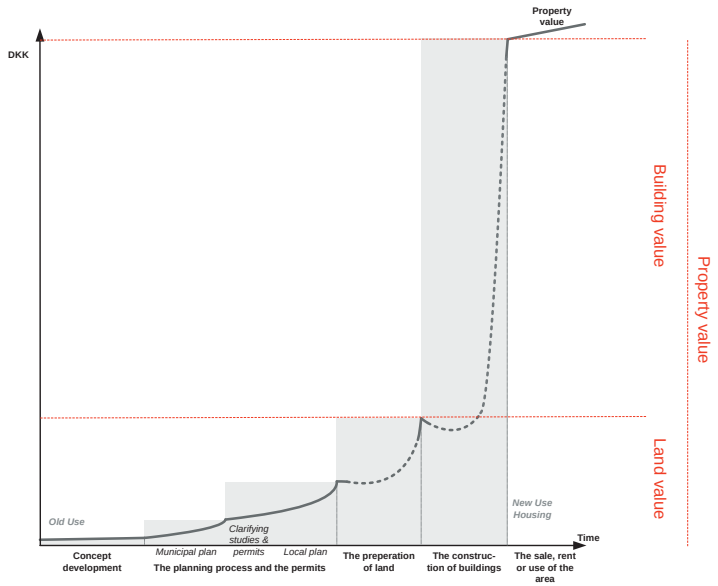

Figure 12.1.: The figure shows JW's differentiation between the land value and the building value, related to the different steps in the urban development process. Besides the red lines the model is identical to figure 11.1.

There was a general agreement among all the developers that the Construction step is where the greatest value increase is. JW made an interesting point in continuation of this when saying that the property value is divided into the value of land[72] and the value of buildings. It then becomes clear that the construction step is the only step that does not concern the value of land – see JW's point illustrated in figure 12.1. From this, it is evident that a big part of the process concerns work with the land and its value. JW and MS estimated that it takes in average 2/3 of the process time to get from beginning of concept development and until the land is prepared. It would have been a stronger point if other interviewees, the multiple case study or theory could support this statement. However, since none of the previous findings suggests otherwise and since JW and MS's statements are supported by their description of a typical development situation for their business, it is assumed that 2/3 is a reasonable rule of thumb. It is discussed below how the first 2/3 of the process can stretch out for different reasons. The remaining 1/3 of the time is used for construction. When looking at the time it takes to construct buildings and how much the property value increases, it also becomes evident that the property value increases, by far, the most in this step.

JN wondered if it would be relevant to include the time before the Concept development step starts in the model. The land has a property value before as well – a value that depends on what kind of Old Use the land has and where the urban development area is located. The location element is discussed further below. JN does however have a point in saying that there is a time before the urban development process starts. In the previous version of the model this is shown by letting the value curve start above zero on the models y-axis, but maybe this needs to be emphasised.

MS further adds that there is a profit to be made in all the steps in the urban development process. In contradiction, it was questioned by the interviewees in Interview Analysis I whether there is a profit to be made in preparation of land, but it was the case in some of the cases from the Multiple Case Study. Among the second round of interviewed developers, two out of three said that it is possible to make a profit of preparing land. In continuation of profit possibilities and the property value of a project, JW stated that there is a difference in the sale price of an urban development project depending on who the buyer is. Theoretically, this should only influence

72 It should here be noted that the preparation of land – when looking and the Danish property valuation for taxation – is not a part of the land value but included in the "building value" part of property value. In JW's point, the preparation is included in the value of land.

the Market Price and not change the Market Value of the project, since the buyer's and seller's individual factors are not included in the definition of Market Value, but in the Market Price. JW stated that when selling the whole project to a pension fund, it is done at an early stage in the process and this implies two things; that the developer's cost on financing are low and that he knows that he will receive a sales price (and size of such) at the end of the process. The opposite situation is selling individual apartments to private owners, where the developer has the cost on financing during the urban development process and does not know when the apartments will be sold and to which price. This is also a question of risk, and in the latter situation the Market Price paid is highest.

In sum the third version of the conceptual model was considered to be realistic, both regarding content and the value increases. However, the value of Old Use could be emphasised. The construction step was found to be the most value increasing and time consuming, furthermore the step that adds building value to the project.

12.2. Risk and Uncertainty

"The biggest problem in the construction industry, that is from you get a good idea (read: start of Concept development step) and until we reach here, where you are allowed to build" (JW). JW is clearest on the issue of risk and uncertainty, but the other interviewees also in other ways talk about this – either due to a planning process that stretches and takes long time or when a project becomes a political issue. There is a difference between the English textbooks, who does not point at planning and politics as a risk issue, and the interviewees and the Danish authors (Bogason et.al. 2008) referred to in section 5.2., who points at planning and politics as a risk issue. The interviewees state that the investments made in an urban development project are significantly highest during the construction step as the value increase also is, and it could be so that the English textbooks measure risk in a monetary way, while the interviewee's and (Bogason et.al. 2008) measure risk as how uncertain they experience the situation. Following the division JW illustrated – shown in figure 12.1. - it would appear that in a Danish context, risk and uncertainty is perceived high during the process of working with the land.

The issues, which came up during the interviews concerning risk and uncertainty, are discussed further below under the themes "Planning in the Face of Risk and Uncertainty" and "Politics in the Face of Risk and Uncertainty".

12.2.1. Planning in the face of Risk and Uncertainty

It was asked how much certainty the different planning documents give, meaning how certain the developer are to be allowed development, when a planning document has been adopted. This is also directly linked to how much risk there is after a plan has been adopted and how value increasing a plan is. The fact that there is a direct link between how likely an actual building right is and how value increases is one of the big points that can be extracted from these interviews. This point is elaborated further by a discussion of risk and uncertainty in relation to the Municipal Plan, the Local Plan and plan proposals.

Municipal Plan

All the interviewees agree that the Municipal Plan is only a step on the way to have the right to build, and one of the reasons for this is as JN states; the Municipal Plan and Local Plan presupposes each other. Both a Municipal Plan and a Local Plan are needed for development to be allowed, and the Municipal Plan is the first of them. JW says that it can be expected that a Local Plan is to be produced and permits to be given, when the urban development area is mentioned in the Municipal Plan. JN says that the Municipal Plan only gives development potential. MB says that the developer, based on an adopted Municipal Plan, can be fairly sure to be allowed development in the area if it is residential purpose, however if it is retail purposes it is unsure. It is also unsure exactly how much that can be build – is it 1000 m^2 or 1500 m^2 residential space. From the previous analyses, density was proved to influence property value, and the lack of specific stipulation on this in the Municipal Plan, may be one of the reasons for the limited[73] impact on property value. MS is more optimistic and says that if the area is in the Municipal Plan, it takes a lot for the municipality to say no, and not produce a Local Plan as well. In these statements, it shines through that there is some certainty in the Municipal Plan – it is a big step on the way, but it is also clear that it is not all the way. JW also emphasises that there is a value increase when the Municipal Plan is adopted and exemplifies it with an area of agricultural land with a value of 30 DKK/m^2 which is transferred to urban land with residential purposes in the Municipal Plan with a value increase to 200 DKK/m^2.

73 Limited should here be seen in connection to the impact of a Local Plan with specific stipulations on density and use.

BØ supplements this with the comment that if it is not necessary to make a Local Plan for the project[74], the Municipal Plan gives the same "rights" as a Local Plan gives.

Local Plan

When the Local Plan has been adopted the developer has, as JN puts it, reached goal – so to speak. There is only a little step left to get the building permit and according to BØ and MS a building permit must in principle be given. According to JN, there will usually be a correspondence in time between the adoption of the Local Plan and the building permit – there will only be a short time in between. The time span between the Municipal Plan and the Local Plan will usually be larger.

With an adopted Local Plan, it will be known exactly what is possible and what is not possible to develop (JW; MB). This will reduce the uncertainty, because it is not only assumable that a building permit will be given, it is also known what can be build. MB and MS have some elaborating thoughts on this. According to MB, the risk reducing element from an adopted Local Plan depends on the future use of the area. This also leads back to his thoughts on how much certainty a Municipal Plan gives. He stated that if the future use is residential, the Municipal Plan will give quite of bit of certainty, to which the Local Plan cannot add much, because it is already certain that it can be build. However, the Local Plan will specify how much. If the future use, on the other hand, is retail, MB does not believe that the Municipal Plan gives much certainty, but the Local Plan will add a lot of certainty. JW distinguishes between the Municipal Plan and the Local Plan by saying that the Municipal Plan determines that it is a housing area, but the Local Plan determines exactly which kind of housing area and how much can be build. MB adds that if the area is to be a shopping centre, the Local Plan will reduce uncertainty significantly. MS puts it a bit different, but there is a link nevertheless, because he says that amount of uncertainty that the Local Plan reduces depends on how necessary the development area is to the developer. If the developer's project can only be placed at a specific spot – much like the shopping centre example – the Local Plan will reduce uncertainty a lot, unlike if the developer's project can be placed a handful other places it will not reduce as much, because the project can be moved if necessary – as it can be the case with a standard housing project. MB further adds that in

74 Some smaller projects are below the limit where a Local Plan is required cf. the Planning Act, and building permits can be given on the basis of the Municipal Plan instead. It is, as mentioned earlier assumed, in this research that the urban development projects are of a size that require local planning.

the present market situation (fall 2010), developers only buy local planned land, or at least with the condition that the sale only goes through if a Local Plan is adopted – in other words the developers wait until he is certain. This illustrates the Local Plan's importance as a risk reducing factor, and value adding factor.

The developers agree that there is a value increase between the Municipal Plan and the Local Plan. MB says that for Green Field projects the increase shown in the model – see figure 11.1. – seem plausible. JW illustrates the value increase due to planning with a Green Field example: a piece of agricultural land is bought for 30 DKK/m^2, which afterwards is changed by the Municipal Plan into urban land with residential purposes. The land then increases to about 200 DKK/m^2 land. If a standard plot ratio of 25 %[75] have been used in the Municipal Plan it is necessary to have 4 m^2 land to build 1 m^2 housing space, in other words the value is 800 DKK/m^2 housing space. When the Local Plan is adopted, the area is worth around 2.500 DKK/m^2 housing space. The value has increased with a factor 3, which is twice as much as in the model[76]. MB is however unsure if the increase in value is this big in Brown Field projects as well. This neither determines that the increase in the model is right nor wrong – it is however here interpreted as an indication on that the value increase in the model is a useful indication of an average.

Plan Proposals

"That a proposal does not end up as a Local Plan, which broadly allows the same as the proposal, this I have only experienced one single time." MS – Translated by author

In Interview Analysis I it was indicated that the plan proposals were an important value increasing factor. In the interviews for this analysis, this has been investigated further. The developer MB states plain and simple – the proposal gives no certainty, to which BØ adds that the proposal is a middle step. MB further adds that the proposal can be the foundation for taking a chance, but not in the present market situation – at the moment, developers wait. JN and MS have experienced that Local Plan proposals have not been final adopted, as it was also the situation in one of the cases in the Multiple Case Study. According to MS, it is, however, the exception that a proposal does not make it – because the proposal also indirectly represents a "yes" from the politicians to the project. According to JN, there are two types of comments to

75 For future "open-low" / single family housing areas.

76 It must be noted though that (JW) does not take into account that some of the bought land will be used for roads and green areas. In the Multiple Case Study, between 38 % and 70 % could be built upon in the Green Field cases.

a Local Plan proposal[77]; from the public, neighbours etc. and from other public authorities – some of which can veto the Local Plan. The case in section 10.4. is an example of a proposal that is not adopted due to comments from the public, neighbours etc.

	Municipal Plan proposal	Municipal Plan	Local Plan proposal	Local Plan
Plan vs. risk and uncertainty.	Is not risk and uncertainty reducing, but a political indication for future options.	Is risk and uncertainty reducing – especially for housing projects.	Is not risk and uncertainty reducing, but a political indication for future options.	Is risk and uncertainty reducing.
Plan vs. the urban development areas usage options.	Indicates that an area may become a development area.	Determines that the area in the future can be developed.	Indicates that the area becomes a development area if the politicians do not decide otherwise during the planning process.	Determines that the area can be developed – and that the developer in principle is entitled to a building permit if the project fits within the Local Plan options.
Plan vs. value increase.	The value increase is insignificant.	The Municipal Plan is a value increasing factor.	The value increase is insignificant.	The Local Plan is a value increasing factor.

Figure 12.2.: Overview of how plan documents relate to risk in Danish context.

When viewing upon how plan proposals, Municipal Plan, and Local Plans reduce the developers' uncertainty, it is evident that there is a progression from the Municipal Plan proposal to the adopted Local Plan. The Municipal Plan reduces the developer's uncertainty, but he cannot be sure that future development is allowed. However, the developer can expect to get a building permit if the development project fits the options given in an adopted Local Plan. This is summed up in the table in figure 12.2. Combining this with the interviewees' statements that the Municipal Plan and Local Plan, but not the proposals, have a value increasing effect on the property, it becomes evident that there is a connection between how uncertain usage options are, which plans have been adopted and how big the value of property is.

