



Norwegian University
of Life Sciences

Master's Thesis 2018 30 ECTS

Faculty of Landscape and Society

Main Supervisor: Timothy Richardson

Decoration or participation? Children's Tracks and the zoning planning of an area undergoing development and densification

Christina Ilmork Martinsen

Masters Urban and Regional Planning
Faculty of Landscape and Society

Foreword

I would like to extend my gratitude to the many people who have contributed in various ways throughout this project. Most of all, I would like to thank the supervisors of this thesis, Tim and Gro, who have been very helpful and very patient during this process. Special thanks to Gro for allowing me to take part in her project. I would furthermore like to thank the informants who took the time off their busy schedules for the interviews, who contributed substantially to this project. I would also like to thank NIBR and the kind people there for providing a student workspace and nice conversations. I would like to extend my gratitude to the other students who were there for the good times and laughs during that semester. Special thanks to Kinga for making an illustration for the thesis. Thanks to other helpful researchers who have provided articles or advice early in the project.

Thanks to family and friends for being there, helping me see the light in the end of the tunnel and keeping me fed and caffeinated through this project. Special thanks to my parents Wenche and Erland who are always incredibly kind and supportive, and who spent long hours proofreading during the end of the project. I would also like to extend my gratitude to Lisa and Mathilde for the good times in their respective work places towards the end of the project.

Abstract

The thesis builds on two perspectives which are seen as interconnected, and thus treated as such in the thesis: the perspective of children's participation as a means of promoting their local experiential knowledge in planning, and the involvement and influence of the children in planning through Children's Tracks.

In the thesis, PPGIS tools and methodology is viewed as a means of producing local experiential knowledge for planning purposes, and through this: a means of promoting the interest and perspectives of lay persons such as children in the decision-making processes in planning. The thesis assesses what is happening when the local experiential knowledge is co-produced through the use of Children's Tracks and its application in the planning context, and the children's perspectives translated. This must be seen in connection to how children are involved and how they are influencing the decision-making of the planning process. The latter is also studied in the thesis.

Through the case study in the thesis, it is found that there are challenges to the co-production and translation of children's perspectives through Children's Tracks, in terms of spatial accuracy and the access to the children's place-based uses and experiences, and in terms of framing the children's perspectives. Furthermore, when applied in zoning planning as a participatory tool, it is shown the dependency on the context of the planning process and the reliance of the planning actors to promote and prioritize and give legitimacy to the perspectives of the children as represented through Children's Tracks.

Terminology of the thesis

Children:

In this study, 'children' is used as the term, here meaning children in the ages of 0-18. Though some may argue that it would be more specific to also use the term 'youth' or the term 'young people', the term 'children' encompasses children in different ages that are the target groups of Children's Tracks.

Public Participation GIS/PPGIS:

Public participation GIS refers to participatory tools and methodologies for planning purposes, that use GIS technologies (Brown and Kyttä 2014). In the thesis, PPGIS tools and methodology is viewed as a means of producing local experiential knowledge for planning purposes, and through this: a means of promoting the interest and perspectives of lay persons such as children, and their participation, in the decision-making processes in planning.

Co-production and translation of knowledge:

The study draws on concepts in an article by Rydin (2007) (see the theory chapter). The way it is used in the thesis, co-production and translation of knowledge refers to what is happening when children's perspectives meet with planning, through Children's Tracks. In the perspective of Rydin, planners are co-producers of knowledge in planning, meaning that they have a role in recognizing and giving legitimacy to knowledge claims (and opposite to this: disregarding other knowledge claims), furthermore meaning that there are power mechanisms at play through this act (Rydin 2007; Pløger 2015). Furthermore, there is a translation process going on when children's perspectives are co-produced through Children's Tracks, where those who interpret and co-produce this as knowledge for use in planning have a lot of power over how the input is interpreted, and where the tool and methodology also plays an important part in this process (see Aune et al 2015).

Discourse:

The term 'discourse' is briefly used in the theory chapter, in reference to arguments in the work of Hanssen and Saglie (2010). As they use the term discourse, it is: "... understood as "ensemble[s] of ideas, concepts, and categories through which meaning is given to a phenomenon" (Hajer, 1993a, p. 45), can be used to give some arguments power while invalidating others." (Hanssen and Saglie 2010 p.499)

Table of contents

Foreword	2
Abstract	3
Terminology	4
INTRODUCTION AND METHOD	6
THEORETICAL PERSPECTIVES	12
BACKGROUND FOR THE CASE STUDY	35
ANALYSIS	39
Structure of the analysis.....	39
Introducing the Children’s Tracks tool and methodology and its use in the case municipality	40
Children’s Tracks in the case municipality	45
Children’s Tracks in the zoning planning of Ski Vest	60
SUMMARIZING DISCUSSION AND CONCLUSION	111
BIBLIOGRAPHY	117
ATTACHMENTS	124

INTRODUCTION AND METHOD

Introducing the basis for the thesis:

Children as stakeholder groups have fewer means to secure their own interests in planning than adult stakeholder groups, lacking economical, physical and political power, hence relying on adults' assessments and promotion of their interests in planning (Chawla 2002 p.235). Their experiences and uses of their environments may furthermore differ from that of adults (Chawla 2002), meaning that adults may not always fully comprehend their various stakes in the matter of a decision-making process. As Chawla writes (2002 p.221): "Adults may know how to create community environments that promote health and safety, but children and youth are experts on what fosters or fractures their personal sense of well-being". Drawing on such perspectives, a normative basis of this thesis is firstly that children's interests should be sought safeguarded in planning, and secondly that children should have the means to not only have their interests promoted by adults in processes of planning and place development, but furthermore have the means to themselves participate in such processes. In a way which enables them to voice their own perspectives and have a say in matters concerning them, taking on a meaningful role in the process (Hart 1992). Following previous research (see for instance Knudzon and Tjerbo 2009; Chawla 2002; Hart 1992; Sinclair 2004), children's participation is here understood as both the involvement of children and potential for influence of the various perspectives of children in decision-making processes.

In line with what has been argued or demonstrated in previous research (see Horelli 2006; Freeman and Vass 2010; Freeman et al 2016; Chawla 2002; Hart 1992; 2008), the author of the study believes that children can give deliberate input and assessments in the decision-making of planning processes, when such processes are set up in ways which enable children of various ages and abilities to express their respective perspectives and take on meaningful roles in decision-making processes, in accordance with their abilities. As written by Horelli (2006 p.239): "... young participants can be both able critics of their environments and producers of new ideas for implementation", and furthermore it has been demonstrated that they can be "... enriching the content of planning not only with respect to their school grounds, but to the neighbourhood as a whole" (Horelli 1994 p. 371).

In terms of children's participation in planning, children are secured formal rights of participation in the Norwegian legal framework. Research in Norway has furthermore seen a broad acceptance of children's rights to participate (Knudzon and Tjerbo 2009). Still, in Norway as well as elsewhere there can be challenges to implementing children's participation in planning practice in a meaningful way, where children have true means to be heard and have a say in matters concerning them (see

Knudzon and Tjerbo 2009; NOU 2003; Hanssen and Saglie 2010; Hart 1992; 2008; Sinclair 2004; Chawla 2002). Furthermore, though there are legal provisions in place that seek to safeguard children's interests in planning in Norway, it is not always ensured that such interests are safeguarded in planning practice (Hansen 2006; Aune et al 2015).

As an attempt to bridge challenges of children's participation and the safeguarding of children's interests in planning, Children's Tracks emerged, first as an analogical tool and methodology, later appearing in a digital version (Norsk Form 2010). The digital version of Children's Tracks is subject to this thesis. Children's Tracks is known as 'Barnetråkk' in Norway, and it can be seen as a Public Participation GIS tool (also known as PPGIS). Public participation GIS refers to participatory tools and methodologies based on GIS technologies, that are intended to produce information to inform planning and create means of enabling contact and between lay people and planners (Brown and Kyttä 2014). The Children's Tracks tool seeks to capture the place-based uses and experiences of children by having such perspectives mapped by children on digital geographical maps, producing a kind of local experiential knowledge for use in planning and decision-making later on (Norsk Form 2010). It is described as a participatory tool (Norsk Form 2010). The intention behind Children's Tracks is to promote and advance children's interests and participation in planning. In line with what has been argued previously (see for instance Kahila and Kyttä 2009), it can be seen as an attempt of building a bridge between the children and the planner and enhancing the planners understanding of and access to the localized and place-based interests of children. In a preliminary study of the tool it has further been argued that the use of Children's Tracks could contribute to democratic awareness among the participating children (Aune et al 2015).

Children's participation, through PPGIS or otherwise, relies on the context to which it is applied (see for instance Horelli 2006; Brown and Kyttä 2014). Herein the planners' assessments of the legitimacy of their interests and of their competencies to participate, the planning actors being gate keepers to the decision-making process (Cele and van der Burgt 2015; Horelli 2006). Not only are such actors gate keepers, they are also central to what happens with children's perspectives when it is produced as a knowledge to be applied in the planning context, acting as co-producers of this knowledge. One may wonder what may happen to children's perspectives when they become part of complex negotiations of often conflicting interests and concerns going on in planning processes, where the power of the actors to shape the planning process and promote interests, values and views can be seen as asymmetrical. In a Norwegian context, private professional actors initiate, finance and propose the majority of zoning plans, giving them a considerable role and influence in the planning processes of zoning plans.

Though the intentions are admirable, there may be a risk that such tools can be used to give democratic legitimacy to the planning process, while the participation facilitated through the use of the tool may not necessarily give children a true means to voice their interests and have a say in the matter of the decision-making. In light of this, there is a potential risk that such tools may actually create democratic distrust rather than democratic awareness, when they are promoted and presented as participatory to the children and others (see Innes and Booher 2004).

There is generally a need to look further into the actual uses of such tools, studying in depth what happens during the process of mapping children's place-based uses and experiences and utilizing this further on in the decision-making of planning. This is the overall goal of the thesis. In this context, this thesis focuses specifically on the application of Children's Tracks in zoning planning, which is here seen as an important arena for deciding future land-use and development.

Themes to answer the overall goal of the thesis:

There are many themes and aspects that can be drawn upon in relation to this, not all of which it is possible to include within the format of the master thesis project. Based on the perspectives presented above, there should be a focus on the participatory nature of Children's Tracks when applied in zoning planning practice: asking questions of the afforded involvement and influence of the children in the planning process through Children's Tracks, and questions that can contribute to the understanding of how it became so. Furthermore, there should be a focus on the access to children's perspectives and what happens to such perspectives during the different stages in the process of co-producing knowledge through the Children's Tracks tool and methodology.

In order to understand these themes it is necessary to also focus on how Children's Tracks is conducted and organized, not only in terms of the zoning planning but more broadly in the municipality, as this can have implications for the participation afforded through Children's Tracks and the co-production of the children's local experiential knowledge.

Delimits to the themes in the thesis:

Aspects of the theme that are not given the same focus in the study are: how the Children's Tracks tool and methodology is adapted and *can be* adapted to suit the capabilities of the participants, and the potential of the tool to access the place-based uses and experiences of the participants. It was deemed too extensive to substantially explore these aspects of the theme, and it was believed that

these aspects could be more suited for the research of social anthropologists and the like. Here the study draws from other relevant research, where these themes are somewhat explored. It places some limitations on what could be found through the study in terms of its overall goal.

Research questions:

1. How does the municipality organize and conduct Children's Tracks, and what are implications that the tool and methodology can have in terms of the participation and of the co-production and translation of the children's perspectives?
2. How were children involved in the zoning planning of Ski Vest through Children's Tracks, and how did the children's perspectives from Children's Tracks influence the plans?

The research questions must be seen as interconnected and with some overlap.

Research design and methodological considerations:

In order to answer the goal and research questions of the thesis project, a qualitative case study approach was selected. The reasons for choosing a qualitative case study approach were that it is deemed suited for studying phenomena in-depth and in its natural context, also allowing different means of gathering and analyzing data (Silverman 2014).

A single case was selected for the study through purposive sampling (Silverman 2014). A reason for this was that it was deemed too comprehensive within the format of the thesis project to study several cases at the necessary in-depth level that is required for answering the research questions. This places some limitations on what can be drawn from the study in terms of other cases, as there may be other factors in other cases that may affect the use of Children's Tracks which is not seen here.

In accordance with the research questions, the case selected for the study is both 1): the municipality of Ski and how they do Children's Tracks, and 2): the zoning planning of Ski Vest within the municipality. In terms of the zoning planning, there are two planning processes which are covered. The main focus is on the area zoning plan of Ski Vest. Within the area zoning plan is a detailed zoning plan covering parts of the area. There is some focus on this process as well, but it is studied to a lesser extent. The reason for including this is that it was shown to be fruitful in terms of providing perspectives that could yield a broader understanding of the use of Children's Tracks.

The case municipality was part of a pilot project by the creators of the digital Children's Tracks tool, on the use of Children's Tracks. It was therefore perceived beforehand to be some focus in the municipality on children's participation and on putting Children's Tracks to use in planning, which was seen as advantageous in terms of the findings in the thesis being sufficient for answering the research questions. It was also reported that the case municipality had used Children's Tracks in zoning planning. The zoning planning of Ski Vest was seen as especially relevant for the study for several reasons. The Ski Vest area is bordered by a school which had been part of Children's Tracks, and where there were children who were using the area undergoing planning. It was furthermore reported that they had used Children's Tracks in the planning. They had come quite far in the decision-making processes (both plans had been politically adopted for the last time before the end of the thesis project), meaning that it allowed for insights on how Children's Tracks had been used in the actual decisions of the planning. Furthermore, the municipality had been part of a preliminary study of Children's Tracks, meaning that the findings here could add (especially) relevant and helpful perspectives for understanding the selected case (see Aune et al 2015).

The research questions are sought answered through semi-structured interviews with central actors conducting and using Children's Tracks in the municipality and in relation to the zoning planning of Ski Vest – the area zoning plan of Ski Vest and the detailed zoning plan of Magasinleiren. The choice of semi-structured interviews meant that there was some room for flexibility in terms of the themes discussed in the interview, while still retaining some consistency in terms of the different interviews, making it easier to compare and find nuances in what was expressed by the different informants of the study (Silverman 2014).

The informants were chosen through 'snowball sampling', finding new informants through the informants that were first contacted (Silverman 2014). There were four informants interviewed for this study. All the informants had central and very influential (differing) roles in terms of Children's Tracks or the two planning processes of Ski Vest. More actors could have been included, but this was not done due to time constraints. In terms of the area zoning plan, there is a developer that was not included as an informant which could have brought other perspectives to the study. Still, in their areas there were almost no registrations from Children's Tracks, suggesting that the children taking part in Children's Tracks did not use these areas very much. Perspectives from Children's Tracks seem neither to be directly part of the planning of these areas. It was therefore thought to be not crucial for the study to include them. Still, there is the inherent possibility that there are others who experienced Children's Tracks and its use in the planning somewhat differently to the actors interviewed for the study, which could possibly yield slightly different insights.

Given the delimits to the themes in the thesis, children taking part in Children's Tracks were not interviewed for the study, though it could have given useful insights. Nor were the registration processes of Children's Tracks observed, though this also could have given useful insights. Realistically it would not have been possible to both observe such processes and study their use later on in planning decisions, within the format of this thesis project.

In addition to the interviews the thesis builds on document studies of official and publicly available documents of the planning process, which can further clarify that which is studied in the thesis. The document studies were structured by questions, which were again structured by the research questions. This would necessarily affect what was found through this. There is the inherent possibility that some information that could yield insights into the matter is left out of the analysis, if it is not part of the questions that were asked (Silverman 2014). The thesis also builds on mapped data and documents from or in relation to Children's Tracks in the municipality, herein a digital interactive map with Children's Tracks registrations and a document containing an analysis of Children's Tracks registrations that had been done by the municipality. Other documents of the planning processes are drawn upon as sources of information. The combination of different data sources was done to strengthen the validity of the thesis and yield broad insight into the case.

In terms of ensuring reliability, the thesis seeks to use 'low inference descriptors' throughout the analysis, showing the data material as it is (Silverman 2014). Some coding of the material was done by hand, structured by themes and questions in the analysis, but this could have been done more systematically. The interviews were thoroughly transcribed. There are some limitations here. The interviews were conducted in Norwegian and excerpts were translated to English afterwards. The same has been done for excerpts from documents which were in Norwegian as well. There is an inherent possibility that some meaning is slightly altered through this. This was sought avoided by looking very carefully at the meanings expressed in the excerpts when translating them. The informants also read through their contributions in order to ensure that the representation was in accordance with their meanings, also ensuring a higher level of validity in the study (Silverman 2014).

The informants of the study were sought caretaken through the project. They were informed about the study and read through and commented their own contributions. They were also presented in an anonymized manner in the thesis. In terms of data privacy requirements, approval from the Norwegian Centre for Research Data was obtained for the study. Furthermore, the study is about a tool and methodology for children's participation. Children were not directly involved in the study. There is some material made by children which is included, but his material does not reveal personal information, and can't be tied to individual children.

THEORETICAL PERSPECTIVES

In this chapter, theoretical perspectives for understanding Children's Tracks and its application in a planning context is explored. The theory presented here offers some perspectives and questions that are drawn upon in the analysis, as they were deemed important for understanding the case given its context and characteristics and given the chosen research questions. (Note that some of what is presented here is included in order to explain and elaborate the theoretical perspectives, as such this is not directly drawn upon in the analysis but indirectly affect the understanding of the case study and herein its theoretical concepts.)

The theoretical chapter begins by exploring the role of knowledge (herein the local experiential knowledge such as that of children) in connection to participation in planning, before moving on to the theme of PPGIS as a means of furthering the incorporation of such knowledge in planning. The focus then turns to the question of whether PPGIS enables access to children's place-based uses and perceptions. This is followed by an elaboration on knowledge as it is understood in this thesis, and furthermore an assessment of the co-production and translation that is happening by the use and application of PPGIS in planning. The focus then turns to the theoretical foundations for understanding and analyzing children's involvement and influence in planning via participatory processes. This is followed by a section devoted to factors affecting children's involvement and influence in planning, where the focus is on its legitimacy and role in planning.

Planning and multiple knowledges:

Describing contemporary planning in an instrumental lens, Aarsæther (2015) presents the view of knowledge as a key aspect to multiple stages in the course of planning, from understanding the current situation of that which is subject to planning, to identifying goals of the planning to analyzing the means to realize these goals in the context of the current situation of what is being planned. Aarsæther highlights that the gap between the ideal and real world of planning mean that the planning actor cannot have full knowledge about the possible effects of the planning measures, nor the context to which they are applied. Another aspect to this is the question of what constitutes knowledge in planning, and the role of different knowledge types in the knowledge basis of planning processes, especially the local experiential knowledge such as that of children.

In the words of Rantanen and Kahila (2009 p.1981):

“... local knowledge is often considered to be “opinion” or “belief” and thereby dismissed, since the planning system still relies mostly on “hard” technical knowledge and professional expertise (Fischer,

2000; Puustinen,2004). It also seems that the methods of collecting and processing local knowledge are inadequate, and therefore the planning process itself cannot incorporate this knowledge properly (Coburn, 2003; Staffans, 2004).”

To further address this it is necessary to begin with looking at the concept of knowledge. Rydin (2007), following previous research, links the concept of knowledge and its role in planning to ideology and planning paradigms. In this perspective, the shift in planning theory and practice in the latter half of the 20th century changed how knowledge as a concept was predominately understood, from a generally positivist view on knowledge as unified, objective and neutral, to a view of knowledge as multiple, and as constructed through social processes (Rydin 2007). The implication for planning of the latter view is described in the following way:

“Closely associated with this insight is the argument that knowledge is not just the domain of the expert – whether a scientist or a planner – but rather associated with a variety of actors in a variety of social locations. Knowledge now has a variety of sources and takes a variety of different forms.” (Rydin 2007, p.54)

Furthermore, in light of this shift, planning theorists have called for the recognition and use of multiple knowledge types in planning (see Rydin 2007; Rantanen and Kahila 2009), such as local experiential knowledge – what Aarsæther describes as the ‘silent knowledge’ of lay people, often place-based and tied to use (2015). The present agenda of public participation research and activism in planning and decision-making must be seen in light of this, promoting the recognition and legitimacy of not only stakeholder groups such as children and their interests and values but also of their interconnected place-based local experiential knowledge, to inform and influence the planning and decision-making.

Changes in planning, changes in the role of participation and local experiential knowledge:

Similar to the perspective of Rydin (2007), Lane (2005) ties this shift to the development of planning ideologies, and connects the recognition of multiple knowledges in planning with the role of participation planning.

As stated by them:

“The way in which planners and policy-makers define their field and approach their work is to a large extent indicated by the role they provide to nonplanners. The definition of the planning problem, the kinds of knowledge used in planning practice and the conceptualisation of the planning and decision-making context are the important determinants of the extent of participation offered to the public.” (Lane 2005 p.284)

They see this in a broad perspective, exploring the role of participation and lay perspectives in planning models since the post-world war times. I will reiterate their presentation of the planning models and what they entailed in a brief manner. Lane (2005) identifies three planning models, so to speak, that have (respectively) been hegemonic in planning practice: blueprint planning, the synoptic model and theoretical pluralism, which is recognized as the contemporary planning situation. As described by Lane (2005) the first two were rational-comprehensive planning models, they were highly objective oriented, believing in comprehensive planning as a means of realizing long term objectives, and they had a top-down approach, viewing planning as an apolitical rational-technical exercise and science where the expert planner and their analyses knew best. Furthermore, in these models the interests of the public were viewed as unified, and there was a view of society as homogenous and consensual (Lane 2005). As a consequence, there was little room or need for participation in either of the models (Lane 2005). Furthermore, there emerged critiques of these approaches to planning in the late 60'ies, which highlighted the political and distributional nature of planning and its potentially inequitable consequences (Lane 2005), leading to a plurality of new approaches. As pointed out by Lane, some of the tendencies is as mentioned the view of planning as political and distributional, the view of interests of stakeholders as multiple rather than unified and often in conflict, and decision-making as a negotiation process between a plurality of interests and actors where the planner acts as a facilitator (Lane 2005 p.296-297). Following from this, participation and the perspectives of different stakeholder groups (and herein their local experiential knowledge) becomes important to planning (Lane 2005).