12.2.2. Politics in the Face of Risk and Uncertainty

The political aspect of the planning process, where the politicians adopt the plans, has been touched upon in the discussion on plan proposal above. The politician's reaction on complaints from for ex-

77 Comments given in public hearing phase. The flow is that a plan proposal is adopted, sent in hearing, incoming comments are evaluated and then the final plan is adopted

ample neighbours was also discussed in the analysis in section 5.2. and chapter 8., where it was emphasised as a risk factor. In this analysis JN also states that the political handling of complaints/comments from the public as one of the reasons for changes in a plan proposal. MS is more direct and states that the political game in relation to planning means everything. MB says that, popular speaking, the first 6 months after the election of a new mayor (and the other politicians in the city council) is the best period to propose an urban development project. The nearer the election is, the harder it gets to get permission for a project, because the politicians do not want a whole community against them during the elections. There are some indications in this; that the political decisions are not always predictable. This adds to the importance of the certainty and predictability that the planning documents give. MS highlights an area he knows of, which is one of the exclusive and "historic" areas in a city, where the adopted planning allows retail, but it is political not possible to get a project approved, partly because of resistance from the community. This example shows that the political situation can – as e.g. §14 in the Danish Planning Act also shows – overrule adopted planning. The Danish Planning Act §14[78] is also why a Local Plan does in principle and usually give the right to develop, but not always.

In sum regarding risk and uncertainty and how it influences on the property value, it is found that the Municipal Plan gives some certainty and adds some value, and the Local Plan gives more certainty and adds more value. Furthermore, that plan proposals can be viewed as a political indication for future usage options.

12.3. The Interaction between the Developer and the Municipality

Interaction refers to the communication between the developer and the municipality during the steps of Concept development, Planning and permits, and the Preparation of land. How value increase during these steps and how developers experience risk has been analysed, but it is also relevant to understand how the developer and municipality interact and see how the future usage options in planning and costs in preparation of land are settled. In other words to go beyond the fact stated in chapter 1.: Developers need planning and planning authorities to be able to develop, and the municipality needs the developers to implement their planning; a mutually beneficial relation among where the developers and municipality have to interact with each other.

78 The municipality can turn down a project even though it is in coherence with an adopted Local Plan. If they do so, they must make a new Local Plan within one year.

Issues on this can roughly be divided in: The initiating contact, Concerning Planning and Plan Content and finally Concerning Preparation of Land. The interaction is analysed further under these categories.

12.3.1. The Initiating Contact

Given the typical situation that the developer has bought a piece of land, which is designated in the Municipal Plan, and given that the developer has sketches[79] of his wished project. Then according to the interviewees, the contact will begin with an informal meeting between the developer and participants from the municipality. This is often with participation from director or mayor level from the municipality's side (JW; JN; BØ; MB). MS works with smaller projects and often starts with someone from the planning department in the administration. MB and JW also indicate that the contact persons depend on the project; if it is a smaller unproblematic project, it is sufficient to contact the administration. JW sums it up by saying – you need to have a meeting with those who can say "yes" or "no". These are the first three steps in the phase of initial contact – see figure 12.3.

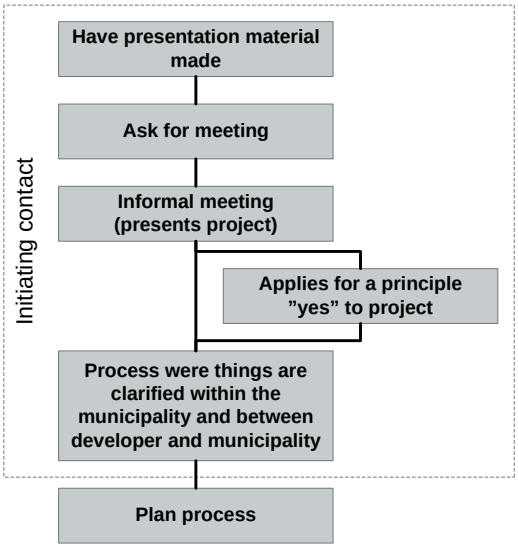

Figure 12.3.: Principle diagram of step in the initiating contact between the municipality and the developer seen from the developer's point of view. (Own figure)

BØ represents a municipality that handles the initiating contact in a different way than average. In the municipality where BØ works, there are five people employed, whose job is to present the development opportunities in the municipality for investors and developers. This gives a situation where they as municipality comes to the developer, just as the developers usually come to the municipality. It appears to be working, and cause a situation where both sides of the table – at the informal meetings – speak the same language.

79 According to the interviewed developers, the nature of the sketches and presentation material depends on the size of the project, but for the sake of the example it is assumed that an architect has made preliminary drawings of how the project could look like.

If the municipality is interested in the project after the first meeting a process will start. This purpose of this, still informal, process is to clarify:

- how the project will look exactly – size, use, appearance etc.;
- if and how it is possible in relation to noise, traffic, pollution, existing planning etc.;
- demands regarding preparation of land – see further below on this issue; and lastly
- to secure the political mandate.
  (MS; JN; BØ; MB)

MS, BØ and MB further add that this process can be initiated formally with an application for a principle yes to the project or an application for a Local Plan – see figure 12.3. After this process the formal planning process starts. Both JN and BØ identify themselves as working in a municipality that follows a "political planning" approach. JN explains the term as a process in which planning creates the opportunities that the developers want – development lead. He viewed this as a contradiction to a traditional planning process – plan lead – where planning expresses the future development, which is then sought implemented. When asking the interviewees on how long time the initial contact takes and how it is done, four out of five interviewees said that it depends on the municipality, meaning which of the 98 municipalities in Denmark that the developer is interacting with. They also said that it depends on the project's size as mentioned above. However, a correlation showed itself; if the municipality follows the traditional plan lead approach, and shows where the developer can place his project, within the existing plans, it will be a shorter process for two reasons; there are only a few things to negotiate about and the Municipal Plan/Local Plan does not need to be changed, which also means less political involvement. This is illustrated in figure 12.4. It is however an open question how long time the municipality has to wait before a developer appears and wishes to implement the municipality's planning. The combination of waiting time and planning process can in principle be longer than a more "political" planning process. If the municipality approve the developer's ideas and start a "political" plan process, planning will take longer time than the plan-lead approach. Firstly, it has to be settled how much, which type of use etc., and secondly plans need to be changed, which also leads to a bigger political process than the plan lead approach. JN further adds that the municipality's choice of planning approach might have something to do with the municipality's geographical location. There are some indications of this among the interviewees that in some places, a "political process" may be necessary to ensure development. Other in-

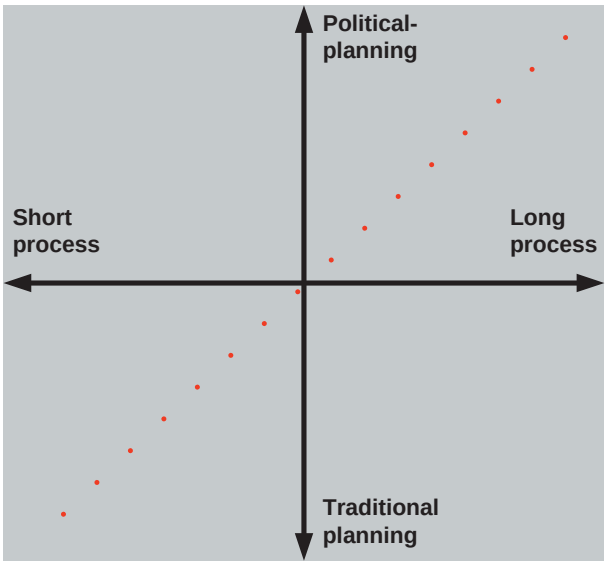

Figure 12.4.: The figure shows the correlation between the time span of the initial contact and the municipality's approach to planning as either "political planning" approach (development lead) or a traditional planning process (plan lead) where the planning expresses the future development and is then sought implemented. (Own figure)

terviewees also indicate that it can be hard to shorten the planning process in the Copenhagen area. It seems that with the development potential in the Copenhagen area – referring to JN's comment on geography – it should be easier to shorten the process than in the rest of Denmark, but this is apparently not the case. A supplementing explanation can be JW's comment that the time it takes also depends on the effectiveness and functionality of the municipality's political and administrative system. When the interviewees say that things work slowly in and around bigger cities, it does not necessarily mean that it is not well-functioning, it can also simply mean that the size of the political and administrative system causes a slower reaction.

This initiating contact can take anything between 2 weeks and 2.5 years. MS, who primary works with smaller projects, uses between two weeks and three months, while some of MB's major projects can take 2-2.5 years. In MB's experience, smaller unproblematic projects can initiate the formal plan process after 1.5 months. Concerning the timeframe for the initiating contact, it becomes clear that it is very depended on the context, but it seems to focus around the size of the project, the areas current and future planning and if it is a political sensitive area.

12.3.2. Concerning Planning and Plan Content

Concerning the interaction between the developer and the municipality regarding planning documents and their content, two issues arise; what is the negotiation about and can the developer obtain something extra in these negotiations. Regarding the latter the question: Can the developer, as for example in Sweden, make an agreement in which the developer is allowed to build more against paying something extra outside the area.

> *"…but there is also a high value increase (read: in increasing the density) – there just is – it is a really big value increase."*
> *JW – Translated by author*

Density

In the previous chapters, the allowed density has been discussed from different angles. It would seem that the allowed density is one of the elements in the negotiations between the developer and the municipality. The interviews showed that allowed density is not the only parameter in the negations although still something being discussed. JW believes that the developer and the municipality perceive the density issues differently. The developer focuses on the project, whether it fits in the area and whether it is a good project, while the municipality focuses on what the density is. However, BØ and MB detects a movement by the municipalities towards also looking at the whole project and whether it fits into the surrounding areas. Furthermore, there is a tendency towards assessing the open space/recreational areas of the development project instead of focusing on a specific density. It does happen that a higher density is agreed upon, especially if it is without discomfort of the surrounding properties (MS). However, excepted from this is retail cf. the Danish Planning Act (MS), and "Dense-low"[80] residential areas is also without possibilities (MB).

"…but there is also a high value increase (read: in increasing the density) – there just is – it is a really big value increase" (JW). He further adds that the high value increase comes with a cost, because such increases in density is often followed by a need for parking cellar or something else costly. JN elaborates on this and adds that the profit rate is directly dependent on the density, because a lot of the fixed costs (see also section 3.3.) do not change when the density increases – e.g. road costs.

80 An area with terrace houses is a typical example of a "Dense-low" residential area. Typically, it consists of 1-2 storages buildings with small gardens attached to the dwellings.

In section 3.3., a theory concerning that a density which is to high have negative influence on property value was discussed. The essence of the theory was that if a developer only owns and builds in a part of a bigger urban development area, he can build so dense that the rest of the urban development area will decrease in value. The interviewees were asked if they had ever experienced this, and this was not the case. JN, BØ and MS expressed that if it happened, it would be a sign of failure. JW, BØ and MB had related examples, but the problematic part of these examples were either the type of residents[81] or if the buildings were unattractive. MB added that lack of open space and taking other buildings sunlight could also be a problem. Open space and lack of sunlight have some connection to density – but generally the theory on a density which is to high seems to be only a theoretical problem viewed from a Danish context.

Other Parameters

MB said that building materials are often a part of the discussion of Local Plan content, and it is related to the buildings' quality and appearance, and therefore also on the property value. It also reflects his perception that Local Plans have become increasingly detailed. BØ adds that they as a municipality have demands for how the project looks.

Something for Something

The general opinion is clear – a developer cannot negotiate something extra against paying something extra e.g. a kindergarten 2 km away. JN adds that it according to Danish administrative law would be wrong to do so, and it would come close to corruption. To JW, as a developer, it does not seem as an unfair principle, but he has never seen it happen in DK. Although it does not seem to be the usual case, that such negotiations takes place, it does according to one of the five interviewees MS happen. According to MS, this can be a nearby roundabout or even the roof on the city hall. If the roof on the city hall is figuratively speaking or an actual example is unknown.

12.3.3. Concerning Preparation of Land

It is not in a Danish context described who does what during the process of preparing the land. Especially how and when the negotiation between the developer and the municipality on this takes place is something that is not described. (Miljøministeriet 2006, p. 38-39) has some indications, but not much more than a negotiation takes place. According to the developers and BØ, a negotiation occurs and

81 E.g. low income groups in areas that are typically inhabited by other groups of people – it can also be other kinds of segregations that are mixed.

there is some sort of written agreement concerning the preparation of land. According to BØ, it is included in the Local Plan, while the developers indicate that it is a separate, written agreement. These negotiations take place during the process of clarifying the project or in the planning process – see figure 12.3. MS further adds that it is settled at the latest before the preparation of land starts.

The topics for negotiation can on the basis of the interviews be divided in four themes:

- The preparation of the urban development area itself – meaning within the area,
- The road access to the urban development area (and attached areas). This could be a traffic lights or a turn lane,
- The re-establishment of recreational elements that the urban development project lies upon – if e.g. a playground is taken down to make space for the urban development project, another playground can be made elsewhere,
- Things outside the area e.g. roundabout or kindergarten 2 km away.