Of the contemporary approaches that were directly influential to planning practice, there is transactive planning, highlighting decentralization and empowerment of communities in terms of decision-making, which as such represented a shift in terms of public participation (Lane 2005), and furthermore advocacy planning – highlighting the unequal distribution of power and opportunity of influence in planning, with a strong focus on participation and the facilitation of more equitable planning outcomes. This lead to the notion of the planner as a facilitator (Lane 2005). And furthermore, bargaining – which was descriptive rather than normative, focusing on negotiations between actors by various strategies in the decision-making, and where participation was not so much a goal in itself but rather a part of this process. This approach was followed by critique leading up to communicative approaches to planning, where participation is seen as a central and inseparable part of planning (Lane 2005). The communicative approaches draw on the Habermasian ideal of intersubjective argumentation – or open dialogue as a means of making known the various interests and concerns and reaching consensus between various actors (Lane 2005; Healey 1996), in which, for Healey (1996 p.217-234), ‘the power of the better argument’ will achieve consensus.

The communicative approaches have been and are to this day highly influential to planning practice, and therefore some elaboration is pertinent. A similar notion to the one of Healey (1996) is expressed by Innes and Booher (2004 p.422; 2000) who contend that collaboration, authentic dialogue and interaction are key aspects for enabling what they see as genuine or effective participation, meaning that the voices of various stakeholders can be heard in the participatory process. Central to this is the enabling of authentic dialogue between the actors in the participation process:

“When an inclusive set of citizens can engage in authentic dialogue where all are equally empowered and informed and where they listen and are heard respectfully and when they are working on a task of interest to all, following their own agendas, everyone is changed. They learn new ideas and they often come to recognize that others’ views are legitimate. They can work through issues and create shared meanings as well as the possibility of joint action. They can learn new heuristics.” (Innes and Booher 2004 p.428)

As implied here, the authentic dialogue ideal as described by Innes and Booher (2000; 2004) requires certain conditions to be present during the process of dialogue. There must be established a shared understanding of the interests and concerns relevant to the issue at hand early in the process, the actors must trust one another and furthermore be sincere in their arguments and present them in a way that ensures that the other actors can understand what they are expressing, and the process must be open and structured by the dialogue rather than predefined subjects (Innes and Booher 2000; 2004). Furthermore, in their perspective, the process must include all the relevant actors and have a legitimate representation of interest, they must be on equal footing, and there should be an interdependence between stakeholders which makes them likely to collaborate in the process (Innes and Booher 2000; 2004). As they see it, given that there is authentic dialogue, there can be built a shared understanding and consensus as the various actors learn from one another through the process of participation, also building competencies and networks that enable them to effectively engage in participation and change decision-making in this context and in future decision-making contexts (Innes and Booher 2004; 2000).

PPGIS as a means of furthering the integration of local experiential knowledge in planning:

The integration of local experiential knowledges and the interests of lay people in planning and decision-making, such as children’s place-based uses and perceptions, is central to the participatory agenda for Public Participation GIS tools and research (Kahila and Kyttä 2009; Rantanen and Kahila 2009; Ghose 2017). Kahila and Kyttä (2009, p.389) see in a Finnish PPGIS equivalent the: “potential to

enhance participation by allowing the residents the possibility of sharing their knowledge of their living environment with urban planners and researchers.” In their perspective, a strengthening of local experiential knowledge in planning can in part be done by developing new and more effective methods for participation, though also requiring that planners acquire a more profound understanding of the local experiential knowledge (Kahila and Kyttä 2009).

There are arguments in the PPGIS literature that see an added value of PPGIS tools for promoting and strengthening local experiential knowledge and, in connection to this, lay persons interests in planning (see for instance Kahila and Kyttä 2009; Rantanen and Kahila 2009; Kahila 2015). It is argued that the use and implementation of these tools can promote the implementation of local experiential knowledge as part of the knowledge base in planning in several ways. An argument that can be made is that the use of PPGIS tools and herein the production of maps can contribute to strengthening the legitimacy of local experiential knowledge in planning, as maps tend to have a special authority in planning, hereby giving the local experiential knowledge the appearance of being ‘objective’ knowledge in the same manner as technical or expert knowledge can have this appearance (see Pløger 2015; Aune et al 2015; see also Hongslo 2017). As commented by Pløger (2015 p.260-261), maps produce ‘truths’ in planning. On the other hand, this can be challenging as: “... unfinished or poor data can be perceived as unbiased fact” (Aune et al 2015; see also Kahila and Kyttä 2009).

One argument is that PPGIS tools can make local experiential knowledge more available to planners (Kahila and Kyttä 2009), in part by presenting it in a manner which is easy to comprehend for the planners and does not require too much effort to assess – speaking in the visual and cartographic language of planning (Aune et al 2015; Kahila 2015). Still, as pointed out by Kahila and Kyttä (2009) there is a common issue of ‘information overload’ for planners, which mean that the maps produced by PPGIS tools can become yet another source of information that has to be assessed, adding to the burden of an already heavy workload and not necessarily ensuring the use of this information. Furthermore, it is also argued that the local experiential knowledge can become more available to planning by the use of PPGIS tools, by improving the attainability of the local experiential knowledge: in this argument, producing local experiential knowledge through the mapping exercise of PPGIS tools and methodologies is seen as having the potential of making the ‘silent knowledge’, which is often hard to attain by traditional participatory measures, speak through the mapping, as the participants are asked to map their place-based uses and experiences (Rantanen and Kahila 2009; Aune et al 2015).

Building on these arguments, PPGIS can be seen as a means of enabling dialogue between stakeholder groups and planning actors in the vein of communicative approaches to planning (see Rantanen and Kahila 2009; Kahila and Kytta 2009; Babelon 2015; Aune et al 2015). Herein are questions of whether such tools promote dialogue, and if so – what kind of dialogue? In a study of different PPGIS tools aimed at adult citizens (Babelon 2015 p.77), it was found that the PPGIS tools tended to promote consultation rather than dialogue, which was seen in connection with the functionalities of the tools. As described by Babelon (2015 p.77): “The mapping surveys seemed to be essentially consultative, whereby the local knowledge compiled in the surveys would then be used at the planners’ own discretion”. Therefore, the enabling of dialogue through such tools is highly contingent on the planning actors. Furthermore, they argue that the assessment of the dialogical qualities of PPGIS tools must be seen in a much broader perspective, implying that there may be further dialogical qualities to PPGIS when applied in the planning process:

“... the real dialogical component of the softGIS method needs to be assessed in the way in which comments about place values are then used by expert planners and integrated in the decision-making process. Rather than appearing at the level of the mapping surveys themselves, the dialogical dimension of mapping place values may appear in the wider perspective of the planning process as a whole...” (Babelon 2015 p.77).

This raises questions of how the tools and methodology are structured, what it allows for in terms of dialogue (in light of the ideal of authentic dialogue as presented by Innes and Booher 2000 ;2004), here between children and planning actors.

Accessing children’s place-based uses and perceptions through PPGIS?

Another question is whether PPGIS mapping aimed at children is suited for enabling the access of children’s place-based use and experiences. In a study utilizing a PPGIS tool version for children, the place-based environmental experiences of children were explored, which showed promising results. In the words of Kytta, Broberg and Kahila:

“...the Internet-based soft-GIS method proved to be a promising way to study the conditions of child-friendly living environments in a de-tailed manner, in a way that also inspires children. Children should be seen as fully abled users of their environment and as informants pos-sessing valuable insights on possibili-ties and restrictions of different environments.” (Kytta, Broberg and Kahila 2012 p.147)

This is supported in a study by Freeman et al (2016) using a similar method to investigate children's knowledge of their local environments. As expressed in the study:

"All the children in the study, regardless of age, gender and socio-economic status of their school, managed to produce a data-rich personal computer map. The most important advance in child-mapping research that this study offers is a clear demonstration of the value of a shift away from mapping as a means to assess children, especially their cognitive abilities, to recognising that children are meaningful map-makers in respect of their own lives can demonstrate an innate understanding of their spatial environment and create maps that effectively present their own data." (Freeman et al 2016 p.168)

It was furthermore stated that: "The advent of new technologies, particularly computer-mapping software, offers immense potential for enhancing understanding and representation of children's everyday spatial relationships." (Freeman et al 2016 p.158). Yet, there is the question of whether the participant is able to comprehend the tool in a manner that is sufficient for them to be able to map their place-based uses and perceptions. As described by Aune et al in the preliminary study of Children's Tracks, there is the possibility of exclusion if this is not the case:

"... PPGIS requires that the participant has some degree of fluency in the skills that are needed to fully participate in the production of the map (Cope and Elwood 2009). An ICT based PPGIS will automatically exclude those participants who are not comfortable with or sufficiently skilled in the use of ICT tools. Depending on whose voice the mapping project aims to visualize, or the level of information that is desired, this could be a serious challenge for the implementation of ICT based participatory GIS." (Aune et al 2015 p.173)

A central aspect to this theme is the accuracy and richness of the children's local experiential knowledge produced through PPGIS mapping, which must be seen in connection to their spatial representation and mapping skills (Freeman and Vass 2010). Freeman and Vass (2010) studied children's maps and mapping to assess the translation of children's place-based experiences into maps, and the use value of this in planning. An aspect to this is how children develop their spatial representational and mapping competencies. Summing up different perspectives from previous research, Freeman and Vass find that there are numerous factors affecting the mapping skills of children:

"In short, independent, purposeful mobility, exposure to various representational media, and guided practice in spatial cognition and map-making are all important factors impacting on the development of a child's spatial capacities and experiences. In other words, a good quality map reveals not only a child's spatial awareness, but also their familiarity with conventional spatial representational techniques and their skill at employing these." (Freeman and Vass 2010 p. 69)

Furthermore, they find that the spatial representational and mapping competencies of children are highly individual and not necessarily tied to age (Freeman and Vass 2010). Neither are they necessarily tied to children's other competencies nor their uses of their environments:

“We can usually expect that good maps represent good spatial awareness, this, in turn, can be linked to a high level of independent mobility, freedom, and richness of life experience. The interviews with children demonstrated a link between these factors, namely that those children who had high levels of independence could talk more knowledgeably about their neighbourhood, the places and people in it. However, crucially for this study, the children could not necessarily transfer this knowledge into their maps ...” (Freeman and Vass 2010 p.84)

In the perspectives of Freeman and Vass (2010), maps can be suited to inform planning and support children's participation although they may lack spatial accuracy. In their view a lack of spatial accuracy of the maps should not be taken as an objection for the utility or use of them in planning. Rather, Freeman and Vass stress the need to use children's maps in planning and for participatory purposes with caution, and urge the planner to look beyond issues of spatial accuracy and: “... seek to penetrate the social and environmental information the map is portraying” (2010 p.85). They see a need to use the maps together with other measures involving dialogue with the children, in order to enrich and clarify that which is mapped, and more fully access the place-based uses and experiences of the children. Furthermore, they contend that all participation, including that of children, requires that there is spent time and effort, hence there is no methodological or technological 'quick fix' for accessing children's place-based uses and perceptions through children's participation in a sufficient manner (Freeman and Vass 2010).

The maps in question in the study by (Freeman and Vass 2010) were hand drawn maps, which mean that the results possibly could be a bit different when using PPGIS. The study of Freeman et al (2016) on children's knowledge of their local environments found that GIS aided the children significantly in mapping their insights. Yet, they still point out that mapping skills generally are necessary in the use of GIS-based maps:

“But, for these new developments to function, traditional mapping skills are necessary in scaffolding children's understanding of space, and to build up and complement the technologically based mapping methods ... Children in using a GIS-based mapping system still need to possess an internal mental map of the space but their ability to articulate that mental map is significantly enhanced by the greater spatial specificity and accuracy the GIS-based maps provide.” (Freeman et al 2016 p.161)

And furthermore, in the study it was found that the interactive computer map, though enabling the children's articulation of their perspectives, needed the support of interviews and drawn maps in order for the knowledge of the children to become accessible (Freeman et al 2016 p.168).

Following the findings of these respective studies, it becomes clear that there is a potential in PPGIS when it comes to enabling the access of children's place-based experiences and perceptions, and that children have a lot to bring to the table in the mapping exercises, having and expressing valuable insights on their local environments, though this can be somewhat contingent on their mapping skills and dependent on the methods chosen (Freeman and Vass 2010; Freeman et al 2016; Kytta, Broberg and Kahila 2012). Furthermore, it becomes clear that the way the PPGIS tools and methodology are structured in terms of what happens in and around the mapping processes is central to the knowledge produced through this process. And furthermore, that the use of a PPGIS mapping exercise as the singular participatory measure is insufficient in terms of enabling adequate access to the place-based uses and perceptions of children, children's participation requires time and effort (Freeman and Vass 2010). Another aspect that can be drawn from the findings of Freeman and Vass (2010) is that the interpretation of the children's maps into planning require a level of capabilities and available resources of the planning actor(s) conducting the interpretation and utilizing the results that enable them to interpret the knowledge in a way that goes beyond summarizing findings on a map. The process of interpretation and furthermore integration of the children's perspectives into a planning context can be viewed as a kind of engagement between different knowledges, which in itself entails what Rydin describes as a form of translation (2007 p.55).

From all of this one can ask questions about how such tools and methodologies are organized and conducted, and furthermore what is the nature of the output gained through this, and how is this output handled and incorporated into the planning process.

Returning to knowledge: basic knowledge considerations and the concept of 'co-production' of knowledge in planning:

Some further clarification on the concept of knowledge is needed in order to fully understand the perspectives and concepts that are used in this thesis. Rydin uses the term 'knowledge claim' in her arguments concerning the role of knowledge in planning (2007). A knowledge claim is described as: "... a claim to understanding certain causal relationships" (Rydin 2007 p.56). Herein lies the

perspective that multiple knowledge claims¹ are promoted and engaged with each other in planning, promoting certain values and ways of knowing, and that the claims must be perceived as relevant, accurate and legitimate in order for them to have the possibility of affecting planning (Rydin 2007). This must furthermore be seen in connection to how they understand the concept of knowledge.² Rydin supports the view that knowledge is not only constructed through social processes, but the result of a co-construction which entails engagement with material reality (Rydin 2007; Alexander 2008). This view still retains a generally relativist position of knowledge, yet it is open to the possibility that there may exist valid absolute truth claims (Rydin 2007; Alexander 2008 p.208). As described by Alexander:

“The ‘social construction’ model does not recognize any absolute truth-claims – it implies that there’s no single observable reality out there – while ‘engagement with material reality’ must acknowledge that some absolute truth-claims may be valid ... based as they are on a material reality that exists. Resolving this paradox as suggested by the ‘co-constructionist’ theorists of knowledge necessarily implies a societal discourse that deploys and combines various kinds of knowledge, which differ in the foundation of their respective truth-claims and their attitude to material reality.” (Alexander 2008 p.208)

A knowledge claim furthermore becomes more than a claim and promotion of certain values and ways of knowing, it becomes a claim of (a truth of) reality (Rydin 2007; Alexander 2008).

Furthermore, building on previous contributions (see Rydin 2007), Rydin presents the perspective that planners are *co-producers* of knowledge, hereby having a role in the production of knowledge in planning, which they describe as:

“... the work of giving voice to the various actors who have a knowledge claim relevant to the issue at hand; in doing so, planners need to recognize the position of more and less powerful actors.” (Rydin 2007 p.57)

It is necessary to mention that in the perspective of Rydin (2007), as implied here, the co-production also entails some form of testing of the knowledge claims, which follows from their view of

¹ In this context it is about knowledge claims, but following the logic of the arguments of Rydin (2007) one could easily apply this to other claims promoted in planning.

² Embedded in this is the idea of knowledge as differing from information by having a causal relationship (Rydin 2007). Alexander (2008 p.208) views this position as unnecessary for their argument, proposing that the arguments of Rydin do not require a separation between ‘knowledge’ and ‘information’ and that a causal relationship is implied in: “... almost everything we think of as factual information ...”. The argument of Alexander (2008) is supported here. However, if one takes the stance of Rydin (2007) it is worth mentioning that for the local experiential knowledge of children, i.e. place-based uses and perceptions, such a causal relationship can be found by drawing on for instance environmental psychology, hereby retaining the status of knowledge claims.

knowledge (Alexander 2008). Rydin (2007) then goes on to create a typology for testing knowledge claims, which is not in focus here.

An implication from the perspectives presented by Rydin on knowledge claims and co-production is the exclusion (by planning actors) of some claims and the recognition of others, which is highly value laden (2007; Alexander 2008). These perspectives should be viewed in light of power aspects to planning and knowledge. Pløger (2015), following Foucault and Flyvbjerg, argues that the production of knowledge in planning is connected to power: it is producing power and being produced by power. In this perspective (Pløger 2015), planning (system and practice, and herein its dominant approaches (see also Lane 2005; Kahila 2015)) is interconnected to a hegemonic knowledge and value regime, structuring what is considered relevant to planning and what is not considered relevant (by planning actors), and promoting and giving legitimacy to some values and knowledges whilst excluding others (see Hanssen and Saglie 2010). The regime (Pløger 2015) is cemented in planning institutions such as for instance the legal framework for planning – stating process requirements to planning and implying, directly and indirectly, what are central concerns, knowledge types and values of planning, and how they should be prioritized in the planning process, which impacts the planning actions being conducted in planning practice by the planning actors. Building on Pløger (2015) the co-production of knowledge and herein the translation happening in the engagement between different knowledges (Rydin 2007), becomes an exercise *of* power that is shaped *by* power.

PPGIS, power and the co-production and translation of local experiential knowledge into the planning context:

Following Rydin (2007), the translation of local experiential knowledge into the planning context can be seen as inherent to all participatory processes involving stakeholder groups in planning. Additionally, for PPGIS tools this translation is happening in many stages. Applying the term ‘co-production’ (Rydin 2007), the translation process of PPGIS can be seen as a way of co-producing local experiential knowledge (see also Kahila 2015 who writes about knowledge creation), where the nature of the tool and methodology and the context to which they are applied affects the knowledge output. Herein, the many stages of translation mean that some information can be ‘lost in translation’, i.e. misinterpreted or excluded or sorted out at some point during the process of translation, shaping the knowledge output that is co-produced through the use of these tools (see Kahila 2015 who writes about ‘cherry picking’ in this context).

There is a translation going on already at the stage of the mapping exercise being conducted – where the tool of the mapping exercise and the process surrounding it leads the participant and creates an

opportunity space for the participant to map certain kinds of use and experience, necessarily excluding the registration of some kinds of uses and experiences, and steering the knowledge being co-produced (see also Aune et al 2015). As contended by Aune et al (2015 p.178): “Those in charge of a PPGIS-process hold a lot of power by controlling how the mapping process is framed and which issues are brought to the table for participants to comment on.” Furthermore, a second translation happens when the ‘raw data’ from the mapping exercise is processed, into i.e. a map or a GIS-layer to be used in planning (see for instance Rantanen and Kahila 2009), and then one can identify a third translation or possibly further translation steps when the map/processed data is interpreted by planners or others for use as part of the knowledge base in a planning process.

From a planner’s perspective, the advantage of the kind of translation inherent to the PPGIS tools is that the knowledge output can be shaped through the interface of the tool and the stages of information processing to give the kind of participatory information that the planner views as relevant to their practice, which could contribute to advancing the incorporation of the knowledge, albeit selected knowledge, in planning (see also Aune et al 2015). Following this line of argumentation, the planners would then be more likely to view the contribution from these tools as relevant to their planning actions and their knowledge base, excluding information that would perhaps not be used anyway. Yet this is problematic in terms of participation. Given the power mechanism inherent to the act of translation, the danger is that the local experiential knowledge co-produced through the whole process of PPGIS can be sorted and selected (Kahila 2015), consciously or unconsciously, to fit with preconceived knowledge notions (Pløger 2015) of the present and future for the area undergoing planning, in line with the interests and concerns of powerful actors shaping the decisions in the planning process and the expertise or professional assessments of the planners, at the expense of children’s interests. As highlighted by Rydin (2007 p.55-56): “It is much more difficult than often acknowledged to generate agreement between actors whose knowledge of an issue is rooted in very different experiences.”

Following this, there is a question of how especially children’s local experiential knowledge is being translated throughout this process by adult practitioners, whose own perceptions and use of place may differ to that of children, and who therefore may not necessarily be able to recognize or understand fully the place-based perspectives of children (see Chawla 2002), nor prioritize or see a relevance of these perspectives in the planning context.

In a study by Cele and van der Burgt, looking at planning actors' perceptions of children's participation, it was found that the planning professionals saw special challenges with incorporating children's participatory output in planning:

“One identified difficulty was how to use the information retrieved from children, with participants virtually clueless about which methods to use. Children's information is perceived as being non-compatible with the information planners can use.” (Cele and van der Burgt 2015 p.22)

Furthermore, an aspect to this is the nature of the participatory output from PPGIS tools that is to be incorporated into the planning context. As shown by Freeman and Vass (2010) there may be spatial inaccuracy and a lack of details specifying the meaning of that which is mapped, when the map stands alone as a measure for accessing children's perspectives. The work of Kahila and Kytta (2009 p.404) strengthen this argument as they point out that the output from PPGIS tools (generally, i.e. not only in terms of children's mappings) is not easily handled as the use of the tools produces 'geographically imprecise and fuzzy' data. The digital technical nature of the PPGIS tools also have its role to play in the process – there could potentially occur technical faults during the mapping exercise or in the processing or interpreting phases which can affect the knowledge output created by the use of the tool (Kahila and Kytta 2009). What this means is that the output from PPGIS and children's PPGIS can be difficult to interpret and understand, which can distort the translation of these perspectives. As highlighted by Cele and van der Burgt, describing something to the likes of a PPGIS tool aimed at children:

“...If the planner does not know how to interpret this information and what the 'best interest of the child' means in a wider social perspective as well as in a specific local context, there is the risk that 'lay' adult representations of children and childhood will take over.” (Cele and van der Burgt 2015 p.18)

Again, the implication is that those who interpret and utilize the participatory information must have the available competence and resources towards children's knowledge and participation in order to support the implementation of this in the planning context. This should furthermore be seen in relation to the participation facilitated through the use of such tools. Here it is useful to look into the concept of children's participation and address the theoretical foundation for understanding the nature of children's participation, drawn upon in the thesis.