Concerning the first bullet, the municipality only pays if they own the area, and in that case they will add the preparation costs to the sales price[82] – says JN and BØ who both are municipal employed. This confirms the "owner pay principle" as indicated in Interview Analysis I. The responsible part for paying the preparations costs when the developer buys the land from a private owner, either the seller or owner, is settled in the sale agreement (MB). Concerning the second bullet, MS indicates that there has been a shift towards that the developer more frequently pays, were the municipality paid more often previously. JW and BØ further add that it also depends on how many that has advantage of the new road access. BØ gave an example of a parking house at a hospital, which was paid by the hospital and build on hospital land. The municipality did however pay the new traffic lights, because it released parking spaces and therefore the pressure on the parking spaces in the inner city. It could also be so that the access road gives access to other areas, which will also benefit from extra road capacity. MS brought up the third bullet and gave the example with the playground above, where the re-establishment of the playground was a precondition of being allowed to develop on the old playground area. It could also be a green area instead of a playground that is "moved" (MS). It can be claimed that the third bullet is a grey area where it in some cases can come close to the "something for something" situation

82 This fits very well with the fact that the municipality then sells a prepared lot and not just a lot with an adopted Local Plan. If the conceptual model is right it should also be so.

discussed above. On the other hand the concept of substitution is a tool in Danish regulation e.g. the Danish Forest Act § 14. The forth bullet is "something for something" in a Danish context and as discussed above not used.

In sum regarding the interaction between the municipality and the developer, it is found that there typically is an informal meeting structure before the formal planning process, where the developer presents his ideas. The municipality can handle this in different ways from a plan-lead approach to a development lead approach. The latter takes longer time, but opens for changes in the existing planning and new usage options. In the planning process it has been found that density and building materials are some of the parameters that the developer and municipality negotiate about. Lastly it has been found that agreements on preparation of land are written agreements, where it is typically the owner who pays the preparation of land.

12.4. Location

When asking the interviewees how long time the urban development process takes they all in one way or another replied that it depends on the project, its size and it depends on the location. Concerning the project and its size, this has been discussed in section 12.3.1. and the connection between the project and the time it takes to develop the site is that a bigger and more controversial project or a more political project takes longer time – due to the time it takes to straighten things out. There is however also a connection between the location of the urban development area and how long the process is and how valuable the development is. This is discussed in the following sections, respectively.

Before moving as far it must be noted that the interviewees refer to different kinds of locations. Firstly, the distinction between Green Field and Brown Field is made by JN and MS, meaning at the edge of the city or within the city, and the distinction between different cities is made by JW, JN, MB and MS.

12.4.1. Location's Influence on Planning Process

There is a difference in location between Green Fields and Brown Fields which becomes evident when looking at how long time the planning process takes. It appears that the Brown Field cases potentially take longer time. Especially the harbour front Brown Field cases are by JW and MB emphasised as cases where the process can be extended due to different reasons. JW and MS emphasise

political interests as something that is area dependent, meaning that in Brown Field areas, e.g. harbour fronts, there can be more political focus and it will due to this take longer time to get things settled. MS further adds that there can be areas in a city where there is no political will to allow urban development; this could be historical areas or areas with long architectural traditions. Both from the developer's side and the municipality's side there is also an increased focus on what is hidden in the ground (JN; MB). The large city in the municipality where JN works has a city centre where some parts dates back to the medieval, and JN points out that the potential archaeological findings lengthens both the Preparation of land step and the planning process. This exemplifies that the municipality and developer must pay regard to a larger amount of elements in Brown Fields, which increases the time it takes to get plans produced. MB further states that Brown Fields are often followed by a longer planning process than Green Field areas, partly due to the possibilities of discussing the future allowed density of the area. He says that in "dense-low" areas, the future density cannot be discussed as it is given on beforehand in Danish customs on how dense a "dense-low" area is. In the inner city it is often discussable. Presumably, what applies for "dense-low" areas also apply for the even more standardised single family housing type "open-low" in Danish Green Field areas. MB's statement shows that there is simply less to discuss in Green Field housing cases. Summated, this indicates that location of an urban development project influenced on the time span of the planning process, in which Brown Field cases are likely to extent the process.

12.4.2. Location's Influence on Value

The property value of the finished urban development project is assessed to be dependent on the location (JW; JN; MS). The value will be different from city to city, but it will also be different within the city, as also found in section 3.2. – roughly speaking between Green Fields and Brown Fields. MS gives the clearest example of why there can be a value difference between Green Fields and Brown Fields. MS works with development for retail and in that field it is important to know which kind of traffic that passes by a shop. In the city centre, there will be pedestrians, cyclists and car traffic, but at the edges of a city there will in general only be car traffic. Furthermore, there will live fewer people. In other words, the foundation for setting up a shop is poorer. The indication that Brown Fields are worth more the Green Fields also fits the theoretical discussion of how value increases towards the city centre in chapter 3.

The value of the urban development project when the concept development starts will also depend on the location (JW; JN; MS). The value will be different from city to city, but also between the Green Fields at the fringe of the city and the Brown Fields in the city centre. That the "start value" and "end value" of the urban development process changes due to location has also been established in previous chapters. However, JW and JN add that the "start value" and "end value" of the urban development project do not increase the same, as it was indicated in Interview Analysis I. On a scale from poor to good location the "start value" and "end value" of a good location will increase, but the "end value" will increase more (JW; JN). JW illustrates this with an example of a large provincial town and the city of Copenhagen (see figure 12.5.). The "start value" of an urban development project in the two locations could be 2.500 DKK/m^2 residential space[83] and 5.000 DKK/m^2 residential space, respectively. The "end value" of the same project could be 20.000 DKK/m^2 residential space and 30.000 DKK/m^2 residential space, respectively. From figure 12.5., it can visually be seen that the increase between start value and end value in the Copenhagen case is biggest. Both JW and JN state that the effect of this is a higher profit to the developer, because the construction costs have not changed. This means that a better location potentially cause a bigger profit.

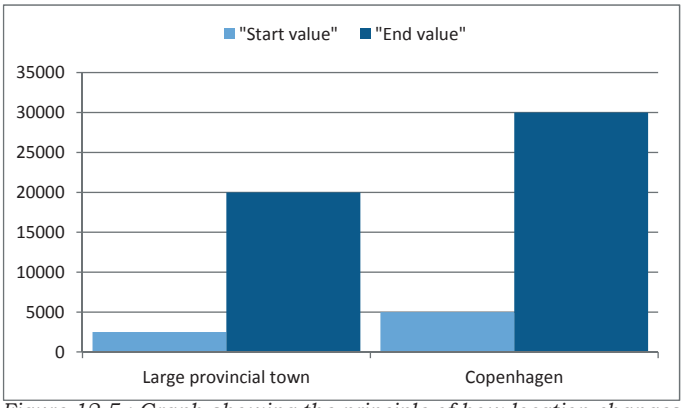

Figure 12.5.: Graph showing the principle of how location changes the "start value" and "end value" of the same urban development project, but two different locations. (Own Figure)

In section 12.3.1. and figure 12.4., different types of planning approaches utilised by the municipality was discussed. JN spoke about a political planning process and adds further that the municipality where he is working – one with a large provincial town,

83 JW measured in amount of square meter residential space and not square meter land. It does however not change his point that he uses these figures instead of square meter land.

although not the one from the example above – the political planning process might be a necessity to ensure development, where a plan-led approach may not ensure enough urban development. The other interviewees did not comment this.

In sum regarding the location of urban development projects for housing, the interview analysis indicates that Brown Fields are typically more expensive than Green Fields and that they are more complex, which also prolongs the time it takes to develop. There is also a difference from city to city.

12.6. Conclusion

In this interview analysis it has been analysed how planning in particular influences value changes and how the different actors use this. Furthermore it has been analysed if the third conceptual model could be confirmed/disconfirmed.

Nothing in the present analysis suggests that the conceptual model does not represent the concept of how value in principle evolves in an urban development project. It was suggested too stress in the model that the Old Use have a value before the development starts. There were some thoughts on the "height" of the different step, but not something that points conclusive towards a change of the model on this.

The steps of Concept development, Planning and clarifying permits, and Preparation of land all concern the land, meaning no buildings have been made at this point so the effort in these steps concerns the land, i.e. also the value of land. This is off course with the intention to construct building afterwards, but it is not until the construction step that buildings and an actual "building value" appear. The steps of Concept development, Planning and clarifying permits, and Preparation of land are perceived as risk full in a Danish perspective, and the most time consuming. The construction step – estimated to be 1/3 of the process – is the most value increasing, most costly and adds building value to the property.

Planning and especially the adopted plan are both value increasing and risk reducing. The Municipal Plan gives some certainty and adds some value, and the Local Plan gives more certainty and adds more value. The plan proposals are not perceived as value increasing and risk reducing. In the Planning process and the permits step there seem to be the following mechanisms:

- Property value is increasing,
- Usage options given in planning becomes increasingly specific,
- An increase in certainty, from the developer's point of view, to get buildings rights, and
- Risk reductions.

A part of the planning process is a political process, in which the plan is adopted by the politicians in the municipal council. From a developer perspective, it can be hard to predict the politician's decisions, which characterise the uncertainty in the process. The uncertainty increases when the political interest/involvement in the planning process increases. However, larger political involvement also increases the opportunities to change the existing planning.

Location also influences the value of property. Different cities have different levels of attraction, meaning that a similar building and/or location have different values in different cities. There is also a difference within a city. When moving from the fringe towards the city centre, the property value increases, but the political interest usually also increases simultaneously; the amount of elements, such as sewage and pollution, also increases; and due to this, the initiating contact and planning process can take longer time.

The interaction between the developer and the municipality during the steps of Concept development, Planning and clarifying permits, and Preparation of land usually starts with an informal meeting. If it is a large project, the meeting will often be with the mayor or director of the administration and if it is a minor project, the meeting will often be with someone from the administration. After this, details regarding the development project are clarified – what is the project's purpose, how big, when, where etc. This can for unproblematic projects more or less be settled in the first meeting, but especially with large projects, a process with a series of meetings will start. When things are settled, and political will is achieved, the formal planning process will start. A part of the clarification of things is also who is responsible and pays for the preparation of land. It is usually the developer who conducts and pays for the preparation of land, and the agreement is always written in one way or another.

12.6.1. Influencing Factors

The following section has the purpose to summarise the main factors, found in this chapter, which has an influence on the evolvement of property value in the urban development process and the planning process in particular.

- **Planning**
  Both the *Municipal Plan* and the *Local Plan* are factors that can cause property value to increase, and they both reduce the developer's uncertainty. The Local Plan is where the exact usage opportunities are determined.
- **Location**
  Green Fields and Brown Fields have different potential and difficulties. Location (towards the better) improves the potential for value increase, but it can also complicate the process due to more obstacles in the land and the amount of things that need to be settled, which potentially prolongs the planning process. Between cities, location can cause that urban development projects have different start values and potential end values.
- **Old Use**
  The urban development area will have an existing Old Use that determines the value of the property when the urban development process starts. Depending on the Old Use, the properties will have different start values.
- **Preparation of land**
  Preparation of land is value increasing and profit can be made.
- **Construction of buildings**
  Construction of buildings is the most value increasing step, but also costly, and the factor that adds building value to the urban development project.
- **Political process**
  There are two sides of the political process in urban development projects; it can prolong and make the planning process more uncertain for the developer; and it can also be the factor that makes changes in the planning documents possible.
- **Time**
  When times passes and the urban development drags out, e.g. the society and the financial situation have time to change and make the urban development process out-dated (or some degree of this) and making the project hard to sell.
- **Risk**
  Risk and uncertainty cause a lower property value, which means that when a risk factor is removed, e.g. due to adopted planning, the property value will increase.

Many of these factors have also emerged in the previous chapters, which entails a greater validity of the findings. For example, the preparation of land was also in chapter 5, 8 and 10 found to be an influencing factor.

13. Conclusion and a Conceptual Model of Value Changes in Urban Development

The purpose of this chapter is to answer the research question and summarise the results of this research. The chapter is divided into three parts. Firstly, the findings of the analyses are summarised and the previous versions of the conceptual model are presented. Secondly, the final conceptual model is created and described in details. This answers the research question in part and concerns how property value changes and the creation of a conceptual model. Thirdly, the key factors causing property value changes are presented, which relates to the key factors searched for in the research question and answers the remaining part of the research question. As mentioned, the purpose of this chapter is to answer the research question and to recap the research question, it is:

> *How does property value change in urban development areas from the time when the existing Old Use stops and until the area is fully (re)developed as a residential area; and is it possible to create a conceptual model, describing the key factors (and their weight) in this increase of value?*
> - *The project will have particular emphasis on how municipal planning, and thereby new usage options, influences on the value of property.*

The Research Strategy

To shortly recap the research strategy it consists of a theoretical part and an empirical part. The theoretical part consist of three theoretical analyses; "The Value of Property and Its Determinants", "The Urban Development Process", and "Property Value Changes during Urban Development". Based on these analyses, a first edition of a conceptual model of changes in property value during urban development was made, see also figure 13.1. The next elements in the research strategy were empirical and consisted of three analyses; Interview Analysis I, a Multiple Case study and Interview Analysis II. After each empirical analysis, a revised conceptual model was made. Lastly, the final conceptual model is created, which is done in this chapter.