Theoretical foundation children's participation:

The concept and role of public as well as specifically children's participation must be seen in relation to its wider theoretical foundations. Arnstein (1969) pioneered the research on public participation

by introducing the ladder of participation, describing the different ways and degrees to which citizens can be involved in and affect the decision-making processes that affect them or their community. In their ladder of participation (Arnstein, 1969), eight rungs represent different degrees of public involvement and power over the decision-making process. The degree of participation varies from 1): nonparticipation, where those in power over the decision-making process are not interested in the perspectives of citizens, who lack ways to influence the decisions made in the process. To 2): tokenism where citizens are given some means to voice their opinion and interests in the decision-making process, however they do not have the power to see that their opinions and interests influence the decisions of the process. And lastly 3): to degrees of citizen power where there is a 'true participation' - citizens have the power to ensure that their opinions and interests have an impact on the decisions made in the decision-making process.

Building on Arnstein's (1969) ladder of participation, Hart (1992;2008) has created a ladder of participation which is adapted to children specifically. Their ladder differs from Arnstein's ladder of participation by being more adjusted to the ways of which children can be exploited and manipulated (by adults) in the processes of participation and decision-making (Hart 1992;2008).

THE LADDER OF PARTICIPATION

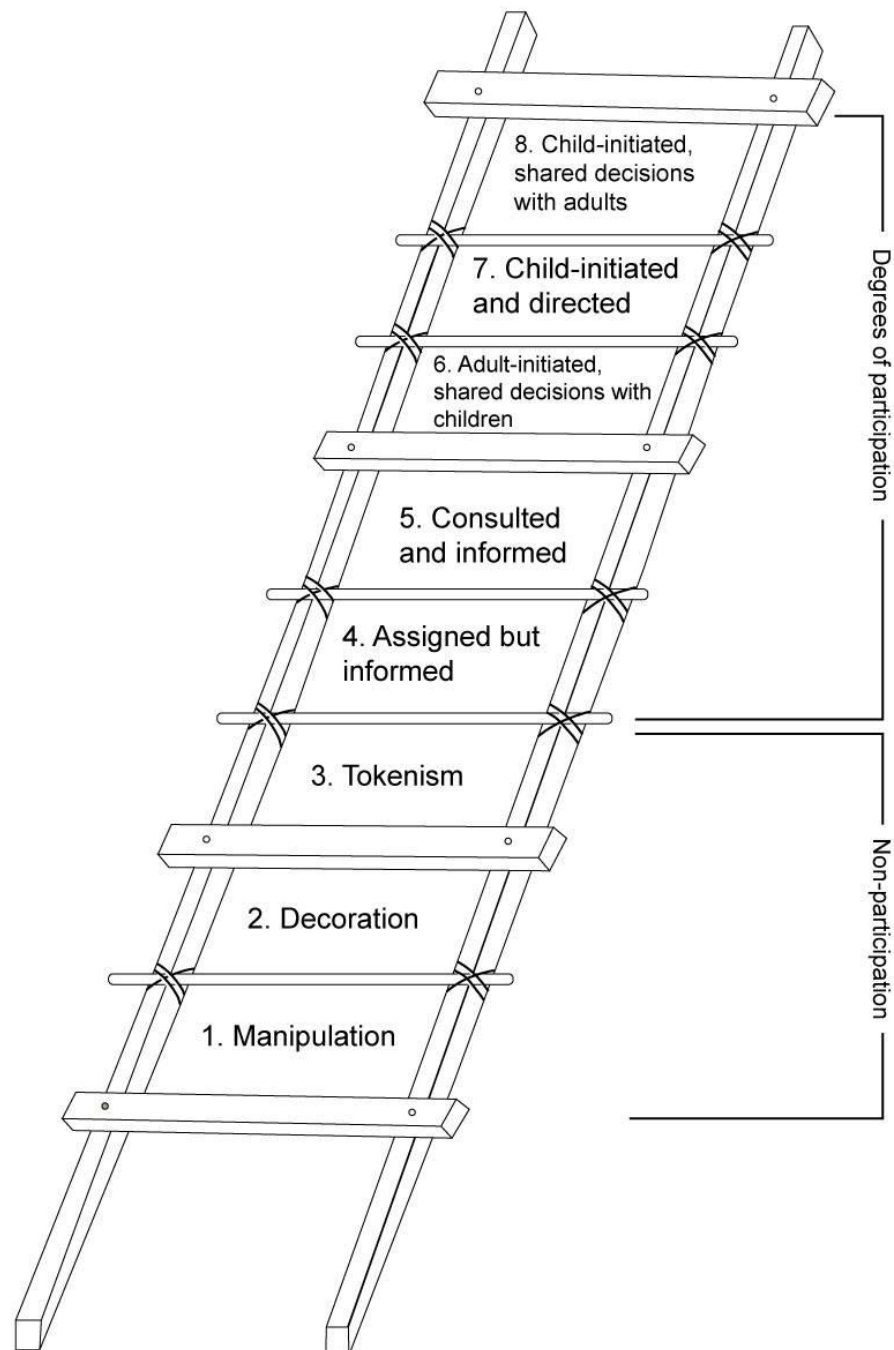


Figure 1. Hart's Ladder of Children's Participation, adapted from Hart (1992 p.8), produced by Kinga Kot.

In Hart's ladder of participation (1992), the following steps describe the different degrees to which children can be involved in decision making processes:

Nonparticipation: This section of the ladder of participation is classified by Hart as a form of nonparticipation, as the children do not truly have an opportunity to participate according to Hart's understanding of participation. In this section of the ladder the following steps are identified:

- *Manipulation:* children's participation can be described as manipulation when the children involved are not in any way part of organizing the process, nor are they aware of the issues at stake and of what they are contributing to or how their input will contribute. In this step, children are intentionally misused by adults to legitimize the process or outcome.
- *Decoration:* children's participation can be described as decoration when the children involved are not in any way part of organizing the process, nor are they aware of the issues at stake and of what they are contributing to or how their input will contribute. Unlike the previous step the children are not intentionally misused by adults to legitimize the process or outcome.
- *Tokenism:* children's participation can be described as tokenism when the children involved are "apparently given a voice, but in fact have little or no choice about the subject or the style of communicating it, and little or no opportunity to formulate their own opinions."
(1992 p.9)

Degrees of participation: in this part of the ladder the children are involved in a manner that is participatory according to Hart's understanding of the term where participation occurs when: "1. The children understand the intentions of the project; 2. They know who made the decisions concerning their involvement and why; 3. They have a meaningful (rather than 'decorative') role; 4. They volunteer for the project after the project was made clear to them." (Hart 1992 p.11). In this section of the ladder the following steps are identified:

- *Assigned but informed:* children's participation can be described according to this step when the involvement follows the description in the abovementioned degrees of participation.
- *Consulted and informed:* children's participation goes beyond the previous step of the ladder when also the opinions of the children involved are treated in a more serious manner by the adults facilitating the process.
- *Adult-initiated, shared decisions with children:* children's participation can be described according to this step when the process of involving children follows the descriptions of the previous steps of this section. Unlike the former steps they are also taking part in the decision-making of the process.
- *Child-initiated and directed:* in this step of the ladder, the children involved are themselves initiating and directing the process of which they are participating.

- *Child-initiated, shared decisions with adults*: in this step of the ladder, the children involved are incorporating adults into the process that they themselves have initiated.

Hart expresses that the kind of participation that should be afforded depends on the competencies of the children (1992). The ladder of participation by Arnstein (1969) and of derivatives such as the ladder of children's participation (Hart 1992), must be seen as normative analytical tools for understanding the nature of participatory processes, promoting some form of power distribution in planning and decision-making processes (Sharp and Connelly 2002). For Arnstein (1969) and the ladder of citizen participation it is about empowering 'citizens' and especially the least advantaged groups in society, the 'have-nots', at the expense of current 'power holders', in order to ensure a more socially equitable outcome of planning processes. The change in power distribution is deemed necessary in order for these groups to be influential in decision-making, as this allows them to 'set the terms of the participation' (Arnstein 1969; Lane 2005 p.285).

Do the participatory ladders clarify the nature of a participatory process?

With the agenda of promoting social justice in planning, Sharp and Connelly (2002) view the consequences of what is implied in Arnstein's ladder of participation (1969) and its derivatives in a critical light. According to them (Sharp and Connelly 2002 p.43): "Citizen power, taken to its limits could result in exclusion and conflict between groups, and disempowerment through disconnection between citizen groups and the state." The issue as they see it, is that the ladder and its derivatives do not take into account the complexity of participation processes and herein its multiplicity of interests and concerns (Sharp and Connelly 2002).

However, there is a distinction between the implications of the participatory ladder of Arnstein and that of children's participation by Hart. For the ladder of children's participation (Hart 1992; 2008), the normative element is to promote children's interest via the involvement and influence of children in decision-making processes in a way that is in tune with their competencies and in a manner that ensures that they have some say in how they participate and the realistic opportunity of some degree of influence over the decisions, avoiding children being used as 'decoration' in the process or the process being 'tokenistic' or 'manipulative'. According to Hart (2008) the ladder should prominently be used as a tool to further the discussion about the role of the children in participation, and it should not be assumed that the highest steps of the ladder is the ultimate goal for all participatory processes involving children (2008). An implication that can be drawn from all of this is that there can be a balance between different interests in the decision-making process, allowing for socially equitable outcomes where there are conflicts between multiple interests and

concerns. Herein lies the possibility to direct the focus towards: clarifying the nature of the participatory process, and further: raising the status of children's interests and perspectives (as some of many interests and perspectives) and children as actors (as some of many actors) in decision-making processes, rather than promoting the absolute control of the decision-making process by children, as Hart warns against (1992;2008), or children's interests above all other interests.

Still, there are questions of how such tools as the ladder of children's participation can shed light on the nature of a participatory process in planning. Sharp and Connelly (2002) view the participatory ladder of Arnstein (1969) and derivatives as ambiguous analytical tools for shedding light on public participation and the power distribution in planning processes. In a lengthy example they show how, depending on the 'point of departure' or perspectives chosen for the analysis of participation in a decision-making process, the analysis can come to opposing conclusions about the level of participation in a decision-making process (Sharp and Connelly 2002). In short, they point to a simplification in the ladders on the actors of the decision-making process, which tend to show what they call a binary relationship between powerholders and others, whilst in reality there are many more actors, concerns and agendas present (Sharp and Connelly 2002).

The need for additional analytical questions for understanding the participatory process:

In the perspective of Sharp and Connelly the ambiguity is about the questions that such analytical tools as the ladders allow for and do not allow for (2002). They see a need to ask additional questions to those of the ladders in the analysis of participation, and call for a stronger incorporation of the planning context in the analysis, which is also supported by Lane (2005). In their words: "Arnstein and derived work allow us to ask "who is in control?" and wonder "who should be in control?" – but fails to specify control "over what?", "where?" and "by whom?" in a useful way." (Sharp and Connelly p.45) To be more specific, Hart's ladder of children's participation (1992) already raises questions about the role of children in the participatory process: how they are included in decision-making processes and to which degree they have a say in how the participatory process is done and their involvement in it. The ladder also raises the question about how their 'participatory input' is a part of the decision-making process (Hart 1992).

Sharp and Connelly (2002) point to several factors that should be in focus to further understand the nature and role of a participatory process. As they see it, these factors are important in understanding the possibility for the participation to change power balances and challenge hegemonic perspectives/interests. These factors are: *the geographical scale of the participation* – is it for instance a small park or a large area undergoing development or city that is subject to the

participation, *the extent of action* – what kind of influence does the participation have in the process, *agenda* – is there a broad consensus on the subject of the decision or are there conflicting interests or concerns, *participants* – who are the participants that are invited in/involved in the participation, and, *style of engagement* – how open or steered is the participatory process (Sharp and Connelly 2002 p.46-50). Within this there is a perspective of whether the participation is what they term ‘safe’ or opposite to this ‘dangerous’, referring to the degree to which the participation has a potential to shift power balances or make substantial changes (Sharp and Connelly 2002). An analysis of a participatory process should incorporate additional elements (of Sharp and Connelly 2002) to the ones proposed by Hart (1992) in the ladder of children’s participation.

Perspectives on the incorporation of children’s perspectives in the planning process:

Following the contribution of Sharp and Connelly (2002), children’s participation through PPGIS must be seen in relation to the context of the planning process to which it is applied. Here it is pertinent to return to a power take on planning. In light of the perspectives presented throughout the theory chapter, it becomes difficult to realize the ideal of authentic dialogue as proposed by Innes and Booher (2000; 2004). In fact, dialogue and consensus building as generally advocated by theorist supporting communicative approaches to planning (Innes and Booher 2000; 2004; Healey 1996), may not in itself be a sufficient means for enabling the integration of children’s place-based uses and perceptions in planning and decision-making, as more powerful actors in a planning process may act according to their own interest and priority of concerns at the expense of ‘the better argument’ and rationality (see Allmendinger and Twdwr-Jones 1998; Huxley and Yiftachel 2000; Flyvbjerg 1991). Furthermore, it is contended by Connelly and Richardson (2004) that consensus building is inherently exclusionary when applied in praxis as there are multiple and conflicting interests present in the planning process.

Furthermore, an institutional challenge with incorporating lay perspectives, such as those of children, in planning through participation is the timing of the participation process, as was implied by Innes and Booher (2004 p.423), commenting on public hearings in planning processes: “Typically these procedures are used after plans or decisions have been proposed, often in some detail. The citizen role is to react.” In such contexts, it may prove difficult in practice to make serious alterations to the planning proposal, as it has already gone through phases of discussion and negotiation with central (and powerful) actors (see Hanssen 2015; Hanssen and Saglie 2010; Hanssen and Falleth 2014). It can be seen as a kind of path dependency where central actors in the planning process may, at this point in the process, not truly be interested in or open to serious changes being made to the plan, as this

would mean redoing previous steps that have been conducted in the process of formulating the planning proposal such as negotiations, perhaps prolonging the planning process (Hanssen and Falleth 2014). Furthermore, there may be (legal) provisions and guidelines (see background chapter), or paramount discourses in place in planning (or among central actors herein), that promote the protection of some concerns and interest over others in advance of the planning process (Hanssen and Saglie 2010). What this means is that the opportunity space for decision making concerning land use in the planning process may be reduced, or be perceived to be reduced, herein restricting the opportunity for lay perspectives, such as those of children, to influence the decisions of the planning process (Hanssen and Saglie 2010). In a similar vein, Turnhout et al see tendencies of ‘framing’ of the participation process (2010; see also Aune et al 2015). In the critical perspective of Turnhout et al, participatory processes are often predefined, and they serve to legitimize pre-existing goals, restricting the influence of the participants:

“Participation assimilates the participants and incorporates them into the projects of the already powerful. In this sense, participation is little more than a new technique with which, under the veil of inclusivity, existing goals can be reached in effective and newly legitimated ways (Kabeer 1996, Parfitt 2004). Thus, pre-existing definitions of problems influence citizen involvement because they structure and restrict the possible outcomes of participation and influence what citizens can and cannot do.” (Turnhout et al 2010³)

The framing of the participation process becomes important to the integration of PPGIS in decision-making (Turnhout et al 2010; Babelon 2015 p.77-78; Aune et al 2015). Herein lies a possibility that a PPGIS tool, methodology and output can be used to give legitimacy to the planning process and the decisions herein, showcased as a participatory process involving and giving influence to stakeholder groups such as children and valuing their local experiential knowledge, whilst in reality the participation does not involve or give influence to the participants in a meaningful way (see Cele and van der Burgt 2015). Again, it is necessary to highlight that maps produce ‘truths’ in planning, as contended by Pløger (2015 p.260-261). Herein lies a connection between the perspectives of co-production and translation of the children’s input into a ‘children’s local experiential knowledge’ for use in planning, and the level of involvement and influence of the children in the planning process. What happens during the translation of children’s perspectives through PPGIS, the becoming of this mapped ‘truth’, will inherently have some effect on the degree to which the children can influence and can be involved in a planning process.

³ Unknown page

This highlights the importance of understanding how the perspectives of children are translated, as part of the co-production (Rydin 2007).

Legitimacy as a factor influencing the incorporation of local experiential knowledge of children and children's participation in planning:

As has been highlighted, the power aspect to planning and participation (Pløger 2015; Turnhout et al 2010) mean that the role of children's interests and their local experiential knowledge in planning co-produced through the use of the PPGIS tools, relies heavily on the planning system, planning culture, planners and other powerful actors in the planning process and it's/their take on the legitimacy and relevance of these contributions in the planning process (see for instance Kahila 2015; Babelon 2015; Kahila and Kyttä 2009; see also Hanssen and Saglie 2010).

The planning actors act as what Horelli (2006 p.239) terms 'gate keepers' to the planning process. Their views on the legitimacy of children's participation through PPGIS tools, and herein the local experiential knowledge co-produced through this, must be viewed in connection to their perspectives on children's planning competencies (Cele and van der Burgt 2015; see also Aune et al 2015). In a study in Sweden exploring this theme (Cele and van der Burgt 2015), it was found that planning professionals were unsure of how children could contribute in the planning process, and in which circumstances participation was the best way to ensure children's interests in the planning process. This was a question of children's planning competencies, where the study saw in the professionals' assessments of children's planning competencies: "... an underlying understanding of competency as defined from an adult definition of planning competencies..." (Cele and van der Burgt 2015 p.21). Following this, there was a focus on the degree to which children were able to adapt to the existing (adult) context and practices (Cele and van der Burgt 2015). The underlying understanding of competency: "... made it problematic to see children as competent social actors in the planning process" (Cele and van der Burgt 2015 p.21), the implication being that the participation of older children was more valued than the participation of younger children, as they have a greater ability to adapt to the planning context and planning practice. If these attitudes are widespread among practitioners and in the planning culture, the implication would be that children's participation, especially that of younger or young children, would hold a lesser degree of legitimacy compared to the participation of other (adult) stakeholder groups, meaning that it is less likely to be influential in planning (Cele and van der Burgt 2015).

Perspectives from the theory section are sought drawn upon in the analysis. The theoretical perspectives of the thesis also raise many questions which are sought drawn upon in the analysis.

BACKGROUND FOR THE CASE STUDY

In the background chapter it is described how planning is organized in the Norwegian planning system, process requirements for zoning plans and the legal requirements for participation and especially children's participation, and the planning context. Children's interests and participation in planning practice is referenced. The purpose is to give a broader understanding of the case study.

The Norwegian planning system and its legal framework and delegation of authority:

In Norway, the Planning and Building Act of 2008 (PBA) is the primary law that regulates planning (Pedersen et al 2010). The law sets a hierarchy of spatial plans or guidelines created at different levels of government – from national to local (Pedersen et al 2010). All plans are politically adopted at the corresponding political level (Pedersen et al 2010). In the planning hierarchy, the decision making about future land use is to a great extent delegated to the municipal level, although plans should follow the provisions laid out in the plans and guidelines of the higher levels, as well as considerations that are regulated through sector laws (Pedersen et al 2010). To ensure this, affected branches of government can make objections to planning proposals if they contradict with adopted plans and guidelines or provisions on a higher level in the planning hierarchy, or with considerations that are regulated through sector laws such as the Act Concerning the Cultural Heritage (Pedersen et al 2010). If objections are made, the plan is renegotiated by government authorities at state level, unless agreement is reached between the actors (Pedersen et al 2010). Thus, affected branches of government have a considerable power to influence plans and ensure that the higher-level plans and provisions or guidelines, or concerns governed through sector laws, are followed, even though much of the planning is delegated to the local level (Pedersen et al 2010).

The state government sets central government planning guidelines and provisions that apply to plans at all levels in the planning hierarchy (Pedersen et al 2010). The regional plans set the future pattern for themes such as development and mobility in the regions, on a broad level (Pedersen et al 2010). Below the regional plan there is the municipal masterplan, which decides future land use in broad categories for the municipality (Pedersen et al 2010). The municipal masterplan is followed up by zoning plans, which give a detailed provision of potential changes in the land use in the future (Pedersen et al 2010). The zoning plans act as a basis for future physical development and give legal rights to develop an area in accordance with the provisions set in the plan (Pedersen et al 2010). However, as described by Falleth and Saglie (2010; see also Pedersen et al 2010), the higher-level plans are not directly binding (though they constitute grounds for making objections to a plan).

In the context of zoning planning, research shows that there is a widespread practice of dispensation from the provisions set in the municipal masterplans (Hanssen and Falleth 2014). As the zoning plans have the status of legal rights documents for development and lay out the detailed provisions for potential land use (see Pedersen et al 2010), and as they often result in land use provisions that differ from the ones set in the municipal masterplans (Hanssen and Falleth 2014), the zoning plan processes act as central arenas for decision-making about future land use and place development.

The zoning plans can be separated into two categories: area zoning plans and detailed zoning plans (Pedersen et al 2010). Area zoning plans are plans usually made by the municipality in cooperation with developers, affected branches of government and the public (Pedersen et al 2010). The area zoning plans can be followed up by detailed zoning plan processes within the planning area, when this is required in the provisions of the plan (Pedersen et al 2010). The area zoning plan is not a requirement for deciding the provisions for development, rather it is an optional tool that the municipality can use to coordinate the land use provisions in large areas in greater detail than the more comprehensive plans allow for (Kommunal- og moderniseringsdepartementet 2017). Detailed zoning plans are required for development projects that involve: "... the implementation of major building and construction projects and other projects which may have substantial effects on the environment and society." (Planning and Building Act 2008, section 12.1). In the Norwegian planning system, anyone can propose a detailed zoning plan, as long as the planning proposal is crafted by someone with the expertise that the municipal administration deem necessary (Kommunal- og moderniseringsdepartementet 2017). This was added to the PBA of 2008, and the idea behind it was to make land use planning more democratic and accessible (Hanssen and Falleth 2014). As a consequence, most of the zoning plan processes in Norway are proposed by private actors, mainly by property developing companies (Hanssen and Falleth 2014). As for area zoning plans, they cannot be proposed by private actors (Pedersen et al 2010; Kommunal- og moderniseringsdepartementet 2017). However, the legal framework allows private actors to finance the planning processes and conduct the actual planning of area zoning plans (Pedersen et al 2010; Kommunal- og moderniseringsdepartementet 2017), thus allowing property development companies to have a considerable role and power to influence the formulation of the planning proposal in the area zoning plan as well as the detailed zoning plan. The consequence is that private actors, in addition to affected branches of government, have a central role in planning at the detailed level (detailed zoning plans and also area zoning plans) (Falleth and Saglie 2010). When private actors propose plans, the role of the municipal planner is often delimited to conducting proceedings, whilst the private actor finances and conducts the actual planning and holds the responsibility of the planning process (Falleth and Saglie 2010 p.59). Though these changes were promoted as a way of making the

planning system more democratic, they can also be interpreted as part of a neoliberal turn affecting the planning system, where private actors have more access and power to shape planning and spatial development (see Falleth and Saglie 2010; Hanssen and Falleth 2014).