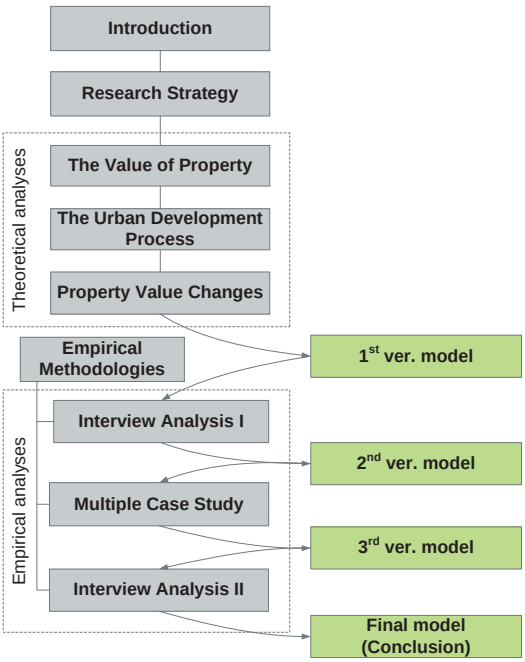

Figure 13.1.: The structure of the research.

13.1. The Summarised Findings of the Analyses

In the following the findings of the conducted analyses are summarised. The different versions of a conceptual model are also shown.

The Theoretical Analyses

In the analysis "The value of property and its determinants", Market Value was defined as *"…the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion"* (Lantmäteriverket & Mäklersamfundet 2004, p. 3-4), and it was chosen as the primary definition of value in this research – the property's Market Value. It was also found that factors influencing properties' Market Value can be categorised in:

- Property Related Factors,
- Location and Area Related Factors,
- Social Factors, and
- Affiliated Community Factors.

The remaining category, Individual Factors, have an influence on the Market Price, but not on the properties' Market Value.

The influence of planning on the value of property was analysed further, and it was through the existing theory determined that both the permitted use and the allowed density influence the value of a property and especially the value of land.

The urban development process was defined in the analysis "The Urban Development Process" and was defined as a series of seven steps:

- Concept development,
- The planning process and the permits,
- The preparation of land,
- The supply of land,
- Financing,
- The construction of buildings, and
- The sale, rent or use of the area.

The steps Supply of land and Financing are not included in the conceptual model of changes in property value during urban development, because they concern changes in ownership and not changes of the property as such. When property changes ownership it is between actors in the urban development process and the main actors – described in the analysis – are the developer, municipality, landowner and investor.

The analysis "Property Value Changes during Urban Development" is an analysis of existing models, the stair step models, and it was found that these models are suitable for showing how property value changes during the urban development process. It was furthermore found that planning, existing land use, general price development, preparation of land, construction of buildings and risk are factors influencing properties' Market Value.

A conceptual model of how property value changes in the urban development process was created in the chapter "A Model of Changes in Property Value during Urban Development – In Theory" based on the theoretical analyses, and the model is shown in figure 13.2.

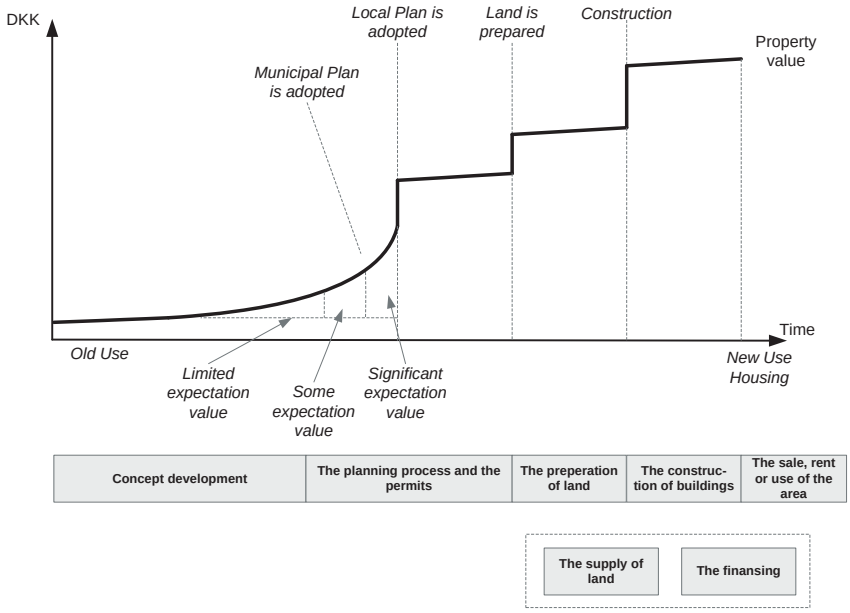

Figure 13.2.: The first version of a conceptual model, made after the theoretical analyses, showing how property values generally change throughout the urban development process. It is based on the theoretical analyses.

The Empirical Analyses

In the first empirical analysis, Interview Analysis I, six people were interviewed on their view of how a property's Market Value changes during the urban development process. The starting point of the interviews was the model shown in figure 13.2. Through the interviews, it was found that Planning; Preparation of land; Construction; Presale and rental contracts; Costs; Location and Prior use are factors influencing property value. It was furthermore found that the model based on theory could be improved – especially concerning when and why the property value increased. The interview analysis did not bring sufficient information of how much the value increased to be able to incorporate this in the model at this point. A revised conceptual model was created based on the first model and Interview Analysis I – see figure 13.3. In the revised model, the Planning process and the permits step has been divided into three sub-steps; Municipal Plan, Clarifying studies and permits and Local plan. The curve showing property value has been changed in the Preparation of land and Construction step. Lastly, it has been indicated in the model that the urban development project will have a value when the urban development process has ended and it is in use.

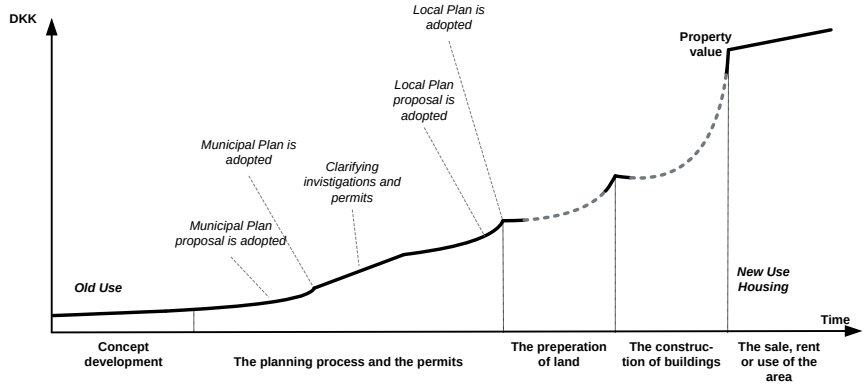

Figure 13.3.: The revised second version of the conceptual model, made after Interview Analysis I showing how value changes throughout the urban development process.

The second empirical analyses was a Multiple Case Study. Four cases were analysed including both Green Field and Brown Field cases and with different types of ownership. The findings in the case study were very similar to the findings in the previous analyses and thereby at large verifying the previous findings. It was found that Planning, Preparation of land, the General price development, Political decision making in the planning process and Actor behaviour are factors, influencing property value in the urban development process. It was furthermore possible to identify a "typical" height (measured in value) of the different steps in the conceptual model. The individual urban development project will of course always have special conditions making "typical" only guiding. It has not been possible to extract the influence of the individual factor, but as mentioned only the typical height of the steps and sub-steps. The analyses provided some findings on the influence of the Local Plan, but this could be better grounded. Especially the findings on the size of influence made it necessary to revise the model again.

A third version of a conceptual model showing how property value change during the urban development process was created after the Multiple Case Study, and it is shown in figure 13.4. Especially the heights of the different steps in the model were adjusted according to the findings in the Multiple Case Study.

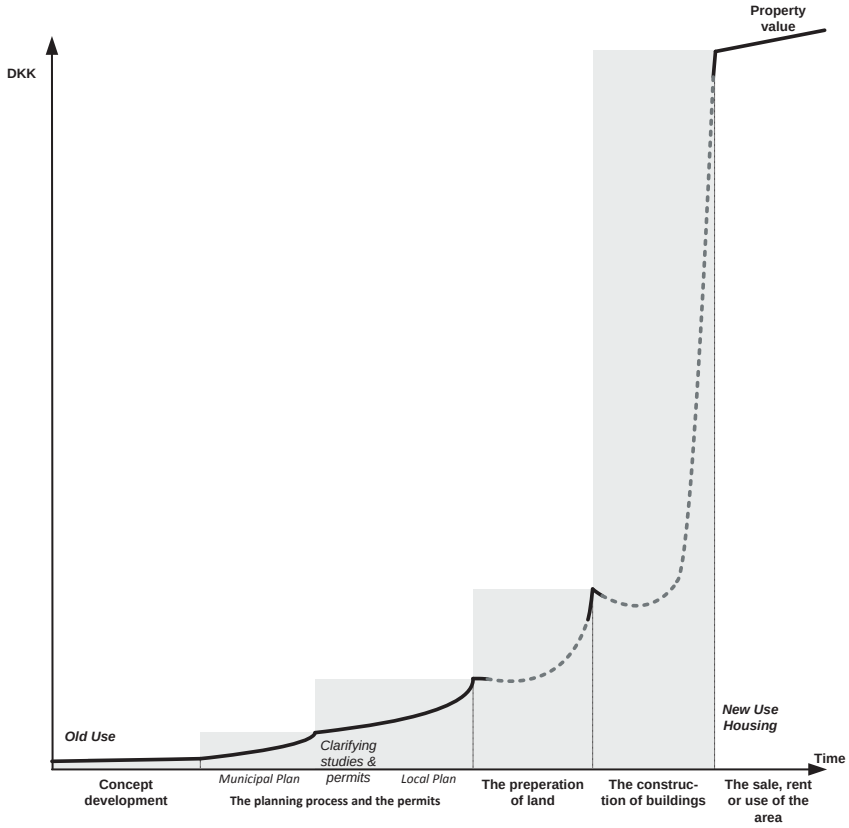

Figure 13.4.: The third version of a conceptual model, showing how property value changes during an urban development process in Denmark.

The third and last empirical analysis was Interview Analysis II, which was based on the interviews of three developers and two municipal employees. In this analysis, it was concluded that the conceptual model in figure 13.4. shows the principles of how property value increase in the urban development process. It was found that the Construction step takes about 1/3 of the time in the urban development process. It was furthermore indicated that the model should include location and the value of the Old Use to a greater extent. This caused the need for revising the model to the final conceptual model, which is done below. In Interview Analysis II, the planning step and the interaction between the developer and the municipality was analysed further. It was found that the adoption of the planning documents, Municipal Plan and Local Plan, are value increasing, because they increase the certainty for the developer to be allowed development, i.e. building rights. Planning becomes increasingly specific during the planning process, ending with an

adopted Local Plan. It was found that Planning, Location, Old Use, Preparation of land, Construction of buildings, the political process, time and risk are factors influencing the value of property during the urban development process.

13.2. The Final Conceptual Model

Three temporary versions of a conceptual model showing how property value changes during an urban development process have been presented so far, and in the following, the final conceptual model is presented. The model can be seen in figure 13.5. The final conceptual model is an improved version of the previous models and is a part of the final conclusion of this research and answer to the research question.

Preconditions for the Model

During the analyses it has been found that the conceptual model has a number of preconditions which must be mentioned. It is a set of underlying "all things being equal" considerations that serve the purpose to articulate under which conditions the model is applicable. The previous models in chapter 6, 9, and 11 also have preconditions and they are here brought together.

First of all, it is assumed that *the development project goes well* and that *the end value is higher than the start value*. That is not always the case, which the Multiple Case Study showed. The Multiple Case Study also emphasised the next condition; that there is *a stable market situation* during the urban development where the prices in general are increasing – this was not the situation in all the cases. Looking at prices over a large span of years prices rise, but fluctuations occur and from time to time, there will be market slumps where prices fall or only increase slowly. In the model, it is assumed that each step is completed before the next start, and there is therefore *no overlap between the steps* in the model as there would normally be in an actual project. This assumption was chosen to be able to present the value changes clearly. It is also assumed that the urban development project is sold to a new owner and that *the end users actually exist*. When developing a project, it is sometimes done with the expectation of the existence of the future users and it is here assumed – with a link to the first assumption that everything goes well – that they are present. Lastly, it should be noted that the model is *based on the Danish planning system*, which includes a Municipal Plan, binding for the municipality, and a Local Plan binding for both municipality and landowners. This is important to note because the certainty that the Danish planning documents give from a devel-

oper's perspective may be different from other countries' planning documents, even if they have similar planning documents.

The property value, that the model shows, is the Market Value in a sale situation cf. the definition in chapter 3. This means that it is not, e.g. the booked value that the developer is using in his accounting, but the value which he would actually be able to sell the development area for at a given time – or at least the value that he should expect to receive.

The Scale of the Model

The final conceptual model – figure 13.5. – is to a wide extent, as also the third version of the model, scaled accordingly to figure 10.20. It was in the Multiple Case Study found that around 12.5 % of the property value increase is created during the planning step, 12.5 % of the value increase is created during the preparation of land step, and the remaining 75 % is created during the Construction of buildings step. The proposed scaling between the steps in the model also fits fairly well with how the costs are distributed throughout the urban development process – see section 4.10.1[84].

Furthermore, in Interview Analysis II, it was indicated that the Construction of buildings step in the urban development process consumes about 1/3 of the total time the urban development process takes. Based on this, the model is stretched so that the steps of Concept Development, Municipal Plan, Clarifying Studies and permits, Local Plan and Preparation of Land takes 2/3 of the total time – equally divided between them, since the analyses does not suggest otherwise. The step of Sale, rent or use of the area is technically after the process is finished, and is therefore not included in the distribution of time above.

It is not possible to state a standard start value for an urban development project, since it will depend highly on the properties' Old Use and the location of the project. To accommodate this issue, the bottom of the y-axis is made "flexible", and is meant to indicate that different urban development projects will start at different levels.

In the following, each step in the model – shown in figure 13.5. – will be discussed.

84 In the shown table, the developer's profit – discussed in section 5.2. – needs to be added.

Concept Development

The first step in the model is the Concept development. During this step, the urban development area can still be used in accordance with its Old Use, which is often the case in Green Field areas. Brown Field areas are on the other hand often out of use or the existing industry is in progress of leaving the site.

It has not been possible to find something that suggests that property value increases due to the developer making plans for his property. This is one of the cases where there may be difference between the value that the developers perceive the property to have and the value that other people are willing pay – the Market Value. One of the interviewees from Interview Analyse II makes a profit during the Concept development step with the following approach; buys land, produce the concept development, makes agreements with the municipality and end users, and then sells the property together with the agreements made. However, this is a package deal where the agreements made also hold a value in itself for both the selling and buying developer. Additionally, the property's value is reflected by the property's Old Use, and the agreements will hold a separate value. The general price development – in this model it is assumed that it is present and that it is an increase – is the only thing that is likely to cause an increase in the property value of the urban development area during this step. The general price development has this effect throughout all the steps in the model.

The developer may in this step have project sketches made and other material that either clarifies the developer's possibilities or the development area's potential. The developer holds the cost of these activities.

The Planning Process and the Permits

The next step is the Planning and permit step and this has been subdivided into three sub-steps: Municipal Plan; Clarifying studies and permits; and Local Plan as it was also the case in the previous models. As both the name of the step and the subdivision implies this is the step where the municipal planning is adopted (Municipal Plan and Local Plan). It is also the step where the developer has different kinds of investigations conducted for instance archaeological investigations, analyses of soil and the ground's geological condition.

Municipal Plan – The Municipal Plan has an influence on the future usage options and on the developer's certainty of being allowed to develop. This cause an influence on property value. Roughly, one third of the property value increase created during the step of Planning process and the permits is created during the Municipal Plan process. *Clarifying investigations and permits* – If it is possible to determine that the soil is not contaminated or that Vikings have not lived on development area, the risk of obstacles during the later process is minimised. Less risk makes the urban development area more attractive and worth more. It has not been possible to determine how much value these actions contribute with since they are typically completed simultaneously with the local planning. In other words, they are in principle value increasing, but not visible in this study. *Local Plan* – The Local Plan is also value increasing and it is here the land is given its precise usage options. It is almost certain that the developer is allowed to develop when the Local Plan is adopted, making the land worth more. The moment of the Local Plan's adoption therefore has an instant impact on the size of the property value, but the Local Plan also has an impact on future value, since it is here, it is determined how much that can be built on the land later in the urban development process. The Local Plan contributes with about two third of the value increase during the Planning and permit step (including the influence of Clarifying investigations and permits).

Planning and the clarifying investigations are, however, one of these things that are only value increasing if they give better usage options than the existing and if the planning documents are adopted. A plan proposal does not give options; it only gives expectations of options. A "decline" from an authority, when a permit has been applied for, is clarifying, but not value increasing. This step has to be successful all the way before it makes sense to talk about a property value increase.

In chapter 5., the expectation of future development and especially the right to future development is described as causing "expectation value". During this research "expectation value" has been concretised, and the contributions from Municipal Plan, Clarifying investigations and permits and Local Plan have been found.

Preparation of Land

Land has to be prepared for its new use, meaning that the urban development area must be cleared/cleaned from its Old Use and new physical infrastructure – road, sewage, water supply etc. – must be completed. This step is a necessity to start the construction of buildings. The value is increasing during this step, roughly the

same as during the Planning and permit step. It is, however, not an increase which is much higher than the cost of preparing the land according to the interviewees. The cases in the Multiple Case Study show developers that have both lost and gained money in this step. The thing is that the costs of preparing the lot are not linked to the value that people are willing to pay for the prepared property on the market. In good times, the potential Market Value of prepared land may significantly exceed the necessary costs and in other periods it may be hard to make it profitable to prepare land.

The curve is sloping "downwards" at first and thereby, the property value becomes lower than the costs of preparing the property. This is because the Market Value is low until the preparation of land is completed. In the model, the curve is drawn as a dotted line since it is only a theoretical value, as it was found in Interview Analysis I. Projects are as a rule of thumb not sold during the preparation step, and not until the end, since there is no market for half-finished projects. This makes is a bit theoretical to talk about a Market Value until the preparation of land step is finished.

Construction of Buildings

The fourth step is the Construction of buildings and this is where the biggest value increase is. This step causes an increase roughly in the size of 75 % of the total value increase during the development. The curve is sloping "downwards" in the same way and for the same reasons as in the preparation of land step. It is in chapter 4 indicated that the cost of the construction of buildings is approximately 65 % of the total costs, meaning that it is the step where both the biggest value increase and costs are. This step is also the most time consuming and takes up about 1/3 of the time of developing the urban development project.

Sale, Rent or Use

In principle, this step is not occurring until after the development process has ended – at least as it is defined in this project. It is in this project not analysed how a property's Market Value change after the urban development process is ended, since it is not the focus of this research. Two aspects are relevant to the actual urban development process: Rent agreements and changes in location. It is indicated in the model that the property value can change after the process is finished, for example due to the general price development, and there is probably a number of other possible reasons.

It is relevant to mention rent agreements because they can cause a difference between the urban development project's Market Value and Market Price when it is finished and sold at the end. Rent agreements are minimising the investor's risk – meaning that his income from rent is more predictable than if there was not a tenant ready. He can therefore reduce the "buffer[85]" in his budget and that makes it possible for him to pay the developer more for the project. In other words paying a price that is larger than the Market Value. This is an Individual factor, but has an influence on the price paid. In Interview Analysis II, it was found that the value at which the urban development project can be sold, is dependent on whether it is a private "consumer" or if it is an institutional investor. The latter will pay less, but will make an agreement with the developer at a much earlier stage in the process, providing certainty for the developer.

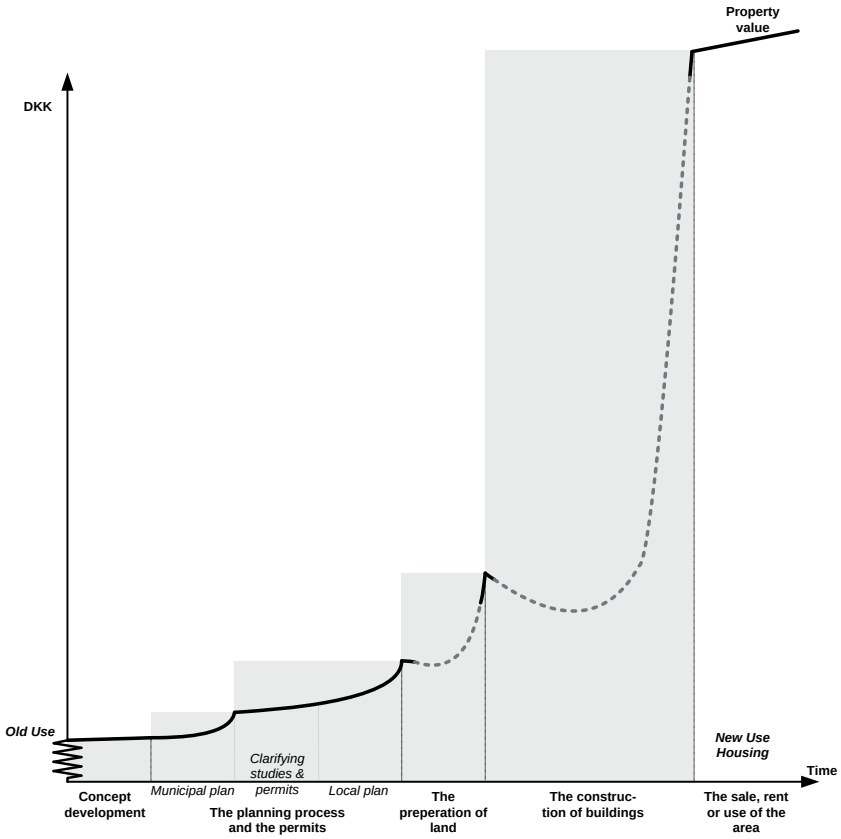

Figure 13.5.: The final conceptual model showing how property value changes during an urban development process in Denmark.

85 The amount of money, the developer has to reserve for vacancy periods.

When the development project is finished, it has also changed the "location" of the area (what real estate agents call location, not the geographical location). Hopefully, it changes the location to the better, but it may take some time before the full effect of this improvement can be seen in sales prices. People might want to know more about which neighbours they can expect and see whether the planned café and shop actually open. When they see that everything is going as planned, their risk of ending up with an apartment in an area with no life and no chance of a resale is reduced. This makes them more willing to pay, but indications on how influential this is on the Market Value of the urban development area has not been found.

13.3. Key Factors That Influences Property Value in the Urban Development Process

In chapter 3, a categorisation of value determining factors was introduced based on (Lantmäteriverket & Mäklersamfundet 2004, p. 64-66 & 107-109; Perrson 2008, p. 256; Eckert 1990, p. 180-181), and it was found that when it comes to changes in a property's Market Value during the urban development process, the following categories are relevant: Property Related factors, Location and area related factors, Social factors, and Affiliated community factors. The key factors that influence properties' Market Value changes in the urban development process, which has been found in this research, are described in the following under these categories.

The Key factors are not steps in the urban development process, however, the Preparation of land and Construction of buildings are examples of things that are both a factor and a step in the process. It means that the Preparation of land is a key factor influencing in the step the Preparation of land, were e.g. the General price development influence in all the steps of the urban development process.

Property Related Factors

The Property related factors can be viewed upon as the factors that influence the value of the land and the value of the buildings. Concerning the latter, the *Construction of buildings*, it is an obvious influencing factor which causes a value change. Furthermore, municipal planning is influencing the buildings in the way that the planning determines how much and what that can be built. Planning in the form of *Municipal Plan* and *Local Plan* therefore influences the value. It has been found that the Municipal Plan although only binding for the municipality has an influence on the value of property. The Local Plan, which determines the specific usage options of a property, and is legally binding, also influences the value of property. This is mainly

through specifying the measures of the allowed use, *Zoning*, and the amount of allowed use, *Density*. In the planning process, and partly the step of Concept development, it is also determined which *Quality* the urban development area should have. By quality is meant both the architectural expression and standard of building materials. If the area is more exclusive, due to higher quality, it can have a positive effect on the property value. The Municipal Plan and Local Plan are, as well as the factor *Clarifying investigations and permits*, not something that changes the physical appearance of property, but the rights and possibilities associated with the property. This is clearly something that affects the value, especially when it improves or devalues the present building rights. The physical appearance of the land is changed through the *Preparation of land* and this is also a value increasing factor. As discussed previously in chapter 4, it concerns both cleaning up from the previous use and the actual preparation for the future use. Before the urban development starts, the area has an existing *Old Use*, which has a value in itself.

Location and Area Related Factors

In many ways, *Location* as a factor relates to the distance to something – either something bad (e.g. waste deposit) where the distance is preferably long, or something good (e.g. social infrastructure such as a school) where the distance is preferably short. It has been determined that a good location often means that the property has a higher value. Good location in the sense that there in the local community are recreational elements, social infrastructure, and other services like shopping possibilities. Furthermore, Brown Fields, which are typically located in the central parts of a city, have higher values then Green Fields due to both Location and the Old Use. In the perspective of value changes, it is worth noticing that *the location can be improved* through planning and development of the area. Especially infrastructural and recreational improvements are a possibility for the developer and municipality while the responsibility to provide social infrastructure is the municipality's.

When choosing a better location, either a better city or better location within a city, the start value of the urban development will be higher. The value of the finished project will also be higher; however, it will increase more than the start value, as it was found in Interview Analysis II. This means that the difference between "start value" and "end value" of an urban development projects increases when choosing a good location over a poorer locations. The production costs do not increase – in principle at least – leaving a larger profit for the developer in good locations.

Social Factors

It has been indicated that changes in *Social structures* within an area, or certainty that the area will be populated, can influence the value of property. This means that an area can be planned and developed for a certain target group; for example by choosing a different quality or type of dwellings. However, it also means that it is necessary to analyse in the beginning of the development process which groups of people would be interested in living in the specific development area. Not all areas are attractive to all people, which inevitable means that different areas have different potential – this does not mean that some areas are better than others, but merely that the possible group of end users are different. As described above, it is possible to change the location of an area – to some extent – and also implies that it can potentially change the social structure of the area as well.

Affiliated Community Factors

It has also been shown, especially in the Multiple Case Study, that changes in the society affects the value of property – in this context referred to as the *General price development*. The market slump (2008+) is a good example of how the value of an urban development project can change without being caused by something that has happened within the area or by the actors involved.

Furthermore, it has been found that *Risk*, the *Political decision making* during the planning process and *Time* are factors influencing the property value. These are discussed in the following section.