The Planning and Building Act of 2008 – communicative and top-down traits:

The Planning and Building Act of 2008 (section 1-1) states that:

“Planning and administrative decisions shall ensure transparency, predictability and public participation for all affected interests and authorities. There shall be emphasis on long-term solutions, and environmental and social impacts shall be described.” (Planning and Building Act 2008)

As shown here, and as highlighted by Aune et al (2015; see also Falleth and Saglie 2010) the PBA of 2008 has communicative traits. The act furthermore states legal requirements for participation of sector authorities, the public and stakeholder groups such as children. Still, it’s hierarchical arrangement of plans and power by sector authorities to make objections to plans can be seen as traits of a ‘top down’ planning approach that are still present in the planning system (Falleth and Saglie 2010).

The planning process of zoning plans and process requirements for participation and children’s participation and interests:

The PBA sets process requirements for zoning plans and public participation, herein children’s participation (Pedersen et al 2010; Kommunal- og moderniseringsdepartementet 2014). Here I will list the requirements that are of relevance to this case study. The legal requirements for public participation are regulated by the Planning and Building Act of 2008. The Planning and Building Act (§ 5-1) states that: “Anyone who presents a planning proposal shall facilitate public participation” (The Planning and Building Act of 2008). The legal requirement applies to all types of planning processes (Kommunal- og moderniseringsdepartementet 2014; Pedersen et al 2010).

In the beginning of the process, the commencement of the planning process has to be publicly announced, allowing for comments by anyone (Pedersen et al 2010). For zoning plans a planning program may be required (Pedersen et al 2010). The planning program (when required) creates the framework for the planning process, its themes, goals and process (Pedersen et al 2010). It is drafted and then politically adopted early in the formal planning process after a period of hearing and public inspection/scrutiny, allowing for comments by anyone (Pedersen et al 2010).

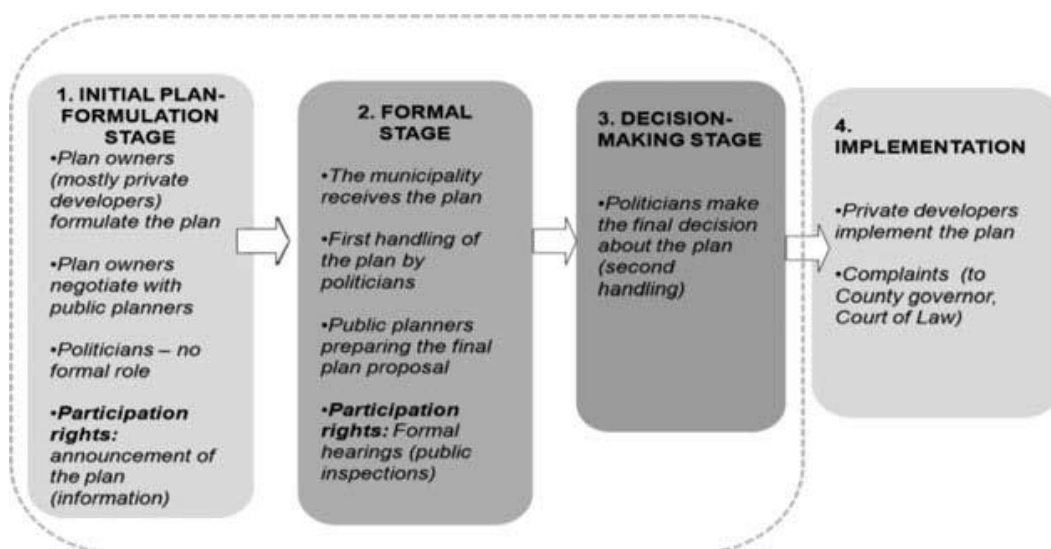


Figure 2. Showing the zoning plan process and requirements for participation. Here the planning process is without a planning program, which would otherwise be included in step 1. The dotted line can show the main arenas for the planning and decision-making of the process. Illustration retrieved from Hanssen and Falleth (2014 p.8).

This is followed by a process of developing the planning proposal. The planning proposal shall then be made available for hearing and public inspection/scrutiny, during this time anyone is invited to make a comment (Planning and Building Act of 2008; Kommunal- og moderniseringsdepartementet 2014). The planning proposal is then politically adopted, and the adopted plan is sent to hearing and public inspection/scrutiny yet again, before a final political adoption. During this time, sector authorities affected by the plan have the power to make objections, which, if unresolved, results in mediation between the parties (Pedersen et al 2010).

The law stipulates further requirements for participation by children. It is stated that:

“The municipality has a special responsibility for ensuring the active participation of groups who require special facilitation, including children and youth. Groups and interests who are not capable of participating directly shall be ensured good opportunities of participating in another way.” (The Planning and Building Act of 2008)

Children’s rights for participation are also stipulated through the National policy guidelines for strengthening children and young people’s interests in planning (RPR-BU) (Miljøverndepartementet 2012). The extra requirements can be seen in connection to the lesser opportunities of children, especially of young children, to promote their own interests in a planning context (Miljøverndepartementet 2012). The requirements in the PBA and the RPR-BU mean that there shall

be facilitated some form of adapted participation that may enable children to participate during the planning process (Kommunal- og moderniseringsdepartementet 2014; Miljøverndepartementet 2012). The municipalities have the responsibility to ensure that the minimum requirements for participation and children's participation are met (Kommunal- og moderniseringsdepartementet 2014; Miljøverndepartementet 2012).

Furthermore, there are requirements in place directed at securing children's interest, in the RPR-BU and the PBA, stipulating that there should be some kind of arrangement in the municipality that should safeguard the interests of children in the planning process (Miljøverndepartementet 2012). Children's interests should also be described and thematised as an important consideration in the planning process, and in environmental impact assessments which are sometimes required in planning processes (Miljøverndepartementet 2012; Pedersen et al 2010). As such, there are requirements in terms of incorporating knowledge of children's interests in planning processes. There are also requirements in the RPR-BU for replacing children's play areas when these areas are planned for other purposes (Miljøverndepartementet 2012).

Children's participation and interests in planning practice:

Even though there are further requirements for enabling children's participation, the requirements (in total) for their participation are vague (Aune et al 2015), and do not by themselves ensure a level of participation that would be seen as participation according to Hart's ladder typology (1992), as there are no requirements that ensures that the children's perspectives may have some influence over the decision-making, how the participation should be organized (beside the rather vague requirement that it should be adapted to children), nor for children having a say in the way they are involved in the process. However, the municipalities may set further requirements for the arrangement of public and children's participatory measures in the planning process. In terms of children's interests, Hansen (2006; see also Aune et al 2015), looking into the RPR-BU, found that though children's interests for play areas are protected by requirements in the RPR-BU, they were not always safeguarded in practice. In the Official Norwegian Report of 2003, evaluating the Planning and Building Act (previous version), the caretaking of children's interests and children's participation and influence in planning was thematised (Norges Offentlige Utredninger 2003). It was found that children's participation was not systematically facilitated in more than half of the municipalities that were asked about this, even though there were legally required arrangements in place at the time to safeguard children's interests and participation (Norges Offentlige Utredninger 2003). Still, Knudzon and Tjerbo report a broad acceptance of children's participation (2009).

Furthermore, it has been seen by Knudzon and Tjerbo (2009) that it can be challenging to enable the influence of children, especially of younger children, in planning and place development, even when there are special arrangements in place for children's participation in municipalities. Such arrangements did not necessarily mean that children or their perspectives were much involved in decision-making processes in municipalities (Knudzon and Tjerbo 2009). Furthermore, in a study by Hanssen and Saglie (2010 p.513) it was expressed by planning actors that the incorporation of children's interests in planning could be difficult.

Challenges with enabling public participation in general can also apply to the context of children's participation in planning, giving valuable perspectives. Generally, participation in planning in a Norwegian context is often done too late in the process, making it difficult to make serious alterations to the planning proposal and reducing the opportunity for participation to influence the decision-making, as shown in the theory section (Hanssen 2015; Hanssen and Falleth 2014). With private plans there are special challenges, as there might be unclear actual starting points of the planning process and development of ideas for the area, prior to the formal beginning of the planning process (Falleth and Saglie 2010 p.66), and where the participation happens after important negotiation rounds have taken place:

“Formal planning legislation regulates the process in terms of transparency and participation, but this only affects the latter stages of the process. It is in the crucial early stages that market actors get together with the planning authorities for negotiations. This is when the planning problem is defined and a rough idea of the plan set out.” (Falleth and Saglie 2010 p.65)

Also, research has shown that lay perspectives generally may not be the most prioritized input by the central actors formulating the planning proposal (Hanssen 2015). It may be connected to considerations and discourses that become paramount in planning structuring what is considered legitimate and/or the different means and powers actors have to influence the planning process and its outcomes (Hanssen and Saglie 2010). The study by Hanssen and Saglie (2010 p.504) found that discourses created: “... a common narrative around the idea of high density urban growth”, in the context of urban planning, which could act at the expense of arguments of opposing concerns held by local actors such as lay persons, such as those of place qualities, playgrounds, preserving woods (2010 p.516).

ANALYSIS OF THE CASE STUDY

Structuring of the analysis

The analysis part of the thesis switches between presenting descriptive and analytical perspectives of the case study. The analysis begins with an introduction of Children's Tracks and its use in the case municipality. It then presents how Children's Tracks is organized and conducted in the municipality, before moving on to the incorporation of Children's Tracks in the zoning planning of Ski Vest. This is followed by a summarizing discussion where the research questions are drawn upon.

In the Ski Vest area two connected planning processes and plans are studied; the area zoning plan for the whole area, as well as a detailed zoning plan for a part of the area, with a focus on how central actors have utilized Children's Tracks and their perceptions on this tool and on children's participation. The main focus is on the area zoning plan process, where the main participation by children for the development of the area was facilitated (by Children's Tracks).

The informants interviewed for the study:

Children's Tracks organizer: an informant from the municipality with responsibility for organizing and conducting Children's Tracks registrations, analyzing the participatory output gained from the tool and conveying this to planners working with spatial plans.

Planner A: a planner who was involved in the planning process of the area zoning plan of Ski Vest.

Planner B: a planner who was involved in the planning process of the detailed zoning plan of Magasinleiren within the Ski Vest area.

Developer: an informant from one of the real estate developing companies that were involved in the area zoning plan process, which is also the real estate developing company that was involved in the detailed zoning plan of Magasinleiren.

Introducing the Children's Tracks tool and methodology and its use in the case municipality

This section introduces the digital Children's Tracks tool and methodology recommendations from its creators, the Centre for Architecture and Design. Furthermore, the use of Children's Tracks in the case municipality is introduced.

The participatory tool of Children's Tracks:

The goals behind the Children's Tracks tool (Norsk Form 2010; Aune et al 2015 p.173) is to enable the participation of children in planning processes where decisions are made that affect them, create democratic awareness and increase spatial representational skills and understanding among children, promote and raise the status of children's interests in planning, as well as what can be seen as a bridgebuilding between the perspectives of children and the planners (see Kahila and Kytta 2009). The Centre for Design and Architecture identify multiple uses for the tool relating to planning contexts and other decision-making processes in the municipality affecting children and young people (Norsk Form 2010).

The digital Children's Tracks tool and methodology is directed towards children in the ages of 11 and older (Aune et al 2015; Norsk Form 2010). During a process of registration, the participants are asked to map how they perceive and use their local surroundings. The mapping exercise is conducted through the use of a digital GIS tool which is available online through computers. The registration process can be done in collaboration between the municipality and elementary or middle schools, where children in the ages of 11-14 take part in the registration process (Aune et al 2015; Norsk Form 2010).

A practical and representational advantage of the organization of Children's Tracks through the school is that the mapping process can reach a great number of children, making the participatory output more representative of the uses and experiences of different children – at least for the age groups that are involved in the mapping exercise (Aune et al 2015). Herein lies the potential of reaching some children who otherwise would not take part in a participatory process, and therein have their perspectives also represented in decision-making (Aune et al 2015).

The Centre for Design and Architecture place the tool itself somewhere between the steps 'consulted and informed' and 'adult-initiated, shared decisions with children' on Hart's ladder of children's participation (Norsk Form 2010; Aune et al 2015), hereby placing the tool well within what Hart (1992) recognizes as participation, in contrast to non-participation. They furthermore recognize that

this is not only dependent on the tool itself but how the output is used for planning purposes (Norsk Form 2010).

The Children's Tracks digital tool:

In the Children's Tracks registration process, each participant goes online and individually accesses the digital registration platform and do the mapping exercise (Norsk Form 2010). The mapping exercise is conducted on an interactive map.

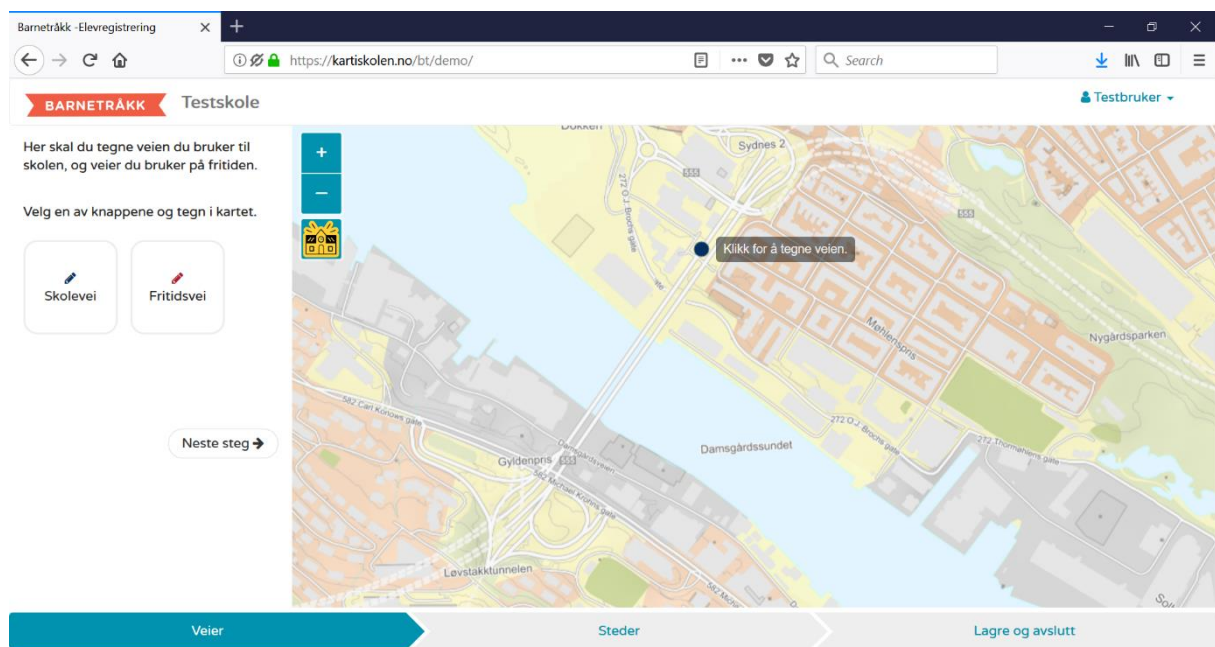


Figure 3. Showing a demo version of the mapping tool. Here the children are asked to map their mobility patterns. Retrieved from Centre for Design and Architecture (2017).

In the interactive map, the participant is first asked to draw their route to school, and later other routes they use in their everyday lives. They are then asked to evaluate their surroundings, via icons that they can place on the map. The icons show either positive or negative attributes that can be used to describe how they perceive their surroundings. The positive icons are: “nice building”, “nice park”, “nice forest”, “nice place”, “nice view” or “I like this”. The negative icons that they can utilize are: “I dislike this”, “dark”, “angry dog”, “scary people”, “noise”, “trash”, “traffic” or “want to change”. The user can add comments to the icons and routes when placing them on the map.

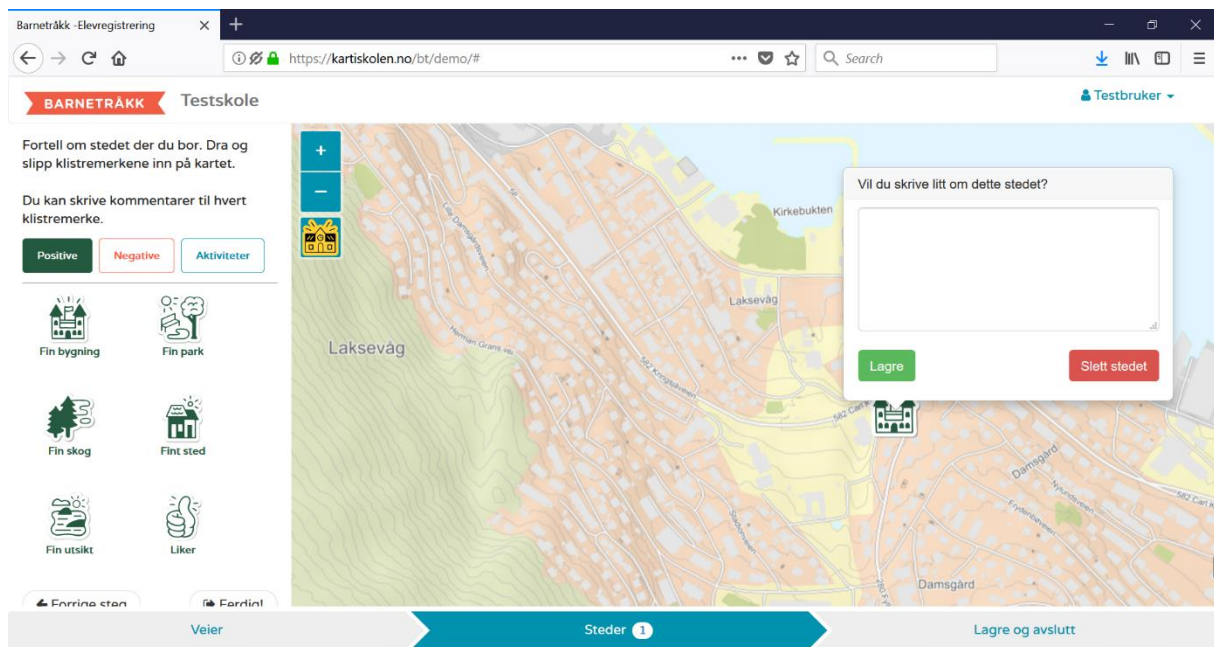


Figure 4. Showing a demo version of the mapping tool. Here the children are asked to map their perceptions and use of their local environments through attributes. Retrieved from Centre for Design and Architecture (2017).

They are also asked to register their activities, and there are icons for activities that the children/young people can add to the map. The options are: “sliding on the snow”, “ballgames”, “play area”, “meeting place”, “shopping”, “skateboard”, “ski”, “ice skates”, “swimming” and “bicycling”. The user can also add comments to these icons when placing them on the map. The user can also delete an icon that was put on the map if they want to change it.

After each child has conducted the mapping exercise, the information which was mapped by each of the children is combined into a map/GIS-layer containing all the registrations that were mapped. What happens next is dependent on the municipalities utilizing the tool and their routines for the use or their ad hoc uses of the information gained from the tool.

The Children’s Tracks tool and the recommended methodology by the creators of the tool:

The recommendation of the Centre for Design and Architecture is that representatives from the municipality, local planning department, health department, technical department and children’s representative should be involved in organizing and anchoring Children’s Tracks in the municipality, and furthermore clarify how it can be incorporated in planning processes and other decision-making processes of the municipality (Norsk Form 2010). They furthermore recommend that representatives

from the municipality takes part in the registration process rather than the schools conducting Children's Tracks independently (Norsk Form 2010; Centre for Design and Architecture 2018a).

They furthermore recommend that there is a preparation process in advance of the day the registration process is conducted so that the children understand why they are doing the registration, what they are contributing to and how the registration will be used, and furthermore to make the children become aware of how they use and perceive their local environments (Aune et al 2015; Norsk Form 2010; Centre for Design and Architecture 2018b).

During the registration process the Centre for Design and Architecture recommends that there is some kind of preparation process before the digital mapping exercise which makes the children think concretely about their uses and perceptions of their local environments (Norsk Form 2010). They furthermore recommend that adults are there to guide the children when they are mapping, ensuring that they understand the task and the digital interface of the tool (Norsk Form 2010). As highlighted, after the mapping exercise a combination of all the registrations becomes available (Norsk Form 2010). At this point they recommend that there is a session with the children where the results from the registration process are presented to them, where potential errors in the mapping can be corrected and additional questions asked if necessary (Norsk Form 2010). They furthermore recommend that a written report is created, summarizing and analyzing the findings from the use of Children's Tracks with an emphasis on places that seem to be particularly liked or disliked by the class collectively, in order to inform the practice of planning actors and other relevant actors, and that this information is presented to them (Aune et al 2015 p.174; Centre for Design and Architecture 2018a).

Children's Tracks and the case municipality:

The municipality started using the Children's Tracks tool in 2014. They became part of a pilot project for Children's Tracks, meaning that they had follow up meetings with the Centre for Design and Architecture about the use, methodology and implementation of the Children's Tracks tool (Interview with the Children's Tracks organizer and the Planner B; Interview with the Planner A).

They began conducting Children's Tracks registration processes in November 2014, in collaboration with schools in the municipality, involving 6th and 8th grade classes (Interview with the Planner A; Interview with the Children's Tracks organizer and the Planner B). At this time 8 schools in the municipality were conducting registration processes, including the two schools whose school district incorporate the Ski Vest development area studied here: an elementary school and a school that is partially a middle school. Another round of Children's Tracks registrations was conducted around the

fall of 2016/early 2017, where 4 schools took part in the registration, once again involving 6th and 8th grade classes, and including again the elementary school bordering the Ski Vest area. The second round of registrations was partly done in connection with the process of renewing the municipal masterplan as well as the detailed zoning plan for Magasinleiren in the Ski Vest area.

Implementing the Children's Tracks tool: motivation, measures and organization:

In the municipality today, Children's Tracks is one amongst other measures to involve children in the planning and spatial development (Interview with Children's Tracks organizer and the Planner B). The municipality have their own children and young people's representative. They have also involved children in a workshop for the town square in the urban area, deciding temporary measures. Other than this, the student councils of the schools are invited to make comments in the legally required consultation processes of the planning processes (Interview with Planner A). The participatory measures of the municipality hereby go beyond the legal minimum requirements for children's participation, which shows that there is some interest in and agenda for promoting children's interest by the municipality or at the least by some actors within the municipal administration. As for Children's Tracks, the municipality use the tool for planning purposes and have used it in connection with zoning planning (Interview with the Children's Tracks organizer and the Planner B).

Analytical perspectives: the Children's Tracks tool – framing what is mapped and co-produced as knowledge?

As shown above, the Children's Tracks tool seeks to access children's use of their local environments, via the mapping of activity icons and of the routes they use. Furthermore, the tool is directed towards accessing how the children perceive their environments through the mapping of 'positive' and 'negative' icons. Through this, there is a potential of making visible the kind of 'silent knowledge' of children that otherwise can be difficult to attain and incorporate in planning, given the available resources and time constraints of planners (Kahila and Kytta 2009), and perceptions that planners can have on difficulties with handling children's participation in planning (Cele and van der Burgt 2015). The place-based nature of the perspectives gathered through the use of the tool mean that those who interpret and herein co-produce this as children's local experiential knowledge for use in planning, get information that potentially can be directly applicable to their planning context and the knowledge base that they draw on in the planning process, weighing between multiple interests and concerns (Kahila and Kytta 2009).

Yet, as shown in the introduction of the Children's Tracks digital tool, the tool itself is structured in a way that frames in advance the knowledge co-produced through the tool, as it does not leave much room for the children to affect what is registered and not registered on the digital map (Aune et al 2015; Turnhout et al 2010). Herein lies the possibility of excluding experiences and perceptions that are important to a participant, which the participant may not perceive as relevant information for the registration during the mapping exercise, or 'a desirable activity' in the mapping – as the preliminary study argues (Aune et al 2015), if it is not part of the options that are put forward on the interactive map. Still, the option of adding comments to the icons mean that there is some space for the children to affect what is registered through the process.

The mapping exercise of the children is steered towards the registration of outdoor play activities and travel routes, and positive and negative feedback on their local environment as it is today (Aune et al 2015). The tool does not by itself facilitate the engagement of the participants on the future use of an area, as the tool does not ask questions or include steps for this. Yet, the registration process can be organized and conducted in a way that informs the children of plans and ideas for future land use and encourages them to use the mapping exercise to give feedback and contribute to generating new ideas for the future land use.

An important aspect here is the skills and preparation of the children in advance of the mapping exercise, which will affect the 'output' that is gained through the use of the tool, with the inherent possibility of excluding some participants if their skills do not comply with the requirements of understanding and using the mapping tool (Aune et al 2015).

Children's Tracks in the case municipality

The focus now turns to the way Children's Tracks is conducted in the municipality. As has previously been highlighted, a central goal to PPGIS (Kahila and Kytä 2009), and Children's Tracks is to build a bridge between the professional planners and the lay local experiential knowledge, such as that of children (Aune et al 2015). Following Babelon's study on PPGIS tools, such tools must be seen as essentially consultative, and top-down, leaving much of it up to the municipality and planners, deciding how to translate and co-produce the knowledge of children's use and perception of their local environments, and further to utilize this knowledge in the planning process (Babelon 2015; see also Brown and Kytä 2014). Thus, it becomes central how the registration processes around the mapping exercise are organized and conducted and the way the municipality uses the methodology of Children's Tracks (see also Aune et al 2015). In terms of the translation and co-production of the children's local experiential knowledge, what happens during the registration process and what happens with the 'output' afterwards becomes central. These aspects are also important for understanding the involvement of children through Children's Tracks in relation to zoning planning. This part of the analysis taps into these topics, drawing mainly on the experiences of the Children's Tracks organizer in the case municipality.

The organization of Children's Tracks and conduct of the registration processes in the municipality:

When it comes to organizing Children's Tracks in the municipality, the Ski municipality has arranged it so that one person in the administration, the Children's Tracks organizer, has the overall responsibility to ensure that the registration processes are conducted at the different schools and organize these processes, as well as organizing the use and distribution of the data from the registrations later on.

In the perspective of the Children's Tracks Organizer:

«... I'm the link [between Children's Tracks and the planning department], because I am the one who is responsible for Children's Tracks in the municipality ... it is an evaluation that we have done, that it is important that there is one person who has the main responsibility, who has a focus on how we will use Children's Tracks ...»

Furthermore, the Children's Tracks organizer expressed that the municipal administration sees a value in conducting Children's Tracks registration processes regularly. This ensures that the participatory information gets updated and can retain a status as representative (for the age groups that are represented through Children's Tracks), and it allows for a comparison of the data over time.

They initially planned to conduct the registration processes for each school every year, but they have found that this was not manageable. Instead they organize Children's Tracks processes so that 50 % of the schools take part in the Children's Tracks registration every year. To see through that the registrations are conducted regularly, they have incorporated Children's Tracks in central economic and administrative policy documents in the municipality (Interview with the Children's Tracks organizer and the Planner B). In the registration processes, the municipality tries to involve planning actors, inviting them to take part. Through this there is a possibility for the children taking part in the registration process to get a more direct involvement with the planners, than if the planners are not present.

Furthermore, the Children's Tracks mapping exercise is as described in the introductory section, but there are several ways the municipality can conduct the Children's Tracks registration processes. In the Ski municipality, the registration processes have been conducted somewhat differently at different schools, mainly due to the individual preferences of the schools. In the registration of 2014, two schools chose to do the registration by themselves without the interference of the planning department or the administration of the municipality, while other schools have done the registration process in collaboration with the municipal administration and the planning department. The two schools who conducted Children's Tracks on their own are not in the geographical vicinity of the planning area studied here.

As described by the Children's Tracks organizer:

«... the conduct of Children's Tracks registration processes at the schools has been done somewhat differently, from, at least in 2014 we had some schools who did everything by themselves, they accessed the website and did it by themselves. From, and this was from one end of the spectrum to the other end of the spectrum where we had a meeting in advance with teachers of the classes who would take part in Children's Tracks, explained to them, showed them what they had to prepare, how it [Children's Tracks] would be conducted, we planned, I talked about why we were conducting Children's Tracks and what it was for so that the teachers were fully prepared for it and they had also accessed [the website of the tool] themselves, they also accessed [the website of the tool] and tried the tool ...»

Cooperation and preparation before the Children's Tracks registration process – aiding the teachers in preparing the children before Children's Tracks:

As expressed by the Children's Tracks organizer, in the more cooperative registration processes, the municipality have met with the teachers before the registration process, explaining how to do the registration, why it is conducted, and how prepare the children for it, as well as explaining what the registrations will be used for. The teachers also get to try the Children's Tracks tool for themselves,

so they can understand how the digital tool works when aiding the children in the mapping process. The teachers are expected to prepare the children in advance of the registration process, so that they know why they are conducting the registration and the purpose of it, and to work with the children's understanding of maps.

By organizing it this way, the teachers get a foundation for preparing the children in advance of the registration process, and they get introduced to the tool themselves so that they can aid children during the mapping exercise. Herein lies the possibility of improving the children's spatial representational and mapping skills, and furthermore giving the children time to think through how they use and perceive their surroundings, potentially improving the richness and quality of the 'output' (Freeman and Vass 2010). The teachers are encouraged to work on the children's mapping and spatial representational skills and tie Children's Tracks to their courses, and the municipality try to aid them in this, yet it is not always done.

As expressed by the Children's Tracks organizer:

«... we also print these large maps on paper that they can put up in the classroom and talk about maps in advance, and they have been very happy for this, many of the classes where the teachers who have managed to do it have integrated knowledge of maps in the teaching in advance of the visit, but this varies highly ...»

The possibility to prepare the children in advance in a way that enhances their spatial representational and mapping skills could be lost if the schools conduct Children's Tracks on their own, leaving it up to the teachers to decide what are necessary preparations, contingent on their own knowledge and mapping and spatial representational skills.

Children's Tracks – actors take part in the registration process and the enabling of direct dialogue:

Furthermore, as expressed by the Children's Tracks organizer, in the cooperative processes they usually take some part in the registration as well, often together with planners from the planning department working with area zoning plan processes or detailed zoning plan processes. The reason for this is that they see that this can strengthen the dialogical component of Children's Tracks, which they identify as insufficient in the tool itself. Furthermore, the involvement of planners in the registration can have an impact on the translation process of the children's perspectives into a local experiential knowledge used in planning, potentially making the 'output' more clear and meaningful to them as they can ask questions to the children, and the children can ask questions to them

(Freeman and Vass 2010). Still, the process of registration should then be set up in a way that allows for this kind of dialogue both before, during and after the mapping exercise.

The registration process – preparing the children before the mapping exercise:

At the day of the registration, the Children's Tracks organizer holds a presentation for the children who are taking part in the registration process, in order to further prepare the children for the mapping exercise, and to provide information which they deem that the children lack.

As expressed by the Children's Tracks organizer:

«... very often we see that the children lack a firsthand knowledge of what will happen in areas they use ...»

The presentation is focusing on the development plans for the area and the municipality with the intention of giving information about spatial changes going on in their surroundings as well as explaining the desired policies of the municipality for place development, i.e. the place development in accordance to the compact city ideal. Another focus of the presentation is participation and the children's rights to participate. During the presentation they open up for a dialogue, allowing the children to comment and ask questions and also asking questions to the children to engage them. The presentation also has the intention of checking the children's understanding of maps, asking them where this or that place is on a map that they are showing. They try to adapt the presentation so that it's easy for the children to understand the information.

As expressed by the children's Tracks organizer:

«... where we have a ready-made presentation where we talk about urban development or planning, planning work, we show the areas, those presentations have the purpose of creating an understanding of what we do in the municipality, understanding of participation that this is a right they as children have, we check if they have the necessary understanding of maps so we perhaps show some photos of an area and ask where it is, and then we show the map and check: "do you see where this is?" and then it is for example the same area. In addition we explain to them the professional assessment of desired development, densification of public transportation junctures, a shift in the trends from car to public transportation, bicycle and walking, explain why the car shall not be in some streets, why we make bicycle lanes, why we make bus lanes, we tell, and we talk about transformation areas, maybe show photos of an industrial area which is close to where they live and stay, and then we show illustrations of how it is thought to be in the future ...»

The mapping exercise and afterwards:

Furthermore, in the cooperative processes, the presentation is followed by the children conducting the mapping exercise, with adults present who can help them if they have questions about how to do the registration.

The information that is registered by each participant combines into a raw data map with all the information registered by all the children, which becomes available to the teacher, planner and Children's Tracks organizer. When the registration is done, another presentation for the children is usually held, by the Children's Tracks organizer, where they summarize the findings from the registration on the combined raw data map. Sometimes this presentation is not held due to technical problems that can occur with the map or if they run out of time for this part of the registration process.

Analytical perspectives: What kind of dialogue is facilitated through the cooperative methodology? Does this frame the perspectives of the children?

The registration process of the cooperative sort, when everything is working and they have sufficient time, has some opportunity for dialogue through the stages of the registration, between the children and the planners. Yet it is not set up in a way that makes dialogue the main focus of the registration process. Another question is the one of how the presentation and preparations steers the participatory process, affecting the co-production of knowledge through the mapping exercise, and herein the translation of the children's perspectives into planning. Within this, there is the question of the openness and quality of the dialogue that is allowed for in this kind of registration process. As expressed here, there is a focus in the presentation on the 'desired development and development trends' for spatial planning, with the intent of providing information to the children. This has both its strengths and challenges. On the one hand, it enlightens the children on planning and on what is going on in their local environment, enabling the children to steer their own participation towards giving feedback to ongoing or future planning processes, though within the existing framework and limitations of the mapping tool, giving information that can then be seen as relevant by the planning actors. Yet, this also means that there is, inevitably, some exclusion of perspectives going on at this stage of the process, where the children are led to a certain way of thinking about their local environments in the present and future, highlighting what is the 'correct' or 'desired' way of thinking and perceiving about these spaces, which is in tune with the knowledge regime in planning (Pløger 2015; see also Turnhout et al 2010). The requirements for authentic dialogue (Innes and Booher

2000; 2004) are not fulfilled through this, as the dialogue is structured and the actors in the process are not on equal footing.

The preparation process – affecting the output from Children’s Tracks?

Another question that arises is how the different ways to conduct Children’s Tracks affects the ‘output’ from the mapping exercise, where the preliminary study (Aune et al 2015) implied that less involvement of the planners and municipality meant that the data would have a lower quality, making it more difficult to interpret and put to use for planners. When asked about whether the differences in the municipal administration and planners involvement in the registration process in the schools, from no interference to collaboration, affected the information output from registration processes, the Children’s Tracks organizer replied that it could seem like that there was less information registered when they were not involved in the process, but they were not certain about this.

As expressed by the children’s Tracks organizer:

«... I think it was maybe less mapped attributes! In those areas, but I don’t, I haven’t thoroughly examined this. ... it could also be connected to technical issues actually, in the map, in the web interface.»

The preparation process: ensuring that the children understand what they are taking part in?

Another aspect to the collaborative registration processes is that it ensures that the children get some understanding of what they are taking part in and how their contribution will be used later on, as well as information of spatial changes going on the municipality, which the Children’s Tracks organizer identified as lacking in the children’s knowledge. This is not necessarily ensured if the schools conduct registration processes on their own, leaving it up to the teachers to convey the meaning of Children’s Tracks, children’s participatory rights and place development going on in the municipality, as well as the use of the interactive tool and its output.

As expressed by the Children’s Tracks organizer, in relation to the independently conducted registration processes:

“... you create less understanding of *what* they [the children] take part in ...”

Still, there is a question of whether a sufficient understanding is provided through the preparation process involving the municipality and the planners, in the more collaborative registration processes. Some feedback that have reached the Children's Tracks organizer may imply that the preparations can be insufficient.

As expressed by the Children's Tracks organizer:

"... we have also had feedback saying that the children sometimes do not quite see the point of taking part in Children's Tracks ..."

However, it is not clear if or how this connects to the way the preparation and registration processes are set up, or more generally to the way the children are involved through Children's Tracks. The Children's Tracks organizer expresses that the children, in an instance that they know of, got a better sense of the meaning of their involvement through Children's Tracks when they became part of another participatory process with different characteristics, at a later stage.

As expressed through this excerpt:

"Children's Tracks organizer: ... they took part in Children's Tracks when they were in 6th grade, and when they were in 7th grade they were allowed to take part in a [participatory] workshop, and then the teacher expressed that the pupils then understood a lot more of what they had been part of, of the Children's Tracks they had taken part in.

Interviewer: So first when they were more directly involved

Children's Tracks organizer: yes, then that also created a better understanding of the Children's Tracks registration process."

Children's Tracks: what happens with the output after the registration process and who gets access:

The findings of the organization of Children's Tracks in the municipality connects to the further analysis and translation process of the children's perspectives into a local experiential knowledge in the planning process. To further investigate this theme, the focus now turns to the 'output' from the Children's Tracks and how this has been processed. Furthermore, the 'output' from the registration of 2014 in the planning area is drawn upon in this investigation.

In the case municipality, the raw data map and information from the registration processes are processed and put together with all the other registrations from Children's Tracks that year, as a layer in the municipality's map service, onwards described as the combined map. The municipality views this information as sensitive information, and therefore these maps are not publicly available

(and cannot be shown in this thesis). The maps are available to planners in the municipality. In the perspective of the Children's Tracks organizer, the combined map constitutes knowledge that is drawn upon in the planning processes. (Interview with Children's Tracks organizer and Planner B).

A registration process where the planners are not involved would mean that they would have had to rely on an interpretation of the data from the mapping exercise either conducted by themselves or by the Children's Tracks organizer, rather than getting this information in the more direct manner through the presentations of the registration process.

The data from Children's Tracks was made available to the developer actor interviewed in the thesis during the area zoning plan process, yet not the data that was collected during the detailed zoning plan process. In the map service there are two separate layers that show the two rounds registrations processes, respectively. The first layer was added to the map service shortly after the Children's Tracks registration processes of 2014. For the Children's Tracks registration process of 2016/2017, the layer was added half a year after the registration at the Finstad elementary school bordering the planning area of the planning case. This means that the planner in the detailed zoning plan process did not have access to the data from the registration process in the combined map service for quite some time after the registration process, whilst the planning process moved on. Yet, as highlighted previously both the planner B and the developer took part in the registration at the bordering school, giving them a direct access to the registrations and the children's perspectives as they were presented and articulated there.

Accessing the children's perspectives through the mapped registrations:

As part of this thesis project, the registrations on the combined map from the Children's Tracks registration processes of 2014 were accessed and summarized (see the following sections). The impression from this is that the combined map and herein the layers from the Children's Tracks registrations do not make it easy for the reader to get a thorough and systematic view of the use and perspectives as they were mapped in the mapping exercises. This has to do with how the information is conveyed through the interactive map. The combined map shows a background map, and the Children's Tracks layers which contain point and line attributes. The line attributes, which show roads and paths mapped by the children, clearly visualize the mobility patterns as they were mapped by the children. In the 2014 registration round, as they were accessed in the study, they did not have additional comments specifying the use in detail, which they did in the layer of the registration round from 2016/2017. As for the point attributes, they have different colors which signify what they (respectively) represent: activities, positive perceptions or negative perceptions as mapped by the

children. The point attributes have comments and more detailed descriptions in the layers that were available from both the registration rounds.

There is some overall information about the mapped use and perceptions that can be drawn from just viewing the map, yet, in order to fully access the information, one has to go about it in a more detailed and thorough manner. This is done by accessing each of the many attributes in the interactive map individually, which shows the content of the attribute in detail (the categories as highlighted in the introduction of the tool) and any added comments by the children who mapped them. Going through the information on the combined map systematically proved to be a time-consuming endeavor for the author of the study. This is supported by what was expressed by the Planner B, on the subject of challenges with Children's Tracks.

In their words:

«... how you sort or process that information, when many children add their lines [to the map], it can quickly become quite the mess, so how do you make it so that it's easier for us to read the main patterns, and sorting, make it a bit more clear what are the main patterns so you don't have to access every single symbol and every single line, and then you do this a hundred times to get an overview ...»

Analytical perspectives: the need for analysis of the data, the importance of how the translation is conducted and the nature of the output:

In the context of information overload and lack of time resources in planning (Kahila and Kytta 2009), the findings suggest that the use of the output from the Children's Tracks tool could be better supported by the planners taking part in the registration processes, as was done in the case municipality, rather than having to access to maps such as these to gain the perspectives and experiences of the participating children. Or, possibly, changing the combined map altogether so that it is easier to get an overview of the information. Furthermore, it could also be better supported via a thorough analysis of the data from the registrations being made available to them, as is recommended by the Centre for Design and Architecture (2017b; Norsk Form 2010) who developed the tool and methodology, and as has been highlighted as important by informants in the study (Interview with the Developer; interview with the Children's Tracks organizer and the Planner B).

What is central to this, in the translation of children's perspectives into the planning process, is *how* the perspectives of the children, as they were mapped through Children's Tracks, already going through some kind of selection, is further interpreted and therein co-produced as a 'children's local

experiential knowledge', drawn upon as part of the knowledge base in the planning process, and entailing the engagement between different knowledges (see Rydin 2007).

Herein, the nature of the 'output' from the tool becomes central. As has been highlighted, PPGIS produces 'geographically imprecise and fuzzy data' (Kahila and Kytta 2009), which in the context of children's maps can mean a lack of spatial accuracy and a lack of details deemed necessary for the maps to be meaningful to planners (Freeman and Vass 2010), making it difficult to put the information to use in a planning context (Aune et al 2015). More specifically, as was found in the preliminary study (Aune et al 2015), the children don't always use the comments when they add attributes to the map in the mapping exercise, meaning that the interpreter sometimes only has the line attribute or the point attribute to lean on in the interpretation, making it difficult to understand what is exactly the meaning behind the mapped attribute.

These complications become apparent when looking at the registrations from 2014 that were added to the municipality's map service (see attachments). Not only can it be difficult to comprehend the meaning of an attribute without a comment attached, it also shows that when comments are used, they do not always make it easy to comprehend the meaning behind the registration. Still, it is pertinent to highlight that there are many mapped attributes in registrations that are comprehensible and make sense to the reader, giving input that can show children's place-based uses and experiences (see summary of Children's Tracks data and attachments).

Another aspect is the importance of the individual attributes that were mapped, and the intensity of use. This is not shown in the map, unless the participant adds comments that specify this. It could mean that for instance a registered path that is barely used by the participant is given the same status as another path she also registered which she uses frequently, when planners or others interpret the combined map. Still, the map might give some sense of frequency of use by showing more lines in some places and fewer lines in other places, meaning that many children have registered that they use for instance a path, or few children have registered that they use another path. However, this does not say anything about the individual use. The issue of frequency of use can be applied in the same manner for the point attributes registered in the combined map.

A lack of spatial representational and mapping skills affects the accuracy of the map (Freeman and Vass 2010). Interestingly, some of the attributes in the map express qualities which is not reflected in the immediate surroundings, for instance the attribute "nice forest" was placed over what is actually a parking lot in the registration of 2014. Freeman and Vass (2010) argue that this is not a central issue, calling for an interpretation that go beyond this and assess the meaning of the registrations – i.e. how the children use the area in general, and what they express as qualities or lacks. Yet, in terms

of mobility patterns, spatial accuracy can become an important factor to how the results are understood, for instance in the case of uncovering paths in an area that are used by children, as these are very much bound by geography.

The analysis of Children's Tracks registrations by the Children's Tracks organizer:

Furthermore, and as called for, an analysis was made by the Children's Tracks organizer shortly after the first round of Children's Tracks registrations, briefly summarizing the findings. The analysis was tied to each of the schools separately and based on the 'raw data' from the registration processes that were conducted there.

The Planner B of the detailed planning process highlights the importance of the analysis for making children's perspectives accessible and relevant to them.

As expressed by them:

"... I experienced that it [the analysis conducted by the Children's Tracks organizer] was, then you could understand [the perspectives of the children]"

However, an analysis was not conducted after the second round of Children's Tracks registrations. The Children's Tracks organizer explain that both the lack of an analysis after the latter registration process round and the delay in adding the layer of the combined registrations into the municipal map service was caused by time constraints.

In the words of the Children's Tracks organizer:

«... processing of the data has ... it hasn't been done as it should have been done, or could have made more out of it and interpreted more of the material ... due to capacity ...»

The analysis can be viewed as a step in the translation of the children's perspectives, as previously highlighted. Herein lies the question of how the analysis was conducted and the 'geographically imprecise and fuzzy data' of the maps were interpreted, which can be viewed as central to the knowledge co-produced by the actors through the process of translation (Rydin 2007).