From a Developer's Perspective – Emphasis on Risk and Planning

One of the things that initiated this research project was the fact that the municipality and the developer are dependent on each other to get areas developed. The municipality is the planning authority and the developer has the tools to implement the planning. The results of this study emphasises that the choices made in planning are important to the developer. To explain how the developer is influenced by planning and the municipality's decisions, it is in the following discussed with a starting point in the developer's risk in urban development.

During the planning process, the developer experiences a certain degree of risk due to other actors making decisions without the developer's direct influence. In the planning step, the developer is in the hands of the municipality (and citizens) – it is not the devel-

oper's call when and which choices are made. Instead, it is the municipality. This means that the municipality has a direct influence on urban development due to planning – they say "go" or "no go" – but the municipality themselves are influenced by the citizens in the municipality. The Multiple Case Study clearly showed that this can be the case. The adopted planning influences the rest of the urban development process in the way that it determines what can be build – in principle, planning determines the limits for the potential value increase.

Concerning preparation of land and construction of buildings, there is the risk that the developer's estimation of costs is too low . If costs increase, the profit will decrease. The municipality is also an uncertainty here concerning preparation of land since the distribution of costs and the municipality's tasks in preparing the land are not always predefined. The interview analyses indicate that risk, due to costs, to wide extent can be avoided if the developer manage the preparation of land and construction steps well.

From a risk perspective (of the developer), the end users are a risk factor, because the developer will end up with vacant buildings if there are not any. Vacant buildings imply no income for the developer until this is solved and in the meantime, there may still be mortgage interest to pay. Fluctuations on the property market on regional or national level is also something the developer cannot affect, but only analyse the market conditions as well as possible and try to shorten the time span of the urban development process as much as possible. Concerning the latter, if the time span of the urban development project is short, the market has shorter time to change and thereby becomes more predictable. However it has been shown that this is a difficult task depending on complaint from citizens, politician's actions, hidden obstacles such as historical settlements in the ground etc.

It is not the intention to make the municipality and its politicians look like "the bad boys in the class room". They most likely do their very best to please as many actors as possible and to ensure a sustainable development of the community – socially, economically, environmental etc. However, they are still left with the issue that when they plan an area, it would be preferable also to have it implemented. It is not about giving the developer the usage option he wants, it is about planning an area so that it is put to its highest and best use. In principle, this may not conflict with giving the developer his wished usage options. The municipality also have other interests to attend, which may cause highest and best use to be something dif-

ferent than the developer's wishes. The developer and municipality may have different goals, but if the municipality is clear about their intentions and stick with them, the developer can take this into his considerations and minimise his risk.

In the Introduction, it was asked how important the municipality's role in urban development is, how they can utilise this role and whether they use it. The municipality's role seems to be very important in three ways. Firstly, the municipality adopts the planning documents, which cause the Market Value of the property to increase due to the rights they represent and give the developer certainty that he can develop the property. Secondly, the adopted planning documents have high influence on how big the value of the finished project can be, since this is correlated with the usage options given in the planning documents. Thirdly, the political decision making in the planning process is both a risk factor and an opportunity for the developer. If the municipality sticks to the adopted planning and uses a plan lead approach, there will be low risk for the developer, since he knows what is possible and what is not possible. On the other hand, if the politicians are more open for changes, both from developers and citizens, there is greater risk for the developer, but also better possibilities for adapting planning to a wanted project. Furthermore, a clear answer from the municipality reduces risk. In the empirical analyses, it was not found that the municipality uses this strategically, only partly in some of the municipalities which has a geographical location in Denmark where development does not come by itself, hence a more open politic towards adapting planning to projects.

In this project a conceptual model showing how the value of property changes during the urban development process has been created. It is based on the found key factors, which influence the value of property in the process. Furthermore, it has been found that municipal planning; in the form of a Municipal Plan and a Local Plan, have major influence on the value of an urban development project.

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Available at:
Appendix report V

Others

(The Danish Cadastre)
The Danish Cadastre is the basis for all land registration in Denmark. Consisting of a country-wide cadastral map, an official register and a cadastral archive
(http://www.kms.dk/English/Danish+Cadastre [Accessed 18/09 2010])

Appendix A

AALBORG UNIVERSITET

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Dato: -
Ref.: Finn Kjær Christensen
Tlf direkte: 9940 8383
E-mail: kjaer@land.aau.dk

Info om deltagelse i interview i forbindelse med mit Ph.d. projekt på Aalborg Universitet.

Mit Ph.d. projekt handler om værdistigninger i byudviklingsområder, nærmere bestemt om hvad der påvirker værdistigninger i udviklingen af boligområder og hvordan developer/bygherrer forstår og bruger disse værdistigninger. Projektets sigte er at bidrage til forståelsen af den berøringsflade, der er mellem developere/bygherrer og kommune, da forståelse af dette bl.a. kan bidrage til bedre og lettere realiserbar planlægning fra kommunens side. En stor del af formålet er med andre ord at beskrive og dokumentere den indsigt og (ofte tavse) viden, som bl.a. developere/bygherrer og planlæggere ligger inde med.

Interviewet har til formål at være katalysator til forbedring og videreudvikling af en model for de værdistigninger og/eller værdiskabende faktorer, der er en del af by- og ejendomsudviklingsprocessen. Det er forventningen at gennemføre en håndfuld interviews med forskellige nøglepersoner.

Jeg forventer, at interviewet tager ca. en time (plus lidt tid ifm. case). Jeg har i det følgende vedlagt en beskrivelse af mig selv, nærmere om projektet og hvordan interviewet passer ind i projektet og sidst de spørgsmål jeg gerne vil stille.

Tak – fordi du vil afse tid til dette interview.

Med venlig hilsen

Finn Kjær Christensen
Ph.d. Studerende

Hvem er jeg
Mit navn er Finn Kjær Christensen, og jeg er i gang med et Ph.d. studie ved Aalborg Universitet. Mit Ph.d. stipendium er finansieret af dels Aalborg Universitet og dels Statens Byggeforskningsinstitut (SBI). Jeg er startet i efteråret 2007 og har halvt andet år endnu, dvs. jeg er midtvejs i mit Ph.d. studie. Jeg er uddannet Landinspektør (årgang 2005), og har indtil efteråret 2007 været ansat som landinspektørassistent i én af de større midtjyske landinspektør virksomheder.

Ph.d. projektet
I Ph.d. projektet søger jeg at afdække hvilke forhold/faktorer, der betyder noget for værdiskabelsen i udbygningen af boligområder, herunder bl.a. afklare om det betyder noget, hvordan kommunen lokalplanlægger området. Forventningen er, at det betyder noget hvordan kommunen lokalplanlægger, men hvad betyder det, og helt konkret hvor meget betyder det? Dvs. forsøge at finde ud af hvad kommunen har af økonomiske "håndtag at skrue på" i deres lokalplanlægning m.v.

Det gennemgående element i projektet er at udarbejde en model for de værdistigninger og/eller værdiskabende faktorer, der er en del af ejendomsudviklingsprocessen. Projektet tager udgangspunkt i developere/bygherrers synsvinkel og deres økonomiske forståelse af processen i modsætning til en stor del af de hidtidige undersøgelser, der oftest har taget udgangspunkt i kommunen.

Projektet er delt i to dele: Den første del er en undersøgelse af eksisterende teori og litteratur i øvrigt (hovedsagelig udenlandsk – da de danske bidrag er begrænsede). Den anden del af projektet består af en række interviews samt casestudier af 2-4 områder.

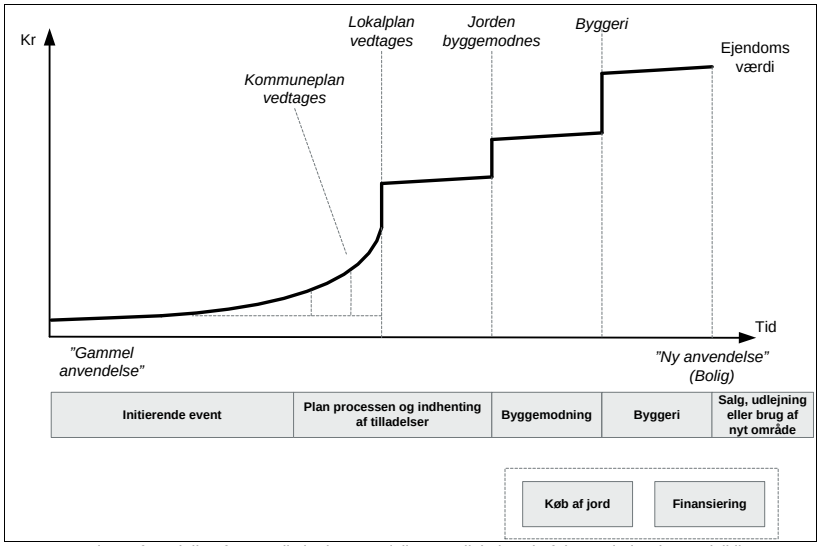
Dette interview
Dette interview er en del af projektets anden del. I projektets første del er der på baggrund af den eksisterende teori og litteratur udarbejdet en "første version" af en model for de værdistigninger og/eller værdiskabende faktorer i ejendomsudviklingsprocessen (se næste side). Denne model har med sit teoretiske udgangspunkt sine begrænsninger og er sandsynligvis ikke fyldestgørende. Modellen mangler input fra praksis/virkeligheden, og dette skal ske gennem casestudie og ikke mindst interviews, hvorudfra den "første version" af modellen skal tilpasses danske forhold og generelt videreudvikles.

Interviewet tager derfor udgangspunkt i modellen og spørgsmålene vil centrere sig omkring denne. Interviewet er med andre ord en vigtig brik for at kunne videreudvikle modellen.

Det som du/I fortæller gennem interviewet, forventer jeg at bruge på to måder: Dels som baggrundsviden, der vil skabe et bedre overblik over emnet. Dels som kilde i projektet og det efterfølgende analysearbejde. I den forbindelse vil jeg gerne nævne, at vi selvfølgelig kan aftale, at noget af det vi berører i interviewet kun bliver brugt som baggrundsviden og ikke citeret i projektet. Det er selvfølgelig i min interesse at kunne bruge mest mulig som kilde, men det er mindst lige så vigtigt for mig at få så god en baggrundsviden som mulig. Jeg forventer at skrive et referat af interviewet, som du/I selvfølgelig får lejlighed til at kommentere og godkende.

På de følgende sider er de spørgsmål, jeg gerne vil stille.

Model



"Første version" af modellen for værdistigninger og/eller værdiskabende faktorer i ejendomsudviklings-processen i forbindelse med boligområder. Modellen er skabt på baggrund af navnlig svenske, tyske og engelske teorier om værdistigninger i byudvikling.

Modellen – som den er vist her – omhandler kun værdistigningerne, mens omkostningerne ved at skabe værdistigningerne ikke er vist. I princippet kan omkostningerne tegnes ind som en omkostningskurve i modellen. Projekts sigte er at øge forståelse af værdistigningerne, men det kræver selvfølgelig også et vis indblik i omkostningerne ved at skabe værdistigningen.

Spørgsmål

1. **De forskellige værdistignings-trin i modellen**
   (Modellen ovenfor er generel og sigter imod den gennemsnitlige ejendomsudvikling. Den samlede værdistigning delt op i en række forventede trin, men der kan være andre trin, som måske er mere relevante. Ejendomsudviklingsprocessen er forskellig fra område til område og nogle faktorer er måske kun relevante i nogle situationer. Spørgsmålene under punkt 1. sigter imod at komme det lidt nærmere, om det er relevante trin, der er i modellen, og hvilke der eventuelt mangler.)

   1.1. Hvilke værdistignings-trin mener du, at der normalt er i ejendomsudviklingsprocessen?
   - Kender du til situationer hvor der var specielle faktorer gav en værdistigning? – kan du give et eksempel?

   1.2. Er der trin i ovennævnte model, som du mener, bør tages ud/tilføjes?
   - Er der trin som du mener med fordel kan deles i mindre trin?

2. **"Højden" på de forskellige værdistignings-trin i modellen (vægten af den enkelte faktor)**
   (Højden på de forskellige trin i modellen er vist uden noget teoretisk eller empirisk holdepunkt. Det er derfor interessant at få sat ord på, hvor meget det enkelte trin betyder. Idet der ikke er noget at holde sig til teoretisk eller empirisk, er selv et "skud fra hoften" et interessant bud, der om ikke andet vil kunne give et pejlemærke for det øvrige arbejde med problemstillingen.)

   2.1. Hvad driver værditilvæksten indtil lokalplanen vedtages?
   - Hvilke faktorer har betydningen for at værdien stiger/falder?
     (er det f.eks. kommuneplan eller ændringer i de omkringliggende områder)

   2.2. Hvad betyder lokalplanen og dens vedtagelse for værdien af ejendommen?
   2.3. Hvor stor er værditilvæksten ved byggemodning i forhold til de øvrige faktorer i modellen?
   2.4. Hvor stor er værditilvæksten ved byggeri i forhold til de øvrige faktorer i modellen?
   2.5. Hvilken rolle spiller det efterfølgende salg/udlejning/brug af ejendommen i forhold til værditilvæksten i løbet af processen?