The Children's Tracks organizer explain that there were many steps and considerations to the process. They began by counting point attributes in the map are registered in the area.

As expressed by them:

«... I first make a [counting], how many dots, how many students took part, for example in one school, was it 50 or was it 100 or 80 or, how many was it, and then after a while I saw a pattern in that, say 30 pupils used to make around 300 dots ... then I started to see a connection between the number of students and the number of dots, and that if it was a very high number of dots, then it was most likely someone who had played around. For example one school where one had littered a road full of red dots with, that it was a danger of traffic, or what the dot was called. And then I think, the 200 dots there was one boy who had played around, or kind of misunderstood how he should map, or she, so then I made an assessment of whether the dots were likely to be representative, and kind of thought that all of those dots around that road there, it was really just one dot, just did an assessment like that ... and then I began to look at patterns, if something was clear [on the map], and then it was for example a sports park, and also the woods [woods in the planning area] and Magasinleiren.»

As shown here, there is an initial assessment of whether or not the attributes in the maps are representative of the children's use and perceptions, where the interpreter has to rely on their experience in order to come to conclusions. They then start to look for patterns in the registrations. This could be considered as in line with the recommendations from the Centre for Design and Architecture, to summarize the places that are important for the class as a whole with a focus on what is especially liked or disliked (see Aune et al 2015; Norsk Form 2010).

Furthermore, the Children's Tracks organizer expresses a need for further interpretation of the Children's Tracks registrations, to look beyond the actual mapped attributes and unveil their meaning, as called for in the study by Freeman and Vass (2010).

As expressed by the Children's Tracks organizer:

"... one aspect is what the children say they want, but they don't necessarily have the knowledge of, so if they say they want a café then it's not necessarily, is it a café they want or is the opportunity to gather, to sit in a dry, comfortable [space], maybe be served, or cook some food, but they *know of* café, but it can be other ways to solve it than a café."

Analytical perspectives: analyzing the output from Children's Tracks:

Implied in the descriptions of how the output is analyzed is the exclusion of the attributes that are deemed to be the result of someone playing around in the mapping exercise, rather than conducting the mapping exercise in a serious manner. And furthermore, a process of interpretation and meaning-making which is highly contingent on the views, resources and capabilities of the one conducting it. Altogether, this shows how difficult it is to deal with this kind of data, where there is uncertainty about the meaning behind the contributions, and, in the case of the Children's Tracks tool (and similarly constructed PPGIS tools), a lack of means to ask additional questions to the

participants at this stage of the translation process, to clarify and make sense of the mapped attributes. Inherent to the translation is a possibility of excluding some perspectives that were meaningful to the one who mapped them.

Analytical perspectives: the output from Children's Tracks:

The findings support the point by Freeman and Vass (2010) that the maps and results from Children's Tracks should be used with caution by the planners and other actors who utilize this data for planning purposes. In the perspective of Freeman and Vass (2010), meaningful participation requires time and resources, which would go beyond conducting a mapping exercise with children. In this perspective, there should be additional participatory measures with the children that ensure the opportunity to ask additional questions to the children, to uncover the meaning behind the registrations (Freeman and Vass 2010). And furthermore, this is important as the process and tool inevitably steers the perspectives gathered through Children's Tracks. Another aspect that can be drawn from this is, again (see theory section), the need for the one conducting the analysis to have the attitudes, resources and competencies to conduct the analysis in a manner that favours the participating children, which ensures that 'as little as possible' of the children's perspectives is lost in translation.

The argument from Freeman and Vass (2010) is connected to the spatial accuracy of children's maps and the need for dialogue to further explore what is the meaning of the children's mapping, enhancing the 'quality of the output'. In the preliminary study of Children's Tracks, the theme of the quality of the 'output' from the use of this tool was touched upon, demonstrating issues with applying this information in a planning context. The preliminary study states that:

"... some of the data collected was reported to be difficult to use by planners. When the children used the preconstructed categories in the registrations, they often gave little explanation of the activities actually taking place. This, in turn, made it unclear what the information could be used for." (Aune et al 2015 p.178)

They tie this to the preparations in advance of the mapping exercise, which is deemed central for the quality of the 'output' from the use of the tool (Aune et al 2015). The study presents an argument from the creators of the tool that planners should take part in the registration process in collaboration with teachers, preparing the children before the mapping exercise by explaining the planning and policy context of Children's Tracks (Aune et al 2015 p.178). Yet there is a question of whether such preparations are sufficient for ensuring a quality or characteristic of the data that make

it meaningful and applicable in the eyes of the planning actors, which is not answered in the study. Though not all aspects to the preparations are known⁴, the findings show that this may not be the case, even though the municipality has a cooperative approach to the conduct of Children's Tracks.

⁴ The school bordering the planning area was contacted by the author of the study in order to clarify this, but there was no reply.

Children's Tracks and the zoning planning of Ski Vest

This part of the analysis is focused how Children's Tracks was incorporated in the zoning planning of Ski Vest. It begins with an introduction of the planning case and the planning processes of Ski Vest and Magasinleiren. It then explores the goals and themes of the planning processes, in order to uncover what were the major concerns and interests at play, and what role Children's participation had in the process. It then moves on to the Children's Tracks registration processes in which central actors of the planning processes took part and looks at how they were conducted and interpreted. This is followed by a section where results from Children's Tracks is summarized. Later on, it is focused on the role and influence of the perspectives from Children's Tracks in the zoning planning.

Introducing the planning case: The Ski urban area and Ski Vest – undergoing transformation and densification:

The municipality is part of the Oslo region, situated only a few miles from Oslo. The main urban area of the municipality, Ski, is connected by railway to the capital city northwestward and cities in the neighboring county in the southeastern direction, and is linked to the housing and job market of Oslo (Akerhus Fylkeskommune and Oslo kommune 2015). This has given rise to a growth tendency which is expected to increase in the future (Ski kommune 2011), as a new railway project under construction will shorten the travel distance between the Ski urban area and Oslo, strengthening the centrality of the Ski urban area (Ski kommune 2011).

In line with the ideal of the compact city and due to its central location and connectedness, the Ski urban area has become the subject of regional and local strategies promoting growth by densification and transformation. In the regional plan of Oslo and the Akershus county, the Ski urban area is defined as a regional city, meaning that it is one of the urban areas prioritized for development. Ski is expected to handle a large portion of the regional growth, mainly by densification and transformation of the areas in walking proximity to the railway station. In the regional plan, development is prioritized at the expense of farmland and green structure, in the centrally located areas of the regional cities. (Akershus Fylkeskommune and Oslo kommune 2015) The municipal masterplan promotes the same agenda and strategy for the urban area as the regional plan (Ski kommune 2011).

On the eastern side of the urban area of Ski lies a compact core and a junction for public transportation. On the western side parted from the centre by the railway lies previously undeveloped areas that have been transformed in the recent past, or that are undergoing transformation today. In the periphery sits a suburban fringe of mainly low density housing.

The development area Ski Vest:

The area Ski Vest is situated close to the railway station, within a walking distance of less than 1 kilometer, thus placing it within the zone of desired densification and transformation of the Ski urban area (Akershus Fylkeskommune and Oslo kommune 2015; Ski kommune 2011).



Figure 5 and 6. Showing the planning area of the area zoning plan to the left and an illustration of how it was proposed to be developed to the right. Some changes were made before the final adoption of the plan but the plan generally facilitates this kind of development of the area. Illustration retrieved from Ski kommune (2015a p.2)

Ski Vest today is quite nature like with green open areas and forested areas, as well as farmland, and only a few roads crossing the area. Within the area to the East there is a psychiatric health clinic. West of this lies a temporary kindergarten. To the north lies what is known as Magasinleiren, which is an area that was used for military purposes in the past. It is a cultural heritage site containing historical buildings. Two of the buildings in Magasinleiren, known as Vognhallene are protected by the strictest regulation by the directorate for Cultural Heritage, while other remaining historical buildings are less strictly protected (Ski kommune 2014c). Furthermore, there are two other heritage sites within the planning area, a burial site bordering the south side of the Villenga road to the east which is automatically protected by law, and the remnants of an old road within the planning area, whose protection status is unclear (Ski kommune 2014c).

Two roads cross the area from East to West, connecting Ski Vest and its surroundings to the core of the Ski urban area, as well as pathways through the Magasinleiren area. There is also a high voltage power cable structure crossing the planning area, and the water creek Finstadbekken.

The area of Ski Vest is bordered by mainly monofunctional areas for low density housing in the North and Northeast, and to the West. To the West lies also the elementary school Finstad, which is situated right next to the planning area of the area zoning plan, separated by a forest that continues into the planning area. The forested area in the West of the planning area is part of the extended school yard and play area for the elementary school (Interview with the Children’s Tracks organizer and the Planner B). Furthermore, there are fields that are used for ballgames in the Northwestern part of the area (Interview with the Planner A).

The Ski Vest area is divided into several land lots, of which the three major lots are owned by two private developer companies and their subsidiary development companies. Another lot is owned by the municipality, and one lot is owned by public health sector authorities. There is also a small land lot owned privately within the area.



Figure 7. The main land owners in the planning area. Retrieved from In’by et al (2014 p.13)

The detailed zoning plan studied here is geographically placed within the planning area of Ski Vest. West of the area as shown in the map one can see the railway and the centre of Ski.

The planning area of the detailed zoning plan contains the Magasinleiren area and forested and open areas to the North and the West of Magasinleiren. The two planning processes must be seen as highly interconnected, both in timespan, actors and in terms of the zoning of the area.

Main actors conducting the zoning planning:

The planning of the area zoning plan was formally led by the planning department of the municipality and Planner A (for most of the timespan of the planning process), who became part of this process shortly after the planning program had been adopted. Furthermore, the two developing companies and their hired consultants had a central role in the planning process of the area zoning plan, as they were financing and conducting the planning in collaboration with the municipality (Interview with the Developer).

In the detailed zoning plan, the process was led by one of the developing companies, of which the informant the Developer is part. Planner B handled the proceedings on behalf of the planning department in the detailed zoning plan process.

The Ski Vest area – beginning and timespan of the zoning plan processes:

Prior to the zoning plan processes, the area of Ski Vest was set aside for a new hospital and surrounding green structure, through the land use provisions of the municipal masterplan (2015a). However, the hospital was built elsewhere in the county, which meant that the area could be used for other purposes such as urban development.

The process of planning the area began when a private developer bought the land lot containing Magasinleiren in 2011, some years after another major land lot in the area had been bought by another developing company. They sent a notice to the municipality to begin the process of a detailed zoning plan, but the municipal administration saw a need for an area zoning plan, coordinating the development of the whole area of Ski Vest (Interview with the Developer; Interview with the Planner A). In order to ensure this, it was added as a provision in the municipal masterplan (Ski kommune 2011).

The area zoning plan process formally commenced in the first half of 2013 (Ski kommune 2013c). A planning program of the area zoning plan, setting the stage for the negotiations and development of a planning proposal, was sent to hearing and public inspection in June 2013 (Ski kommune 2013a). This was followed by a public meeting, the adoption of the planning program, and further the development of the planning proposal. The planning proposal was sent to hearing and public inspection in January 2015, which was followed by a temporary adoption in June 2015 (Ski kommune 2015d; 2016b). Objections were made to the plan (Ski kommune 2016b). Due to an objection

concerning cultural heritage preservation, some of the provisions had to be renegotiated and adjusted, resulting in a final approval of the adopted plan in February of 2016, a little more than a year after the plan was initially supposed to be adopted and approved, as it was stated in the planning program (Ski kommune 2013c; 2016b).

Detailed zoning planning within the Ski Vest area:

The area zoning plan sets requirements for detailed zoning plans within the area, and the first of them, the detailed zoning plan process of Magasinleiren, formally began in June 2015, parallel to the area zoning plan process. It was adopted in the end of 2017, with final approval in the beginning of 2018 (Ski kommune 2017g). The planning process of the detailed zoning plan ran more smoothly than the process of the area zoning plan, with no objections made (Ski kommune 2017g).

Children's participation was facilitated through Children's Tracks in both of the planning processes. In addition, there was a workshop with children in the detailed zoning plan process, conducted in connection to the Children's Tracks registration.

The Ski Vest area and Magasinleiren:

The plans for the development of Ski Vest promote a transformation of the area from its open and green structure characteristics into what can be viewed as a rather dense development compared to the Ski urban area. The zoning plans allow for housing, office and service functions, such as social infrastructure. The plan regulates a new school, and in connection to this sports' facilities. It also regulates kindergartens and public health functions. It regulates play areas in connection to the social infrastructure. The cultural heritage milieu and elements are preserved in the plan, being incorporated in the green structure. Herein the creek running through the area is also preserved and used as part of the green structure as well as a corridor for soft mobility. Some of the open spaces that are present today in Ski Vest are continued in the regulation of the zoning plans, yet the plans allow for a development which will significantly reduce the size of these areas.

The planning process of the area zoning plan of Ski Vest

The planning program:

The planning program is as previously mentioned not required for all planning processes, but it was for the area zoning plan process of Ski Vest. As is pointed out in the program it can be characterized as a plan for the planning process (Ski kommune 2013c). The planning program of the area zoning plan is dated to the 19th of June 2013, which is the date it was sent to hearing and public inspection.

The planning program for the area zoning plan of Ski Vest describes how the planning process shall be conducted in terms of the process, the time frame of the planning process and in terms of participation. It also describes legal requirements, provisions and guidelines that are deemed relevant for the plan and the planning process, themes that are deemed to be important for the planning as well as themes that need to be further investigated during the process (Ski kommune 2013c). It also describes the current situation of the planning area (Ski kommune 2013c). Relevant themes from the planning program is presented onwards.

What were the central guidelines, concerns and interests as described in the planning program for the planning of Ski Vest?

In order to answer this question, the section looks into the (preexisting) guidelines for the planning of Ski Vest as well as the themes that were deemed important for the planning process that was to follow, and how the area and its use is described.

The planning program highlights provisions and guidelines from other land use plans and strategic documents of the municipality that are deemed to be relevant for the planning of the area. Of importance to the context of this thesis, the program states that the area zoning planning shall:

“... facilitate a development of Ski Vest which is in accordance with goals and strategies of the municipal master plan, and in accordance with the need for new centrally located development areas in the urban area. The plan shall also safeguard the protected buildings of Magasinleiren and give a good and predictable framework for the preservation of the cultural heritage milieu. ...” (Ski kommune 2013c p.5)

Thus, as presented in the planning program, preexisting guidelines and strategies become important to the planning of the area, and furthermore the preservation of cultural heritage in Magasinleiren is here given a special role (Ski kommune 2013c). The planning program goes on to highlight urban development as a central focus area in the municipal masterplan, and the concentration of growth to

central areas of the Ski urban core. Herein, Ski Vest is presented as important for the development of the Ski urban area, given its central location and mainly unbuilt characteristics (Ski kommune 2013c).

The program furthermore describes strategies in the municipal master plan for the desired urban development, which function as general guidelines for the development of the area. Of importance here, there are strategies tied to the preservation of existing qualities in the future land use, focusing on environmental qualities and green areas and the integration of them in the built areas in the municipality (Ski kommune 2013c). Then there are strategies which focus on facilitating new qualities in the future land use, ensuring not only housing in centrally located areas undergoing development but also other functions and services, and specifically: facilitating urban functions and high intensity workplaces in areas that are centrally located in relation to the railway station (Ski kommune 2013c). Here, regional provisions are highlighted (Ski kommune 2013c).

In addition to this, the planning program presents specific guidelines from the municipal masterplan concerning the future land use in the planning of the area zoning plan. They state that:

- “The area shall be developed for institutions, service providers and offices, with the possibility of housing in part of the area. Shops shall mainly not be localized in this area, with the possible exceptions for kiosks or smaller shops that service the local area.” (Ski kommune 2013c p.6)
- “The area shall be given a high density and building heights equivalent of 3-4 floors, with the possibility of greater building heights where the considerations of the landscape and the local environment make this a possibility. In the area of Magasinleiren, the density shall be weighed against the consideration of the cultural environment of Magasinleiren.” (Ski kommune 2013c p.6)
- “The parking provisions shall reflect the central location of the area and its high accessibility of public transportation.” (Ski kommune 2013c p.6)
- “The intentions in the current municipal masterplan to ensure a walking and cycling path crossing the area in connection with green structure shall be followed up in the zoning plan.” (Ski kommune 2013c p.6)
- “The cultural heritage of Magasinleiren shall be protected in the regulation in accordance with provisions regarding protection. The cultural environment shall be kept together, and there shall be open space between protected buildings and other cultural heritage elements in Magasinleiren. The planning of the area shall happen in cooperation with municipal and regional authorities with responsibility for cultural heritage preservation. Buildings which have been seriously damaged by fire shall be replaced with new buildings of similar size. There shall be put in place more specific requirements for the design of the buildings during zoning planning.” (Ski kommune 2013c p.6)
- “The area zoning plan shall consider placing two land lots for kindergartens in the area ...” (Ski kommune 2013c p.6)

As shown here, not all of the mentioned general preexisting strategies of land use development in the municipality were transferred to specific guidelines for the area planning and development. Rather, there are specific guidelines for the area promoting *some* concerns or interests as well as some specific guidelines for the land use, which are (Ski kommune 2013c):

- high density (in comparison to the current density of the urban area of Ski) and green mobility
- safeguarding of the cultural heritage milieu of Magasinleiren
- land use development of mainly institutions, service providers and offices, with the possibility of housing in parts of the area, and considering placing kindergartens in the area
- a combined green structure and pedestrian/cycling path through the area

Furthermore, there is a section in the program devoted to a description of the area today. In this section, there is a focus on the cultural heritage milieu of Magasinleiren and the historical development of the area, the landscape and the farmland, other cultural heritage elements in the area (Ski kommune 2013c). Furthermore, the central location of the area is highlighted yet again, and there is a brief description of the land owning actors (Ski kommune 2013c). Furthermore, there is a brief description of the area relating to its green structure characteristics, and it is explained that the area will be connected to a cycling and pedestrian network (Ski kommune 2013c). It also mentions that there is a creek running through the area (Finstadbekken) (Ski kommune 2013c). There are no descriptions concerning the use of this area by lay people generally or children, nor a mention of the school bordering the planning area.

What were the central themes that were to be in focus during the planning process, as described in the planning program:

There is a section in the program devoted to what is at the time deemed to be central themes for the planning and themes in need of further assessment and investigation during the planning process. The program first shows a diagram of the Ski urban area, where the distances as the crow flies from the public transportation junction are marked, highlighting yet again the central location of the area, and the closeness to the major public transportation junction of the urban area (Ski kommune 2013c). The themes that are then mentioned are (Ski kommune 2013c):

- **The vision of the area in the municipal masterplan**, stating that the area shall be regulated by an area zoning plan to safeguard the concerns of cultural heritage protection of the Magasinleiren area and clarify requirements for technical and social infrastructure before the commencement of detailed zoning plan processes. There is also stated a need to give more detailed provisions for the land use of this 'very important area reserve for the future development of Ski city'.
- **Transportation system and parking**, stating some car parking space limitations.

- **The relation between Ski Vest and the core of the urban area**, stating that there should be some coordination of the land use between the two areas.
- **The cultural heritage as a resource in the urban development**, stating that there is to be a substantial focus on the cultural heritage concerns of Magasinleiren in the planning of the area.
- **Environmental-friendly solutions**, highlighting compact urban development and environmental friendly transportation, and innovative measures for climate adaption and climate friendly development.
- **More working places near the Ski station**, stating the need for business and job development in the area, in accordance with the central location of Ski Vest and of the Ski urban area.
- **Public services – localization and design**, stating the need to assess needs for technical and social infrastructure, and the strategic localization of public functions in the urban development.
- **Calculating costs for technical and green infrastructure**, stating the need to calculate costs of certain infrastructure and green structure measures.
- **Housing**, stating the need to assess localization, volume and time aspect of the development with regards to housing.
- **Noise**, stating needs for assessments with regards to preventing and reducing noise pollution in the area.
- **Civil protection**, stating the need for a Risk and Vulnerability Analysis in the planning.

Furthermore, the program states that there is to be made a different program laying out guidelines for sustainable and environmental friendly solutions which will impact the planning of the area, and furthermore an environmental impact assessment.

How is children’s participation and children’s interests described in the planning program:

The planning program was publicized in June 2013 for public inspection, the year before the municipality became part of the pilot project for the digitalized version of Children’s Tracks and began conducting Children’s Tracks registrations in the schools (Interview with the Children’s Tracks organizer and the Planner B). Children’s Tracks is therefore not mentioned in the document. The participatory measures stipulated in the program follow the minimum legal requirements of the PBA, stating that there is to be two consultations during the process, one during the period of public

scrutiny of the planning program, and the other during the period of public scrutiny of the planning proposal. The program also states that participation and involvement shall be facilitated before the public hearing of the planning proposal, although the two rounds of public hearing were deemed to be the main arenas for participation (Ski kommune 2013c p.4). The program makes no mention of participatory measures for stakeholder groups with special mention in the PBA with regards to participation, such as children. In fact, the only mention of 'children' in the document is during the final part of the document, describing the legally required themes in the environmental impact assessment that was required for the planning process, children and young people's interests being one of these themes (as required in the municipal masterplan) (Ski kommune 2013c). Furthermore, there is a mention of the national policy guidelines for children's interests in planning, along with other national policy guidelines that have to be taken into consideration in the planning of the area, but no mention of what this means for the planning process (Ski kommune 2013c).

Analytical perspectives – what were the main guidelines, concerns and interests that were deemed relevant and legitimate for the planning of Ski Vest, at this point in the planning process:

What can be seen here is that there were several guidelines, some of which were specific, promoting an urbanization and densification agenda, preceding the planning process of the area zoning plan, that were deemed to be important for the planning process. It can be viewed as a framing of the planning process and the plan for the area in quite fixed ways. The concerns relating to urbanization and density are incorporated in preexisting guidelines stating that there is to be a given density in the development of the area (Ski kommune 2013c). Herein, the central location of the area with a closeness to the public transportation juncture and the urban core becomes important, and this is mentioned several times throughout the document. Furthermore, the guidelines at the local level concerning cultural heritage state quite clearly that the cultural heritage shall be taken into consideration and be prioritized and safeguarded in the planning of the area, and that there shall be open space between protected buildings and other cultural heritage elements in Magasinleiren. This is in line with the protection rules by the Directorate for Cultural Heritage (Ski kommune 2014c). The cultural heritage concerns are mentioned throughout the document and in greater detail than many of the other themes, and several preexisting provisions, as well as the protection rules by the Directorate for Cultural Heritage, can be seen to strengthen the legitimacy and importance of these concerns in the planning process. Furthermore, the concerns of urban development and cultural heritage are reflected in the goals for the area development.