3. **Andre faktorer**
   (Erhvervelse af jord og finansiering af projektet har ikke umiddelbart ladet sig placere i modellen, men alt tyder på, at der er relevante faktorer. Der spørges her lidt ind til disse med formålet at få bedre hold på deres betydning og eventuel placering i modellen.)

   3.1. På et eller andet tidspunkt skal der erhverves noget jord – og det er ikke placeret i modellen;
   - Ud fra en økonomisk betragtning er der mest at hente for bygherrer/developere ved en tidlig arealerhvervelse, men ud fra modellen kan en senere arealerhvervelse også skabe grundlag for fortjeneste – kan det også lade sig gøre i virkeligheden?
   - Er der andre faktorer, som skal falde på plads for, at en sen arealerhvervelse kan skabe fortjeneste?

   3.2. Finansiering af ejendomsudviklingsprojektet er heller ikke med i modellen – men det er mit indtryk, at det er en ret betydende faktor?
   - Hvordan spiller finansieringen ind på ejendomsudviklingen og modellen her?

4. **Ejendommens beliggenhed**
   (Man kan næsten høre ejendomsmægleren i tv'et sige: "Beliggenhed, beliggenhed, beliggenhed" og alt tyder på at beliggenhed er en vigtig faktor. Men hvordan får den indflydelse? Har en ejendom med god beliggenhed "bare" et andet udgangspunkt eller ændrer mønsteret i værdistigningerne sig så kurven ser helt anderledes ud? Med spørgsmålene under punkt 4. søges det at få taget hul på begrebet beliggenhed og få skabt et indtryk af, hvad beliggenhed er og hvad den gør.)

   4.1. Ejendommens beliggenhed er en naturlig underliggende faktor i dette – men hvilken rolle spiller den?
   - Ændrer det på ejendommens samlede værditilvækst, at området har super beliggenhed i forhold til for eksempel ringe beliggenhed? – hvordan ændrer værditilvæksten sig? – Kan der i forhold til ejendommens "start værdi" skabes en procentvis større stigning i gode områder?

   4.2. Hvad betinger super/god beliggenhed henholdsvis dårlig beliggenhed?
   4.3. Hvad betyder beliggenhed i forhold til planlægningen? – har den større eller mindre betydning?

5. Ejendommens tidligere anvendelse

(Specielt i den eksisterende bymasse er der udviklingsprojekter på f.eks. gamle kaserneområder, bryggerier, som har en historie med sig. I den modsatte ende af skalaen er der forurenede ejendomme o. lign. Det har imidlertid ikke været mulig at holde det op imod modellen og denne anledning af første chance for at få et indtryk af betydningen af ejendommens tidligere anvendelse.)

5.1. Er ejendommens tidligere anvendelse en faktor i dette – og i så fald hvilken rolle spiller den?

- Er ejendommens nuværende standard betydningsfuld? – og hvilken betydning har det i så fald? (f.eks. forurening, gamle bygninger, bevaringsværdige bygninger osv.)
- Ændrer ejendommens tidligere anvendelse på mulighederne for værditilvækst i projektet? – og hvordan?

6. Omkostningerne ift. værdistigningerne

(Værdistigninger i ejendomsudviklingsprocessen skabes langt hen ad vejen ikke uden omkostninger. Sammenhængen mellem værdistigning og omkostninger er godt nok teoretisk beskrevet, men ikke sammenhængen mellem disse i ejendomsudviklingsprocessens forskellige trin. Den teoretiske tilgang går mere i retningen af at marginen imellem samlet værdistigning og samlet omkostning er li med profit. For at forstå værdistigningerne i de enkelte trin er det nødvendigt også at forsøge at holde dem op imod omkostningerne i det enkelte trin – står de mål med hinanden?)

6.1. I modellen ser umiddelbart ud til at de værdistigninger, der sker indtil byggemodningen starter, er forholdsvis "omkostningsfrie". Der er nogle udefrakommende faktorer samt kommunens planlægning, men hvilke omkostninger har developeren/bygherren i denne fase? – og er nogle af disse direkte værdiskabende?

6.2. Stiger værdien af ejendommen tilsvarende de omkostninger, der er i forbindelse med byggemodning?

- De udgifter, der er til byggemodning, står de mål med hvad grundene stiger i værdi? – er det muligt at skabe en fortjeneste på at købe et stykke lokalplanlagt jord, byggemodne det og derefter sælge det?
- Hvordan er den typiske omkostningsfordeling mellem kommune og bygherrer i byggemodningen?

6.3. Stiger værdien af ejendommen tilsvarende byggeomkostningerne i løbet af byggefasen?

7. Generelt om lønsomhed og værdiskabelse

7.1. Hvis du skulle pege på de 5-10 vigtigste andre faktorer, som har betydning for et godt og lønsomt projekt – hvad er de så?

7.2. Hvis du skulle pege på de 5-10 største "fald gruber"/udfordringer som kan vælte lønsomheden i et projekt, som I er i gang med – hvad er de så?

Appendix B

AALBORG UNIVERSITET

g og

l3

Dato: -
Ref.: Finn Kjær Christensen
Tlf direkte: 9940 8383
E-mail: kjaer@land.aau.dk

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Med håbet om en positiv tilbagemelding – på forhånd tak.

Med venlig hilsen

Finn Kjær Christensen
Ph.d. Studerende

Hvem er jeg
Mit navn er Finn Kjær Christensen, og jeg er i gang med et Ph.d. studie ved Aalborg Universitet. Mit Ph.d. stipendium er finansieret af dels Aalborg Universitet og dels Statens Byggeforskningsinstitut (SBI). Jeg er startet i efteråret 2007 og har knap halvt andet år endnu, dvs. jeg er midtvejs i mit Ph.d. studie. Jeg er uddannet Landinspektør (årgang 2005), og har indtil efteråret 2007 været ansat som landinspektørassistent i én af de større midtjyske landinspektør virksomheder.

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Dette interview
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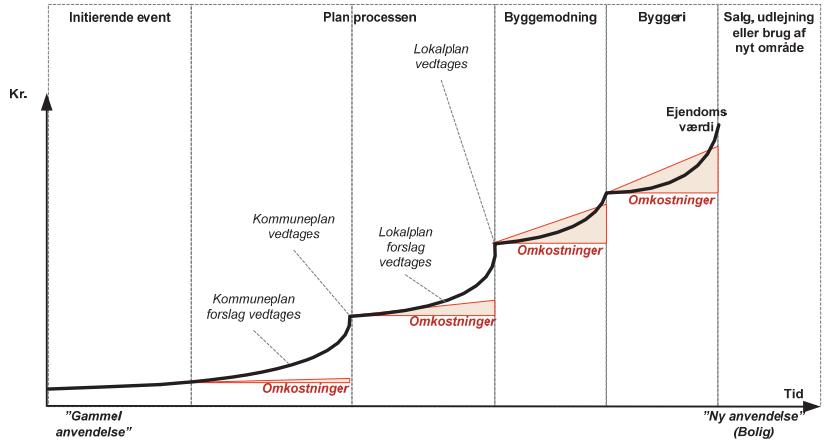
På de følgende sider er de spørgsmål, jeg gerne vil stille.

Model



"Første version" af modellen for værdistigninger og/eller værdiskabende faktorer i ejendomsudviklings-processen i forbindelse med boligområder. Modellen er skabt på baggrund af navnlig svenske, tyske og engelske teorier om værdistigninger i byudvikling.

Modellen – som den er vist her – omhandler værdistigningerne og omkostninger. Værdistigningerne er vist som kurve, mens omkostningerne ved at skabe værdistigningerne er vist som røde flader. Projekts sigte er at øge forståelse af værdistigningerne, men det kræver selvfølgelig også et vis indblik i omkostningerne ved at skabe værdistigningen.

Spørgsmål

1. De forskellige værdistignings-trin i modellen

(Modellen ovenfor er generel og sigter imod den gennemsnitlige ejendomsudvikling. Den samlede værdistigning er delt op i en række forventede trin, men der kan være andre trin, som måske er mere relevante. Ejendomsudviklingsprocessen er forskellig fra område til område og nogle faktorer er måske kun relevante i nogle situationer. Spørgsmålene under punkt 1. sigter imod at komme det lidt nærmere, om det er relevante trin, der er i modellen, og hvilke der eventuelt mangler samt at få sat ord på, hvor meget det enkelte trin betyder. Hvad angår højden af de enkelte trin er der ikke noget at holde sig til teoretisk eller empirisk, derfor er selv et "skud fra hoften" et interessant bud, der om ikke andet vil kunne give et pejlemærke for det øvrige arbejde med problemstillingen.)

1.1. Hvilke værdistignings-trin mener du, at der normalt er i ejendomsudviklingsprocessen?
- Kender du til situationer, hvor det var specielle faktorer der gav en værdistigning? – kan du give et eksempel?
- Hvor stor er værditilvæksten ved det enkelte trin?

1.2. Er der trin i ovennævnte model, som du mener, bør tages ud/tilføjes?
- Er der trin, som du mener med fordel kan deles i mindre trin?

1.3. Hvilken rolle spiller det efterfølgende salg/udlejning/brug af ejendommen i forhold til værditilvæksten i løbet af processen?

1.4. Prøv at tegne kurven, som du mener, den skal se ud

2. Andre faktorer

(Erhvervelse af jord og finansiering af projektet har ikke umiddelbart ladet sig placere i modellen, men alt tyder på, at det er relevante faktorer. Der spørges her lidt ind til disse med formålet at få bedre hold på deres betydning og eventuel placering i modellen.)

2.1. På et eller andet tidspunkt skal der erhverves noget jord – og det er ikke placeret i modellen;
- Ud fra en økonomisk betragtning er der mest at hente for bygherrer/developere ved en tidlig arealerhvervelse, men ud fra modellen kan en senere arealerhvervelse også skabe grundlag for fortjeneste – kan det også lade sig gøre i virkeligheden?
- Er der andre faktorer, som skal falde på plads for, at en sen arealerhvervelse kan skabe fortjeneste?

2.2. Finansiering af ejendomsudviklingsprojektet er heller ikke med i modellen – men det er mit indtryk, at det er en ret betydende faktor?
- Hvordan spiller finansieringen ind på ejendomsudviklingen og modellen her?

3. Ejendommens beliggenhed

(Man kan næsten høre ejendomsmægleren i tv'et sige: "Beliggenhed, beliggenhed, beliggenhed" og alt tyder på at beliggenhed er en vigtig faktor. Men hvordan får den indflydelse? Har en ejendom med god beliggenhed "bare" et andet udgangspunkt eller ændrer mønsteret i værdistigningerne sig så kurven ser helt anderledes ud? Med spørgsmålene under punkt 4. søges det at få taget hul på begrebet beliggenhed og få skabt et indtryk af, hvad beliggenhed er og hvad den gør.)

3.1. Ejendommens beliggenhed er en naturlig underliggende faktor i dette – men hvilken rolle spiller den?
- Ændrer det på ejendommens samlede værditilvækst, at området har super beliggenhed i forhold til for eksempel ringe beliggenhed? – hvordan ændrer værditilvæksten sig? – Kan der i forhold til ejendommens "start værdi" skabes en procentvis større stigning i gode områder?

3.2. Hvad betinger super/god beliggenhed henholdsvis dårlig beliggenhed?

3.3. Hvad betyder beliggenhed i forhold til planlægningen? – har den større eller mindre betydning?

4. Ejendommens tidligere anvendelse

(Specielt i den eksisterende bymasse er der udviklingsprojekter på f.eks. gamle kaserneområder, bryggerier, eller lignende som har en historie med sig. I den modsatte ende af skalaen er der forurenede ejendomme o. lign. Det har imidlertid ikke været mulig at holde den tidligere anvendelse op imod modellen og denne anledning af første chance for at få et indtryk af betydningen af ejendommens tidligere anvendelse.)

4.1. Er ejendommens tidligere anvendelse en faktor i dette – og i så fald hvilken rolle spiller den?
- Er ejendommens nuværende standard betydningsfuld? – og hvilken betydning har det i så fald? (f.eks. forurening, gamle bygninger, bevaringsværdige bygninger osv.)
- Ændrer ejendommens tidligere anvendelse på mulighederne for værditilvækst i projektet? – og hvordan?

5. Omkostningerne ift. værdistigningerne

(Værdistigninger i ejendomsudviklingsprocessen skabes langt hen ad vejen ikke uden omkostninger. Sammenhængen mellem værdistigning og omkostninger er godt nok teoretisk beskrevet, men ikke sammenhængen mellem disse i ejendomsudviklingsprocessens forskellige trin. Den teoretiske tilgang går mere i retningen af at marginen imellem samlet værdistigning og samlet omkostning er li med profit. For at forstå værdistigningerne i de enkelte trin er det nødvendigt også at forsøge at holde dem op imod omkostningerne i det enkelte trin – står de mål med hinanden?)

5.1. I modellen ser det umiddelbart ud til at de værdistigninger, der sker indtil byggemodningen starter, er forholdsvis "omkostningsfrie". Der er nogle udefrakommende faktorer samt kommunens planlægning, men hvilke omkostninger har developeren/bygherren i denne fase? – og er nogle af disse direkte værdiskabende?

5.2. Stiger værdien af ejendommen tilsvarende de omkostninger, der er i forbindelse med byggemodning?
- De udgifter, der er til byggemodning, står de mål med hvad grundene stiger i værdi? – er det muligt at skabe en fortjeneste på at købe et stykke lokalplanlagt jord, byggemodne det og derefter sælge det?
- Hvordan er den typiske omkostningsfordeling mellem kommune og bygherrer i byggemodningen?

5.3. Stiger værdien af ejendommen tilsvarende byggeomkostningerne i løbet af byggefasen?

5.4. Prøv at tegne omkostningerne ind i modellen, som du mener de skal placeres.

6. Generelt om lønsomhed og værdiskabelse

6.1. Hvis du skulle pege på de 5-10 vigtigste andre faktorer, som har betydning for et godt og lønsomt projekt – hvad er de så?

6.2. Hvis du skulle pege på de 5-10 største "fald gruber"/udfordringer som kan vælte lønsomheden i et projekt, som I er i gang med – hvad er de så?

Appendix C

AALBORG UNIVERSITET

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Dato: -
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E-mail: kjaer@land.aau.dk

Info vedrørende deltagelse i interview i forbindelse med mit Ph.d. projekt på Aalborg Universitet.

Mit Ph.d. projekt handler om værdistigninger i byudviklingsområder, nærmere bestemt om hvad der påvirker værdistigninger i udviklingen af primært boligområder og hvordan developer og bygherrer forstår og bruger disse værdistigninger. Projektets sigte er at bidrage til forståelsen af den berøringsflade, der er mellem developere, bygherrer og kommune, da forståelse af dette bl.a. kan bidrage til bedre og lettere realiserbar planlægning fra kommunens side. En stor del af formålet er med andre ord at beskrive og dokumentere den indsigt og (ofte tavse) viden, som bl.a. developere, bygherrer, planlæggere ligger inde med.

Interviewet har til formål at være katalysator til forbedring og videreudvikling af en model for de værdistigninger og/eller værdiskabende faktorer, der er en del af by- og ejendomsudviklingsprocessen. Det er forventningen at gennemføre fire interviews; to med ejendomsudviklere og to med kommuner.

Jeg forventer, at interviewet tager ca. en time alt i alt. Jeg har i det følgende vedlagt en beskrivelse af mig selv, nærmere om projektet og hvordan interviewet passer ind i projektet og sidst de spørgsmål jeg gerne vil stille. Jeg håber at du kan afse tid til dette interview.

Med håbet om en positiv tilbagemelding – på forhånd tak.

Med venlig hilsen

Finn Kjær Christensen
Ph.d. Studerende

Hvem er jeg
Mit navn er Finn Kjær Christensen, og jeg er i gang med et Ph.d. studie ved Aalborg Universitet. Mit Ph.d. stipendium er finansieret af dels Aalborg Universitet og dels Statens Byggeforskningsinstitut (SBI). Jeg er startet i efteråret 2007 og har knap et halvt år endnu, dvs. jeg er i slutningen af mit Ph.d. studie. Jeg er uddannet Landinspektør (årgang 2005), og har indtil efteråret 2007 været ansat som landinspektørassistent i én af de større midtjyske landinspektør virksomheder.

Ph.d. projektet
I Ph.d. projektet søger jeg at afdække hvilke forhold/faktorer, der betyder noget for værdiskabelsen i udbygningen af primært boligområder, herunder bl.a. afklare om det betyder noget, hvordan kommunen lokalplanlægger området. Forventningen er, at det betyder noget hvordan kommunen lokalplanlægger, men hvad betyder det, og helt konkret hvor meget betyder det? Dvs. forsøge at finde ud af hvad kommunen har af økonomiske "håndtag at skrue på" i deres lokalplanlægning m.v.

Det gennemgående element i projektet er at udarbejde en model for de værdistigninger og/eller værdiskabende faktorer, der er en del af ejendomsudviklingsprocessen. Projektet tager udgangspunkt i developere/bygherrers synsvinkel og deres økonomiske forståelse af processen i modsætning til en stor del af de hidtidige undersøgelser, der oftest har taget udgangspunkt i kommunen.

Projektet er delt i to dele: Den første del er en undersøgelse af eksisterende teori og litteratur i øvrigt (hovedsagelig udenlandske bidrag – da de danske bidrag er begrænsede). Den anden del af projektet består af to runder interviews samt casestudier af 4 områder. På nuværende tidspunkt tilbagestår sidste interview runde, mens de øvrige er gennemført.

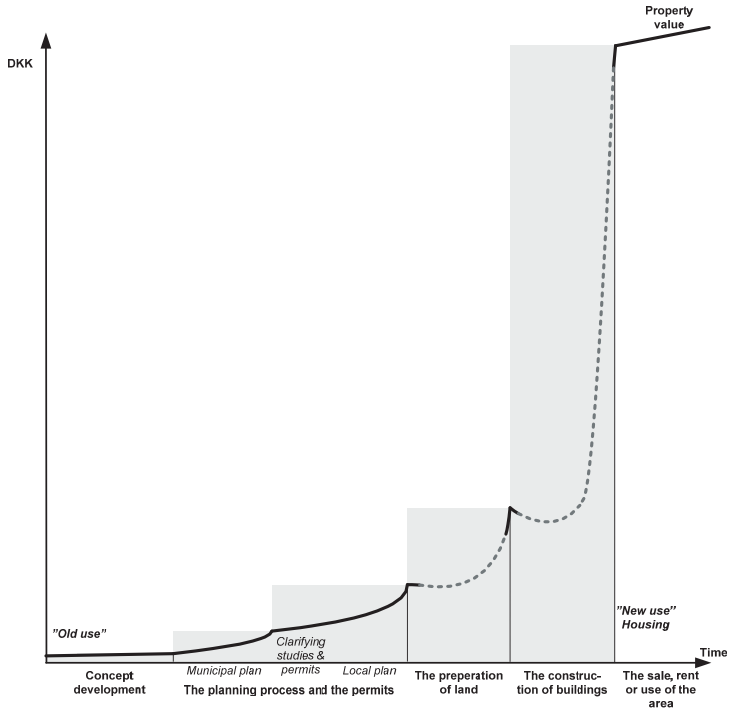
Dette interview
Dette interview er en del af projektets sidste del. I projektets gennemførte del er der på baggrund af den eksisterende teori og litteratur udarbejdet en "første version" af en model for de værdistigninger og/eller værdiskabende faktorer, der er i ejendomsudviklingsprocessen. Denne model har med sit teoretiske udgangspunkt sine begrænsninger og er revideret på baggrund af første runde interviews og casestudie af 4 områder. Herudfra er den "første version" af modellen tilpasset danske forhold og generelt videreudviklet. Den nyeste version af modellen kan ses på næste side.

Dette interview tager udgangspunkt i modellen, dog vil spørgsmålene centrere sig omkring planlægningsfasen og byggemodningsfasen. Interviewet er med andre ord en vigtig brik for at kunne videreudvikle modellen.

Det som du/I fortæller gennem interviewet, forventer jeg at bruge på to måder: Dels som baggrundsviden, der vil skabe et bedre overblik over emnet. Dels som kilde i projektet og det efterfølgende analysearbejde. I den forbindelse vil jeg gerne nævne, at vi selvfølgelig kan aftale, at noget af det vi berører i interviewet kun bliver brugt som baggrundsviden og ikke citeret i projektet. Det er selvfølgelig i min interesse at kunne bruge mest mulig som kilde, men det er mindst lige så vigtigt for mig at få så god en baggrundsviden som mulig. Jeg skriver et referat af interviewet, som du selvfølgelig får lejlighed til at kommentere og godkende. I rapporten vil du fremgå ved initialer, dvs. en delvis anonymisering hvor navn, firma osv. ikke nævnes.

På de følgende sider er de spørgsmål, jeg gerne vil stille.

Model



Model for værdistigninger og værdiskabende faktorer i ejendomsudviklingsprocessen i forbindelse med boligområder. Modellen er skabt på baggrund af navnlig svenske, tyske og engelske teorier om værdistigninger i byudvikling, samt interview analyse og case studie. Modellen – som den er vist her – omhandler værdistigningerne, der er vist som kurve. Projekts sigte er at øge forståelse af værdistigningerne, men det kræver selvfølgelig også et vis indblik i omkostningerne ved at skabe værdistigningen.

Spørgsmål

1. **Model for værdistigninger og værdiskabende faktorer i ejendomsudviklingsprocessen**
   I forhold til den vedlagte model, som udgør det foreløbige resultat i mit projekt, er det nærliggende at stille et par spørgsmål for at udsætte modellen for et "virkelighedstjek".

   1.1. Modellen sigter imod at illustrere "det gennemsnitlige" ejendomsudviklingsprojekt, hvor der bygges boliger.
   - Matcher den din opfattelse af projektudvikling og værdistigning i den forbindelse? (hvordan kan den evt. forbedres?)
   - Mener du, at den også kan dække fx butiksprojekter, byomdannelsesområder o.l.? (hvis ikke hvordan skal den tilpasses for at kunne?)

   1.2. Hvad siger du til "højden" (værdistigningerne) i de forskellige faser i modellen?
   - Kan man sige noget generelt om de forskellige fasers værdistigninger i forhold til hinanden?

2. **Planlægnings indflydelse på værdien af en projektejendom**
   Det fremstår rimelig klart, at fysisk planlægning som helhed påvirker værdien af fast ejendom, både her og nu, men også den mulige fremtidige værdi i kraft af de muligheder, som planlægning giver. Det bliver mere uklart, når der ses nærmere på de enkelte dele af planlægningen, det være sig kommuneplan og lokalplan samt deres forudgående forslag.

   2.1. Hvornår er man sikker på at få lov til at gennemføre et projekt (dvs. hvornår har man ret til at bygge)?
   - "Hvor meget" har man "ret til at bygge" når der foreligger kommuneplanforslag, kommuneplan, lokalplanforslag, lokalplan eller byggetilladelse?
   - Hvilken sikkerhed er der forbundet med vedtagelsen af kommuneplanforslag, kommuneplan, lokalplanforslag eller lokalplan?
   - Hvorfor er der forskel? (hvis der er)

   2.2. Hvilken vægt har planforslaget i forhold til den endelige vedtagelse af planen – hvordan slår det igennem på markedsværdien af fast ejendom?

   2.3. Hvilken vægt har henholdsvis kommuneplan og lokalplan, set i forhold til den "her og nu" værdistigning, der sker (kan ske) for en ejendom, der bliver givet nye muligheder gennem planlægning?
   - Er det kommuneplanen eller lokalplanen, der er afgørende?

   2.4. Kan du give eksempler på, at planlægning har betydet noget signifikant for værdien af en projektejendom (eller ikke har betydet noget overhovedet)?

3. **Forhandling mellem projektudvikler og kommune**
   Der vil uundgåeligt være en eller anden form for kontakt mellem projektudvikler og kommune omkring planlægningen, byggetilladelse og ikke mindst byggemodningen af et projektområde. Ikke desto mindre er dette et næsten ubeskrevet blad i dansk kontekst, specielt omkring byggemodningsdelen. Mange af de valg, som har stor betydning for den fremtidige værdi af projektejendommen og projektudviklerens omkostninger, træffes her, og det er derfor interessant at berøre denne "forhandling", der (formodentligt) finder sted.

   3.1. Hvordan foregår kontakten mellem projektudvikler og kommunen fra første kontakt og indtil jorden er byggemodnet eller byggetilladelse givet?
   - Er der nogen typiske måder?

   3.2. Hvordan aftaler projektudvikler og kommunen "hvem der gør hvad" og "hvem der betaler" omkring byggemodning?
   - Har aftalerne formel karakter (skriftlig aftale eller….)?
   - Har du/I nogle præferencer omkring disse aftaler og hvorfor?
   - Aftaler projektudvikler og kommune "hvem der gør hvad" samtidig med planlægning, ansøgning om byggetilladelse eller…?
   - Indgås der "aftaler", hvor fx projektudvikleren "får" fx en ekstra etage imod at betale en vej? (det er fx ikke ualmindeligt i Sverige)

   3.3. Bebyggelsesprocent synes at være et at omdrejningspunkterne i forhandlinger mellem kommune og projektudviklere (i både DK og udlandet)
   - Hvad skyldes dette? (og er det faktisk sådan)
   - Er der andre forhandlingsemner, som fx off. investeringer i spil i sådanne forhandlinger?
   - Det er teoretisk beskrevet, at bebyggelsesprocenten kan være så høj, at det har en negativ effekt på værdien af projektejendommen og de omkringliggende ejendomme – kender du til eksempler, hvor dette er sket eller dette en "skrøne"?

4. Tiden i projektudvikling

Det tager tid at ejendomsudvikle, men hvor lang tid? Eller endnu mere interessant: hvad er det, der tager tid? Det er specielt interessant, når det sættes op i mod hvornår projektejendommen potentielt stiger i værdi og den risiko projektudvikleren påtager sig undervejs.

4.1. Hvor lang tid tager det typisk at nå hele vejen igennem udviklingsprocessen?

- Hvor lange (tidsmæssigt) er de enkelte faser i forhold til hinanden?
- Hvor lang tid tager det at nå fra første kontakt og indtil den formelle planproces starter?
- Hvordan har tidsfaktoren betydning for risiko og finansiering af projektet?
- Hvad afgør om det tager kort eller lang tid?
- Hvordan forsøger du/I at påvirke tidsfaktoren?