Given their role in the planning program, it can seem like the concerns of urbanization and density and cultural heritage were perceived to be the most central concerns to the planning of the area at

this point in the planning process. Furthermore, as mentioned there are specific guidelines concerning the land use of the area which highlight business development, green mobility and social infrastructure, as well as public functions, and give room for some development for housing. Herein it is mentioned that there is a wish for housing development by developers in the area (Ski kommune 2013c). Thus, the overall land use development for the area was in place at the time of the planning program, but it could seem like there was some conflicting interest regarding the land use of the area, where the municipality promotes business development, and one (or both?) of the developers promote development for housing (Ski kommune 2013c).

Furthermore, there are other concerns and interests that are highlighted in the document, though not in the same substantial manner as the previously mentioned concerns. Herein, there is some focus on green structure, soft mobility and sustainability. There are also some technical, financial and security concerns for the planning of the area. (Ski kommune 2013c)

Analytical perspectives: the role of children's participation, interests and knowledge at this point in the planning process:

The planning program lacks a description of the use of the area by lay people generally and by children, even though there is a school bordering the area (which has no mention in the program). Such themes are not mentioned in the section devoted to describing important themes for the future planning process either, rather these themes are oriented towards expert knowledge and expert assessments. This suggests that children's interests were not in focus at this time of the planning process. Though, children's interests are mentioned as part of the environmental impact assessment, as this is a required theme by the municipal masterplan (Ski kommune 2011; Ski kommune 2013c), and furthermore there is a mention of the national provision for securing children's interests in planning, which they are bound by.

Furthermore, children's participation was seemingly not at all on the agenda at this point in the planning process, as this theme is not mentioned in the planning program. This can be seen in connection to the general (low) focus on public participation, where the plan for the conduct of the planning process, mainly follow the minimum requirements for participation of the PBA (Ski kommune 2013c).

After the publishing of the planning program:

The publishing of the planning program was followed by a legally required public inspection and consultation period where the planning program was circulated for comment. Herein the public, sector authorities and others were invited to make comments. Some general aspects and aspects concerning children from the comments that were made are briefly presented here. Those who made comments to the planning program were sector authorities or branches of government, and some private companies, over all they give the impression that there was mainly a general support of the planning program and the development and urbanization of the area by these actors, providing feedback on specific themes to the plan (Ski kommune 2013b). Furthermore, developers and their consultants mainly expressing support of the planning program and its concerns and themes, though advocating that the planning process should be sped up (Ski kommune 2013b). Additionally, there were some local environmental and cultural organizations, the local LA21 participatory forum and some local inhabitants living in the vicinity of the area, commenting on cultural, environmental, green structure and use considerations related to the area and questioning the need for urbanization in the area (Ski kommune 2013b). There were no expressed concerns relating to children's participation, and few concerns expressed on the interests of children, here promoted by local inhabitants and local organizations, who herein point to children's use of the area and the forest for play and leisure activity and their use of the walking path through Magasinleiren as important considerations (Ski kommune 2013b). In the required reply from the municipality to these comments, it is written that these comments will be assessed in the further planning process (Ski kommune 2013b).

The planning program for the area zoning plan of Ski Vest was then adopted in November 2013 (Ski kommune 2013a). The Planner A had begun working as a project leader for the area zoning plan process earlier that autumn. At the time they were working on four comprehensive plans in the municipality, a municipal partial masterplan and three area zoning plans, including the area zoning plan of Ski Vest studied here (Interview with the Children's Tracks organizer and the Planner B; Interview with Planner A). The time schedule of the planning program set the time of adoption of the area zoning plan to the end of 2014. According to the Planner A, not much had happened in the planning process since the planning program was publicized for public inspection, and they didn't really start the further planning work before April of 2014 (Interview with the Planner A), where they began working on the planning proposal and meeting with relevant sector authorities and other

actors involved in the process. In May they began a cooperation with the two developing companies on the planning of the area (Ski kommune 2015c; 2015d)

In the experience of the Planner A the time schedule that was set up in the planning program for the area plan zoning plan acted as a serious constraint that affected the conduct of the planning, together with what was going on with the other plans being conducted at this time.

As expressed by the Planner A:

“... it happened so fast, we had six months to make all the planning proposals [for several comprehensive plans] and at the same time we also had to ensure the quality of each other’s plans, so it was kind of fast and not so meticulous work ...”

The planning program was followed by the conduct of the planning of the area and drafting of a planning proposal. During this process many actors were involved (Ski kommune 2015c; 2015d). As there were several (intersecting) comprehensive planning processes being conducted simultaneously, the municipality held coordinating meetings, in which administrative leaders in the municipality and within the planning department were involved, together with a consultant company and the National Road Administration (Ski kommune 2015c; 2015d). Furthermore, there were many different actors in the municipality who were also involved in meetings. It is mentioned that the children’s representative, persons responsible for kindergartens and schools, cultural heritage, social and living considerations, as well as representatives from the technical department, were involved. (Ski kommune 2015c; 2015d).

Furthermore, there was a dialogue with regional authorities, such as the County Administration on the subject of cultural heritage during the process. There were also meetings with connected actors concerning technical/infrastructure themes, and meetings concerning the walking connection from the Ski Vest area and across the railway to the urban core (Ski kommune 2015c; 2015d). During the planning process, meetings were also held with politicians, and it is expressed that the responses from these meetings were incorporated in the planning of the area ((Ski kommune 2015c; 2015d).

During the process of drafting a planning proposal, expert assessments drawing on expert knowledge were made, as called for in the planning program. There was an Environmental Impact Assessment, ‘ROS-analyse’ (Risk and Vulnerability Assessment). Furthermore, there was created a report on the cultural heritage of the planning area, as well as an analysis created by the hired consultants and

architects of the two developing companies, describing the planning area and proposing suggestions for the development of the area. Few of these assessments/reports, include findings from Children's Tracks or thematise children's interests and use of the area. Results from Children's Tracks was included in the Risk and Vulnerability Assessment, under the theme children's play and leisure areas, where it is expressed that the children at the bordering school use the forest near the school (with reference to Children's Tracks), and that this area may be affected negatively during the construction phase of the development of the area (Myrmæl 2014). It is also expressed that the play areas are planned to be safeguarded in the area zoning plan (Myrmæl 2014).

How was Children's Tracks introduced to the zoning planning of Ski Vest, and what were the participatory measures for children during the planning process of the area zoning plan:

As it had been lacking in the planning process at the time of the planning program, actors in the municipality saw a need to introduce a tool that could help them secure the interests of children in the plans and in the overall place development in the municipality, in accordance with the legal regulations promoting the interests and participation of children in planning (Interview with the Children's Tracks organizer and the Planner B; Interview with the Planner A). As expressed by the Children's Tracks organizer, the children's representative in the municipality suggested that they utilize the Children's Tracks tool, which was at the time being digitalized. Together with two other municipalities, the Ski municipality applied to and became part of the pilot project of the Centre for Design and Architecture for the newly digitalized Children's Tracks tool. As shown in the preliminary study, the motivation for implementing Children's Tracks can be seen to be both to fulfill legal requirements in planning for children's participation, as well as promoting children's interests in planning (Aune et al 2015 p.168-191). The municipality began conducting Children's Tracks registrations in 2014, and made efforts to incorporate them in the ongoing planning processes, including the area zoning plan process of Ski Vest (Interview with the Children's Tracks organizer and the Planner B; Interview with the Planner A).

Furthermore, Children's Tracks was the singular participatory measure aimed at children during the planning process (Interview with the Planner A) beside the possibility for the student councils at the schools to give input during the legally required consultation processes of the planning process, meaning that Children's Tracks in practice came to represent the interests of all children of different age who use the area and live in its vicinity. The Planner A explains this in connection to the general level of participation they were at during the planning process.

It can be seen in connection to the time constraints and pressure to complete the planning process. It can also be seen in connection with a generally low prioritization of public participation in the planning department at the time, which was expressed in one of the interviews conducted during this study.

In the view of the Planner A, Children's Tracks secured some children's participation, and it probably would have been less participation if the municipality hadn't been part of the pilot project for Children's Tracks.

As expressed by the Planner A:

“... we were at the minimum level in terms of participation, and if we, if the Children's Tracks registrations [hadn't been there] and the Ski municipality [hadn't] decided to be a part of the pilot project and gotten some money for this ... if we hadn't had that chance then we hadn't, then children and young people in those areas would've probably not been heard at all, except through the student councils.”

How was Children's Tracks conducted in relation to the area zoning plan process of Ski Vest:

The registrations from two of the schools were deemed relevant to the planning of Ski Vest by the municipality, as their school districts encompass the planning area. These registrations were conducted in November 2014. The first is the registration process that was conducted on the elementary school bordering the planning area, involving the (then) 6th grade classes. The second one is a registration process conducted during the same time at the middle school of the urban area of Ski. This process is not included here. The main reason for this exclusion is that the planning actors that are interviewed in this study and who conducted the majority of the planning of Ski Vest did not take part in this registration process. Furthermore, the middle school is located quite far from the planning area. The focus now turns to the Children's Tracks registration process at Finstad elementary school in 2014.

In the area zoning plan of Ski Vest, the Children's Tracks registrations from both the Finstad elementary school, situated next to the planning area, and Ski elementary and middle school, were considered relevant by the planners and the administration of the municipality. This was connected to the way the school districts are shaped in the municipality. The urban area of Ski only has one middle school (combined middle school and elementary school), so children from all over the urban area attend this school, including those who live in the surroundings to the Ski Vest area. Yet, as described in the introduction, the planner with responsibility for the area zoning plan of Ski Vest, planner A, did not take part in this registration process. As for Finstad elementary school, the school

district is shaped so that the school is attended by children in the vicinity, living around or very close to the Ski Vest area. The planner took part in this registration process.

As expressed by Planner A:

“... the plan was to have a participation process that could secure the users who came from the Finstad area on their way to the middle school, and the users who came from the Finstad area and crossed the area to go to the Ski urban core. And there it is, many children who attend the Ski elementary and middle school so they could tell us about where they walked, I don't know enough about that process because I wasn't involved in it. I took part in the registration process at Finstad.”

Though the planner did not participate in the registration for the Ski elementary and middle school, the Children's Tracks registration for the middle school was made available to the planners through a digital combined map of all the registrations that were conducted in 2014 at the different schools. An analysis showing a summary of the registrations in the individual schools was also made available to the planner. This could mean that the perspectives gained from the registration process at the elementary school had better chance of influence than those from the middle school, as the planner took part in this registration process and not the other one.

The registration process followed the collaborative approach as described in the previous section. In the presentation in the beginning, there was some steering of the participatory process by the planner, towards feedback on selected themes and the part area Magasinleiren within the area zoning planning.

As expressed by the Planner A:

«... we asked specifically what they had in mind, if the Magasinhallene [protected buildings of Magasinleiren] could be used for a cultural activity, what could it be.»

Analytical perspectives – framing of the participation process?

This should be seen in connection to where they were in the planning process at this stage. As mentioned, the registration process was conducted in November 2014, which is a bit more than a year after the planning program of the area zoning plan of Ski Vest had been politically adopted, and several months after they had begun working on the planning proposal. And furthermore, it was more than a year after the planning process had formally begun and several years after the developing companies had acquired land in the planning area for future development. In this sense, the children were involved in a late stage in the process, which as shown in the theory chapter meant

that realistically there were already limits to how they could influence the planning process through Children's Tracks.

The framing of the participation process can be viewed as in the direction of what Sharp and Connelly (2002; see also Turnhout et al 2010) would call 'safe' themes, where the children are encouraged to focus on aspects that do not challenge powerful concerns and interests which at this point are likely to have been promoted and cemented in the planning process.

In what is expressed by the Planner A, it is not seen as a framing of the participation process but rather as an encouragement that enable the children to participate and engage more directly with relevant themes of the planning process.

In their own words:

«... they use computers a lot, but they don't know enough about it that it is equally logical for all of them, knowing where they were supposed to add their input, what they should add and what we were kind of asking for, so we had to guide them a bit on what we really wanted and why we wanted them to do this in the first place. And then we didn't lead or restrict them but we expressed that we wanted them to somehow come up with [ideas for] how the halls could be used, because they are protected. Even though they are protected by the regulations of the directorate for Cultural Heritage, it doesn't mean that they should not be used! But as of today it is, or as of then in 2014, it had been proposed to use them for car parking! And we thought this was not the best idea, and at this point they [the children] became eager and kind of realized the concept of coming up with ideas that could be directly used ...»

Given the context as described previously, it would be difficult and perhaps even counterproductive (see Innes and Booher 2004) for the planners to 'open up' the participation process to a greater degree at this point, encouraging the children to promote their interests more broadly. The risk here being that the children could have gotten high expectations that could not be followed up in the plan, possibly building distrust of democracy instead of democratic awareness among the children (see Innes and Booher 2004). And nonetheless, there is the opportunity through this participation, that was facilitated by Children's Tracks and encouraged by the Planner A, for the children to give feedback that could be used directly in the planning process, that is perceived as meaningful and relevant for the planning actors, which could ensure some form of participation, albeit a 'safe' participation (Sharp and Connelly 2002).

Summary of the data from the Children's Tracks registration process of 2014:

In this section, relevant data from the Children's Tracks registration of 2014 is summarized, with the purpose of showing what the data shows in terms of the children's use and perceptions of the area. The point with including this is to be able to shed some light on how the perspectives were caretaken in the plans, either by similarity in the data and in the decisions or by influence, and how they were used in the legitimization. The data from the Children's Tracks registration of 2014 cover all the input from the schools that participated in the Children's Tracks registration in the municipality in 2014, in a combined digital map which is the same that is in use in the municipality and is accessed by the planners. As previously mentioned, the combined map is not publicly accessible as the municipal administration consider it as confidential, but access was gained for this study. To keep the confidentiality in accordance with the provisions that were given by the municipality, the findings are not portrayed on a map but shown as a written account of what was found within the whole area (see attachments). The attributes in the map were summarized here based on what is expressed through the mapped attributes and attached comments.

The data presented here is from within the planning area of the area zoning plan, but the bordering area to the West (just east of the Finstad elementary school) is also commented as it is in cohesion with the planning area, as there was a cluster of mapped attributes here, and furthermore as it would be in accordance with the findings of Freeman and Vass (2010) of possible lack of spatial accuracy in children's maps to look more broadly on the map. Though it could be fruitful for the thesis to look at the data outside these boundaries as well, showing what was registered for the urban area of Ski and the Children's Tracks registrations at a larger scale, it was deemed to be too comprehensive for this thesis project. Most of the registrations in the area were added by children taking part in the Children's Tracks registration processes from the two schools whose school districts encapsulate this area: the Finstad elementary school and Ski middle school (Ski kommune 2014a).

There are many aspects that could affect the data from the registration. What is registered could be connected to the timing of the registration processes – the use of the area may be different during the passing year and this might not be reflected in the registration, as pointed to by the creators of the tool (Norsk Form 2010). Looking at the registration of 2014, the activity attributes are only used a few times within the area studied here. This could mean that there was not so much use of the place for activities, or it could be connected to the registration being conducted at a certain time of the year where the use was less frequent. The registrations were conducted during November of 2014 (e-mail correspondence with the Children's Tracks organizer), a time of the year which is often cold

and dark and before the snow has settled. One can imagine that this could also possibly affect the perceptions of the area.

The results from the 2014 registrations for the planning area of Ski Vest – as they were shown on the combined map in the municipality’s map service:

The combined map of the Children’s Tracks registration shows the mobility patterns of children in the planning area (Ski kommune 2014b). The mapped mobility patterns suggest that children cross the area from east to west or the opposite way through Magasinleiren as well as on roads in the area, mainly to and from the school area and its surroundings (Ski kommune 2014b). There are a few mapped line attributes crossing the area in a similar direction north of the protected buildings in Magasinleiren as well (Ski kommune 2014b). As previously mentioned, the line attributes of this registration round did not have comments attached as they were accessed through this study.

The children have mapped negative and positive attributes to the area as well as activities, though as mentioned the last category was only used a few times within the planning area (Ski kommune 2014b). The attributes that have been mapped mostly cluster in the northern part of the planning area around Magasinleiren area and close to the Finstad elementary school with only a few mapped attributes in the southern part, which suggests that the children mainly use the northern part of the planning area (Ski kommune 2014b). The most substantial part of the mapped attributes is of the negative category where the subcategories “want to change” and “dark” appear most frequently and the subcategories “trash” and “dislike” appear to some degree. Of the positive mapped attributes, the subcategories “nice forest” and “I like this” were the most frequent. Many of the mapped attributes have comments attached, though not all.

What is expressed in the registration in terms of use and perceptions of the area:

What is perhaps the easiest to interpret are the line attributes, implying that the children cross the area primarily east-west or opposite on the existing roads of the area as well as through the Magasinleiren area, though this is contingent on the spatial accuracy of the mapping. Though some of the mapped point attributes are quite difficult to understand as they lack specifications or have incomprehensible comments attached (at least to the adult reader), most of them are interpretable, though not necessarily expressing a very clear message. The attributes that were deemed too difficult to understand are left out of the summary.

For the point attributes the registration first and foremost shows that there are multiple rather than unified uses and perceptions of the area that were mapped by the children, and that the perceptions sometimes oppose one another. For instance, someone mapped that they dislike the area of Magasinleiren, whilst another mapped that they like this area (see attachments). Furthermore, there are more negative than positive attributes, and few activity attributes, which could indicate that the children who added attributes to the area to some degree experience this area as it is today as lacking in qualities and facilities, though as highlighted this could be connected to the time of the year the registration processes were being conducted (Norsk Form 2010).

In terms of use, the mapped attributes imply that the children taking part in the mapping exercise use it as an outdoor area, mainly the Northern and Northwestern part of the whole planning area (this is not shown here but on the confidential map which is not publicly available). In terms of activity, it is mapped or implied that they use it specifically for play, ball games and more generally recreationally. There are several needs or wishes in terms of activity or use that appear through the mapped attributes. They are: skateboard park, more fields for ball games and improvement of these facilities (artificial grass was mentioned several times – though, all of the attributes could have been mapped by one person), shop, place to swim, ice hockey field, café, a hall for leisure activities (sports?) with roof, park for families in Magasinleiren (see attachments).

In terms of perceptions the mapped attributes are again multiple. The forested areas, especially the forest bordering the school, seem to have a positive quality in the mapping. Furthermore, there are general positive perceptions that were mapped regarding the area as a place, as a park and its view. One attribute implied a positive perception of Magasinleiren. Of the negative perceptions, many focus on the Magasinleiren area, though some are more general for the whole area. They generally express that the planning area is perceived as dark, that there is trash there, that it is scary. For Magasinleiren they express again that the area is perceived as dark, scary, some dislike the buildings there or dislike the area in general.

Some comments on what was expressed in the mapped point attributes in the bordering area (between the Finstad elementary school and the planning area):

The mapped attributes in this area (point attributes) show much of the same as the point attributes within the planning area. They further highlight the forest as a quality for the children taking part in the mapping. Furthermore, they show much of the same negative perceptions of the area and of specifically Magasinleiren, i.e. that it is scary, that there is trash. In terms of activity they show that the area is used for play and ballgames.

Analysis of the Children's Tracks registrations of 2014 conducted in the municipality:

As has been highlighted, the Children's Tracks organizer conducted an analysis of all the data from the registrations of 2014 ((Ski kommune 2014a). An aspect here is that the analysis summarizes data from each of the schools rather than by area, showing the mapped attributes for each class. Thus, it does not allow for a direct comparison with the data on the combined map as summarized by the author of the study, where the data from different schools and was mixed. This means that the analysis as conducted by the Children's Tracks organizer could have come to slightly different conclusions on the use and perception of Ski Vest by the children. Still, it was deemed relevant to portray the analysis here, as it was used in the planning of the area (Interview with the Children's Tracks organizer and the Planner B).

What is portrayed here are the summaries of Children's Tracks registrations from the two schools Finstad elementary school and Ski middle school⁵, as their school districts encompass the area, and as the results from these schools are deemed relevant by the municipality for the planning of the Ski Vest area.

Finstad elementary school:

The summary from the Finstad elementary school begins by listing what was deemed to be the main patterns from the registration. The information that is not directly relevant to Ski Vest is not presented here. Of relevance to Ski Vest, the following was mentioned:

"Several think that the forest near the school is nice. ... Some want a water park or a swimming facility near the kindergarten in the area, others want a field with artificial grass. Several want an improvement of the football field [in the area] and a skate park near the school. School road through Magasinleiren. Several point out that it's dark and scary there, and many want to change the area."

(Ski kommune 2014b)

Furthermore, comments from the registration is listed. Of those with direct relevance to the planning area, there is a comment expressing that the forest close to the school is a nice place to play, another comment is expressing that they need more fields [for ball games] as there are many children in the existing fields, and then there is a list of comments related to Magasinleiren (Ski kommune 2014b). Here there is a comment expressing that they want artificial grass and a hall with a roof, another

⁵ The Ski school is both a middle school and an elementary school. The school district of the latter does not encompass the planning area studied here, therefore the results from the elementary part of the school is left out.

comment that express that they want to 'fix' Magasinleiren, a comment expressing "artificial grass?" another comment just expressing "ice hockey field" and a comment expressing that they want a skate park in this area.

Ski middle school:

For Ski middle school, the summary follows the same procedure, though it is much less detailed here. Here, the registrations from one of the classes taking part in Children's Tracks showed perspectives that are directly applicable to the planning context of Ski Vest. In the analysis it is written that many are concerned with Magasinleiren (Ski kommune 2014b). There is listed three comments, one of them expressing that the military area [Magasinleiren] is super scary and that the pupils at Finstad [another name for the area] have wanted to change this for a long time and that it could be a park here. Another comment expresses that they want to turn the military camp into a nice family park, while a third comment expresses that it should be converted into a park with a café (Ski kommune 2014b).

The Children's Tracks registrations after the registration process: how was the output incorporated and thematised in the planning process:

After the registration process the analysis following the registration round of 2014 was given to the planners and applied in the planning processes that were being conducted at the time, including the area zoning plan for Ski Vest. The analysis is dated to the end of November.

In the words of the Children's Tracks organizer:

«... I made a summary of the registrations, to get it quickly handed over to those who were making the plans who then used this directly into the area zoning plans. So you will find, in all the area zoning plans and the municipal partial masterplan, in the four plans you will recognize that analysis.»

The data was furthermore added to the municipal mapping service. Thus, the Planner A had access to the registrations from the middle school as well as those of the registration process they took part in. Furthermore, the results from Children's Tracks were a theme in two or three meetings in which the Developers took part (Interview with the Developer), along with planners, where in the perspective of the Developer they were first introduced to the results from Children's Tracks. As they see it, the Children's Tracks registration process was not really integrated in the planning of the area.

As expressed here:

«... we weren't involved in the first Children's Tracks registration round, then it was in 2014, I thought it was earlier, we weren't involved then. But anyway it was kind of not integrated in the area zoning plan process, we didn't know about it when we were working on the area zoning plan.»

Furthermore, there was a meeting where the area zoning plan proposal was presented to the local politicians, in which the Children's Tracks registration was part of the themes that were brought up.

In the words of Planner A:

«... it was brought up in one of the meetings, we had a meeting with the local politicians, or a seminar with the politicians, and then it was brought up. Though somewhat irregular, one of the consultants who represented the land owners was allowed to present their ideas to the politicians, with assessments of heights and sunlight and all of that and participation and ... children's participation was one of the themes ... »

Furthermore, a seminar that had been conducted prior to Children's Tracks, in the end of September 2014, also contributed to questions of how the area of Magasinleiren should be used in the future, involving professionals with competencies of planning and of cultural heritage (Ski kommune 2014c).

As described by the Planner A:

«... we had a seminar for local politicians in all of the regional district, with the cultural departments and the planning departments, where we invited them to a lecture on cultural heritage as identity carriers in the city, and then we talked about Magasinleiren, and we had a workshop where the experts took part and the funny thing was that they came up with ideas that were very similar to those of the children! So it was put in the document describing the plan and then the area here with the importance of, of walking through Magasinleiren ...»

In this lies the possibility that the input from Children's Tracks on Magasinleiren strengthened its legitimacy, as the input was backed by the experts' assessment that had been made prior to the registration process. The Planner A does not see it this way, and furthermore they imply that these contributions are seen by them as equally legitimate input for the planning process (Interview with the Planner A). In their perspective, Children's Tracks gained a strong legitimacy in the planning process due to the municipality taking part in the pilot project for Children's Tracks by the Centre for Design and Architecture.

As expressed by them:

“... In this case I think it was influential because the municipality had a program for Children’s Tracks that was much larger than just Ski Vest [the process]. And then you can say, which ideas were influential, and that’s kind of difficult to say, but at least it’s certain that the idea of using the protected buildings for parking space was discarded, and then I think it had something to say in the matter, because they have been part of, one thing is to be involved in participation in relation to the group of developers, but they have also had quite the influence on the developers, because the developers know ... they know that there is a political pressure under the administration [of the municipality], and the political pressure depends on lobbyism, and they knew, or the politicians knew that we were part of a pilot project process for Children’s Tracks, right, and they supported it ...”

As presented above, in the views of the Planner A, the political pressure of the pilot project made Children’s Tracks influential in the planning process, as it gave these considerations legitimacy. The question of influence is further explored onwards.

How did Children’s Tracks influence the area zoning plan process, in the perspectives of Planner A and the Developer:

In this section the influence of Children’s Tracks in the planning process of the area zoning plan is described, focusing on the perspectives of the planning actors.

Though the Planner A expresses that Children’s Tracks was influential (as seen above), they see some limitations to the influence, which can be seen as connected to the timing of the participation process. In their view, it was mainly influential in the area of Magasinleiren, to which also the participation process was steered, as highlighted previously.

As expressed by the Planner A:

“... the main programming of the area was already there, and then there was the question of what kind of changes this participation process has led to? It hadn’t really resulted in big changes in the programming of the area, but it had for instance given a new purpose to the protected buildings, and it had probably given a totally different purpose to these buildings than the one proposed by the developers ...”

On this subject there is some disagreement between the actors, where another perspective is that it primarily acted as confirmation of planning decisions that had been made prior to Children’s Tracks being incorporated in the planning process.

As expressed here, the Developer sees it as a confirmation of prior decisions:

“... we had already worked on those things, so we felt that the first Children’s Tracks it just, how to say it, confirmed what we had already thought.”

In the perspective of the Developer, there was a similarity between what they had in mind for the area of Magasinleiren and what appeared in the presentation of the results from Children’s Tracks in meetings during the planning process. In their perspective, even though Children’s Tracks came in at a late stage in the process, some of the interests represented here were anyway secured in the plan, as they had already thought of implementing similar suggestions in the plan and development of the area.

As expressed by them:

«... it was a theme in two or three meetings where we went through ... [the Children’s Tracks organizer] was kind of the process leader of Children’s Tracks both times, but it was kind of like, it might sound a bit strange but for Ski Vest we had very talented architects on both sides, both of the land owners, and then we had very talented advisors ... so we had high qualifications within the group [who contributed to the area zoning plan] and then we are a developing company that go beyond, it’s not our intention to stack as many housing units as possible for the least amount of money! So, we have put a lot of work into making it a nice place to live, and we had lots of available space and capacity in ‘vognhallene’ [the protected buildings of Magasinleiren] and we kind of wanted a solution on how to use this ... so we had many internal discussions that was actually about Children’s Tracks, or what we assumed that Children’s Tracks would, or, we didn’t really discuss Children’s Tracks at all but we presumed, we believed, since [the project] was so close to a school and the school road for many children we tried to make the project into something that would benefit them! And then when the first Children’s Tracks [results] were ready we didn’t know it would come up in that meeting, and then the head of the planning department asked me how, what we thought about certain aspects [to the plan] and how they would be solved, and this was the first time I met [the Children’s Tracks organizer] and then we talked about what we had in mind and what we thought, and when they then presented Children’s Tracks, a report on Children’s Tracks, then it was like what we had told, or the three or four things we had decided on were also the conclusion from Children’s Tracks so they were kind of completely [the same], or yes perhaps there were some discrepancies, but it was kind of, we had ...»

Yet, the Planner A contests that the developer actors and their consultants had come up with similar ideas on their own, as expressed here:

“... what they said was that they, they had gotten a confirmation of, they said, many of their, many of their good ideas and concepts of Magasinleiren and the protected buildings, and this is not quite right because this was *not* where we were in the beginning of the cooperation [between the developers and the planning department]!”

In their perspective, Children's Tracks gave them leverage in the negotiations of the planning process, which made it easier to make changes to the planning proposal even though it had come quite far at this stage.

As expressed by the Planner A:

“... they [developers and consultants working on the plan for Ski Vest] had come quite far in the procedural aspect of the area zoning plan, because they had already drawn the area once before, so when I started in September/October I was presented a nearly completed area, already then, but I thought the conditions were all wrong, so I asked them ... to reconsider their thoughts! And the Children's Tracks registration aided that process, because they saw that this [Children's Tracks] was a priority in the municipality.”

Documents preceding the formal planning process were not accessed in this study, but it was expressed in the interview with the Planner A that originally the developers' idea for the protected buildings 'vognhallene' was to use it for car parking (Interview with the Planner A). This also appears as a suggestion of the developers in a news article from 2011 concerning the development of the area (Kvitle 2011). In the same news article, it is furthermore expressed by them that the area between the buildings will remain an open space in the future development, which could be used as a park (Kvitle 2011). This is in line with what was later expressed in the planning program for the area zoning plan, and the preexisting guidelines concerning cultural heritage which follow the protection rules of the Directorate for Cultural Heritage, as previously presented (Ski kommune 2013c). There are two other documents that were accessed in this study that can shed some light on these subjects. The analysis created by the hired architects and consultants (of the developers) suggesting the overall use of the area, dated to the month before Children's Tracks was conducted, does not say anything about the use of these buildings, which could suggest that this had not been decided at the time. In an expert assessment of cultural heritage that was conducted in the very end of November, which was after Children's Tracks, there are however ideas for the use of these buildings (In'by et al 2014; Ski kommune 2014b). Within this document there are notes from the seminar which was mentioned by the Planner A, on the cultural heritage of Magasinleiren and future use and development, which it was expressed came up with ideas that were similar to the ideas expressed during the Children's Tracks registration process (Ski kommune 2014b; Interview with the Planner A). Some of the ideas presented here seem to have found their way into the planning description preceding the first political adoption of the plan, together with other ideas that seem to be from or coinciding with Children's Tracks (Ski kommune 2015a).

Analytical perspectives: influence of Children's Tracks in the planning process:

As shown previously, it had already been established an agreement that this partial area should remain open. Furthermore, what can be drawn from this is that the developing company had ideas expressing that it could be used as a park, prior to the Children's Tracks registration. Furthermore, the idea for the use of the protected buildings 'vognhallene' did change during the planning process, but it is not known when exactly this happened, or how it is connected to the Children's Tracks registration, though the Planner A expresses that Children's Tracks aided them in the negotiations, and though it can seem like a combination of ideas from the seminar and Children's Tracks appear in the planning description (Ski kommune 2015a).

Thus, there are limitations to what can be drawn from this. It is still unclear if or to which degree the Children's Tracks registration influenced the planning process and the ideas for Magasinleiren, as the actors disagree, and the available documentation in the study does not provide clear answers. What *can* be drawn from this, however, is that the influence from Children's Tracks, if it was there, was limited, which must be seen in connection to the involvement of Children's Tracks in a late stage in the planning process.

Furthermore, an aspect to this which is implied in what was expressed by the Developer, if there were coinciding ideas, is the similarity of some interests and the dissimilarity of others.

As expressed by the Developer, when asked about what were the dissimilarities (that were disregarded by them):

“... it was more like, or it was perhaps examples that they [the Children's Tracks organizer] presented, but it was more like, what I call noisy activities, like skate ramp, kind of those ...”

If there was an influence here, it means that there was some degree of selection of the input from Children's Tracks (which, as previously highlighted, had already been framed towards certain aspects of the planning of the area), where some of the input is embraced and other input is disregarded, by planning actors.

How was Children's Tracks incorporated in the plan and its legitimization:

Whether the result of (limited) influence from Children's Tracks or not, the question remains as to how interests represented through Children's Tracks are incorporated and caretaken in the planning and in the final plan, in the mix of interests and concerns shaping the planning of the area. And furthermore, how the plan is legitimized, and herein if and how the knowledge co-produced through Children's Tracks is part of the legitimization of the plan.

The planning description:

The focus now turns to the document of the planning description, which is the official document describing and arguing for the adoption of the planning proposal before it was first politically adopted, herein legitimizing the decisions made by the planning actors during the planning process for the area development. This document is dated to January 2015, a little more than a year after the planning program was adopted and approximately 2 months after Children's Tracks had been conducted. The document contains a description of the area and the planning proposal and the planners' professional assessment and legitimization of the planning proposal.

What were the interests and concerns that were deemed important for the planning of the area at this point in the planning process:

Similar to the planning program, this document begins by presenting briefly the legal requirements, provisions and guidelines that are deemed relevant for the planning of the area zoning plan, herein the central government guidelines on the interests of children and young people in planning. Guidelines in the regional plan for land use and transportation of Oslo and Akershus (then not yet politically adopted) and in the municipal masterplan are then described in detail, as they are seemingly deemed especially relevant and important to the planning of the area (Ski kommune 2015a).

The regional plan (as it is presented in this document) state that the Ski urban area is prioritized for growth in the region, a regional city and an especially prioritized area for increased urban and business development (Ski kommune 2015a). The document then provides a detailed account of provisions in the regional plan that are viewed as important for the planning of the Ski Vest area. Herein there are provisions that highlight urban qualities and growth, green mobility and higher density in the centrally located areas of the regional cities, development of housing and business. According to the provisions, the consideration of growth should be prioritized over the protection of

green structure and farm land in the centrally located areas of the regional cities (such as Ski) (Ski kommune 2015a p. 5).

The document then goes on to describe provisions from the municipal masterplan, again highlighting urban qualities and growth as central considerations for the development of the area, the area development being described as a means to realize these goals of the Ski urban area and the municipality, similar to the planning program (Ski kommune 2015a; 2013c). Furthermore, business development is highlighted as a concern, as well as environmental qualities, the caretaking of the existing place qualities and development of new place qualities and green mobility (Ski kommune 2015a). The document then repeats the specific guidelines in the municipal masterplan regarding the development of the Ski Vest area, in a similar manner as they were portrayed in the planning program. The document then goes on to briefly describe concerns from other plans and strategic documents in the municipality that are deemed to be important for the plan. Herein it is highlighted the importance of densification of centrally located areas in the Ski urban area, a high density when developing unbuilt areas, facilitating the street networks for green mobility, urban drainage, climate and energy goals (Ski kommune 2015a).

As in the planning program, there is a section devoted to a description of the planning area, which is much more detailed here. In the description of the area, there are several themes included, some to greater detail than others:

- **The location, size and use of the area:** describing the central location of the area, size, unbuilt characteristics, buildings in the area, former planning of the area, buildings in the vicinity. Here there is a mention of the Finstad elementary school bordering the area. (Ski kommune 2015a)
- **The surrounding areas and characteristics:** describing the density of the housing in the surrounding areas, new buildings east of the planning area, the road Vestveien. (Ski kommune 2015a)
- **Traffic:** describing the intensity of use of the roads in and around the planning area, statistics on accidents, the facilitation for walking and cycling on the existing road network. (Ski kommune 2015a)
- **Landscape, vegetation:** describing the landscape characteristics, the Finstad creek, unbuilt characteristics of the area, use of the farm land in the planning area. Herein, there is a mention of the forest east of the Finstad elementary school, and the use of the forest stating: "The woods east of Finstad elementary school are used often by inhabitants living in the vicinity of the area and functions as an extended school yard ..." (Ski kommune 2015a p. 13)

- **Areas of biological diversity:** describing registrations of some species and nature in the planning area. (Ski kommune 2015a)
- **Cultural heritage:** describing in detail the historical development of the cultural heritage milieu of Magasinleiren, a remnant of an old road crossing the planning area and some connected archeological findings, by drawing on the expert assessment that was made on the subject of cultural heritage in the planning area. The description highlights the cultural heritage in Magasinleiren, its importance and its protection by the directorate for Cultural Heritage, and furthermore its protection in the municipal masterplan. In this section it is explicitly stated that: “all measures beyond ordinary maintenance of the interior and the exterior for the [strictly] protected buildings have to be approved by the Directorate for Cultural Heritage.” (Ski kommune 2015a p.14)
- **Buildings, aesthetics:** describing the characteristics of the other buildings within the planning area (not part of the cultural heritage site). (Ski kommune 2015a)
- **Local environmental factors:** describing noise, pollution and sunlight measurements within the planning area. (Ski kommune 2015a)
- **Technical infrastructure:** describing the public transportation services near the area and its central location and walking distance to the public transportation juncture in the urban core, status of water and plumage within the area, a high-voltage cable pathway in the planning area. (Ski kommune 2015a)
- **Social infrastructure:** describing briefly kindergartens and schools within and around the area, service/stores in close proximity. (Ski kommune 2015a)
- **Property and owner structure:** describing the (main) land owners of the planning area and the property structure. (Ski kommune 2015a)

The selection of themes in the description is mainly oriented towards expert assessments concerning the area and its development, while there is very little focus on experiential knowledge, use or concerns. Furthermore, the document shows that there are numerous and competing considerations of the area that were viewed as relevant to the planning at this point in the planning process, quite similar to the planning program. Herein, some themes or concerns are described in greater detail than others, or they are given more space in the document. The cultural heritage considerations, especially that of Magasinleiren are given the most detailed description and space in this section (Ski kommune 2015a). The description of the area today mentions very briefly children’s (and local inhabitant’s) use of the forest east of the Finstad elementary school (Ski kommune 2015a). In general, the use of the area by children and lay people generally is only briefly described in the

document, while opposite to this, guidelines and provisions at the local and regional level concerning growth, densification, cultural heritage and business/office development have been described in a manner which is a lot more detailed. Furthermore, public participation is only barely mentioned in the document, and there is no description in this document of how children have been participating in the process, yet, results from Children's Tracks is included in the document.

How is the planning proposal legitimized in the planning description document, and what role does Children's Tracks play here:

In the justification of the planning proposal, it is highlighted the expected growth in the municipality, the need for new housing units and the strategy of densification within the existing building zone and in centrally located areas, as stated in the municipal masterplan.

The document goes on to discuss different alternatives of development in the planning area, referring to the analysis that was conducted by the architects and consultants hired by the developers. The discussion is about to which degree the area should be planned for housing and to which degree it should be planned for business/offices, and what the options entails when following the density guideline from the regional plan, stating that the density of centrally located areas in the regional cities should be twice as high as the density of today in the Ski city (Ski kommune 2015a). Though the planning program stated that the plan should mainly focus on facilitating the development of work places (business/offices and institutions), the plan for the area has herein changed somewhat since the time of the planning program, allowing for more housing development in accordance with the wishes of the developers as described in the planning program (Ski kommune 2015a). Herein the area is programmed with a combination of housing, offices, institutions for health and social infrastructure (herein kindergartens, potentially a new school and a sports facility), as well as some green structure and the preservation of cultural heritage elements. It is argued that there will be more office development elsewhere in the urban area and in the municipality, and as such that these needs will be met anyway. Furthermore, there is a section devoted to justifying the main concept of the area zoning plan proposal. Here it is highlighted that the goal of the area zoning plan is to provide:

“... an urban densification of high quality. It shall facilitate a mixed development of the area which provides both good living environments, business development, good public functions and open spaces, while safeguarding the preservation qualities of Magasinleiren.” (Ski kommune 2015a)

Which is similar to the above mentioned concerns that have been given much space in the document, and furthermore the concerns in the planning program. These concerns seem to be central to the planning of the area zoning plan.

Though children's use of the area is only briefly mentioned in the document, perspectives from Children's Tracks had found their way into the planning description document, in a section describing consequences of the planning proposal. This is the only place Children's Tracks is directly mentioned. This section touches upon many themes and considerations, of which children is one theme. What is presented here can be seen as a part of the legitimization or justification of the planning proposal, even though it is not placed in this section in the document. The theme of children within the section describing consequences was required by the municipal masterplan (Ski kommune 2015a). In this section of the document it is argued that the plan will yield more green structure, meeting places and activities for children, as well as safer school roads (Ski kommune 2015a p.52). Referring to Children's Tracks, the planning description states that:

"To children at the Finstad school the Finstad forest [forest close to the school] is important. Many have their school road through Magasinleiren, which is perceived as dark and scary. Several want better facilities for soccer and skateboard park near the school." (Ski kommune 2015a p.52)

This is a brief version of the results from Children's Tracks and its analysis, highlighting some of the perspectives appearing here and leaving out others (see the part in the analysis chapter summarizing results from Children's Tracks and the attachments). These perspectives appear as knowledge of children's use and perceptions of the area, drawn upon as part of the legitimization of the planning proposal. It is argued that the planning proposal will facilitate walking paths through the area, improving the conditions for school children and that there will be established open areas within the area, and areas for play that will be publicly accessible (Ski kommune 2015a p.52-53). It is also argued that it will be possible to maintain the play areas in the forest close to the school in the implementation of the plan. It is concluded that the development of the area in accordance with the plan will be positive for children compared to the current state of the area (Ski kommune 2015a p.53).

First political adoption/publishing of the planning proposal for public scrutiny:

The planning proposal was published for public scrutiny in the end of January 2015. (Ski kommune 2015c). During the time of public scrutiny, there were multiple concerns that were raised by multiple actors in comments concerning the planning proposal, some relating to order provisions and

technicalities in the provisions of the planning proposal, some related to considerations of cultural heritage, heights and adaptation of the development to the surrounding neighbourhood, green mobility, flooding risk et cetera (Ski kommune 2015c; 2015e). I will briefly describe some concerns that touch upon children's interests in the planning proposal and are relevant for this case study. These concerns were among the concerns raised by neighbours, a neighbourhood organization and the Finstad elementary school's parent council (Ski kommune 2015e). The school's parent council raised concerns about the outdoor areas/play areas of the school and the new school that the planning proposal proposes, questioning if the areas set aside for this in the planning proposal were sufficient (Ski kommune 2015e). To this, the municipality replied that they were (Ski kommune 2015e). A neighbor commented that the forest close to the school was an important play area for the children, and that it should be safeguarded in the plan (Ski kommune 2015e). Similar to these comments, a neighbourhood organization expressed concerns about the play areas for the school children and expressed that the forest should be secured in the plan (Ski kommune 2015e). The replies from the municipality to these comments were that the planning proposal did not necessarily secure that the forest would remain as it was but it would anyway secure play areas in the vicinity of the school (Ski kommune 2015e). They also point to the other qualities that the development of the area in accordance with the planning proposal would yield (Ski kommune 2015e).

Furthermore, the public scrutiny also resulted in notified objections to the planning proposal (Ski kommune 2015d; 2016b). The County Governor of Oslo and Akershus County Council both made objections concerning the provisions for car parking in the plan, which were followed up in the planning proposal, resulting in some adjustments (Ski kommune 2015d; 2016b; Bogsrud and Ulveseth 2015; Hedén and Lien 2015). Furthermore, the Norwegian Water Resources and Energy Directorate made an objection concerning flooding and drainage in the area concerning the Finstad creek, which was also followed up by adjustments to the planning proposal (Nordvi og Selvik 2015). The Directorate for Cultural Heritage made an objection concerning both the preservation of the cultural heritage milieu of Magasinleiren and the burial site within the planning area, arguing that they were not sufficiently preserved in the planning proposal (Mydland and Johansen 2015). This resulted in a temporary political adoption of the plan in June 2015, where some adjustments had been made to the plan on the subject of cultural heritage, though not sufficient for the objection to be resolved (Ski kommune 2015d; 2016b).

Furthermore, in the process of political adoption, there were made alterations and adaptations to the provisions in the plan by the local politicians. Of relevance to what is studied here, the local politicians added a provision to the plan stating that the forest close to the school was to be safeguarded (Ski kommune 2015d).

After negotiations between the Directorate for Cultural Heritage and the municipality the plan was adjusted to suit the concerns raised in the objection (Ski kommune 2016b). The plan was then politically adopted in February 2016 (Ski kommune 2016b).

Area zoning plan map:

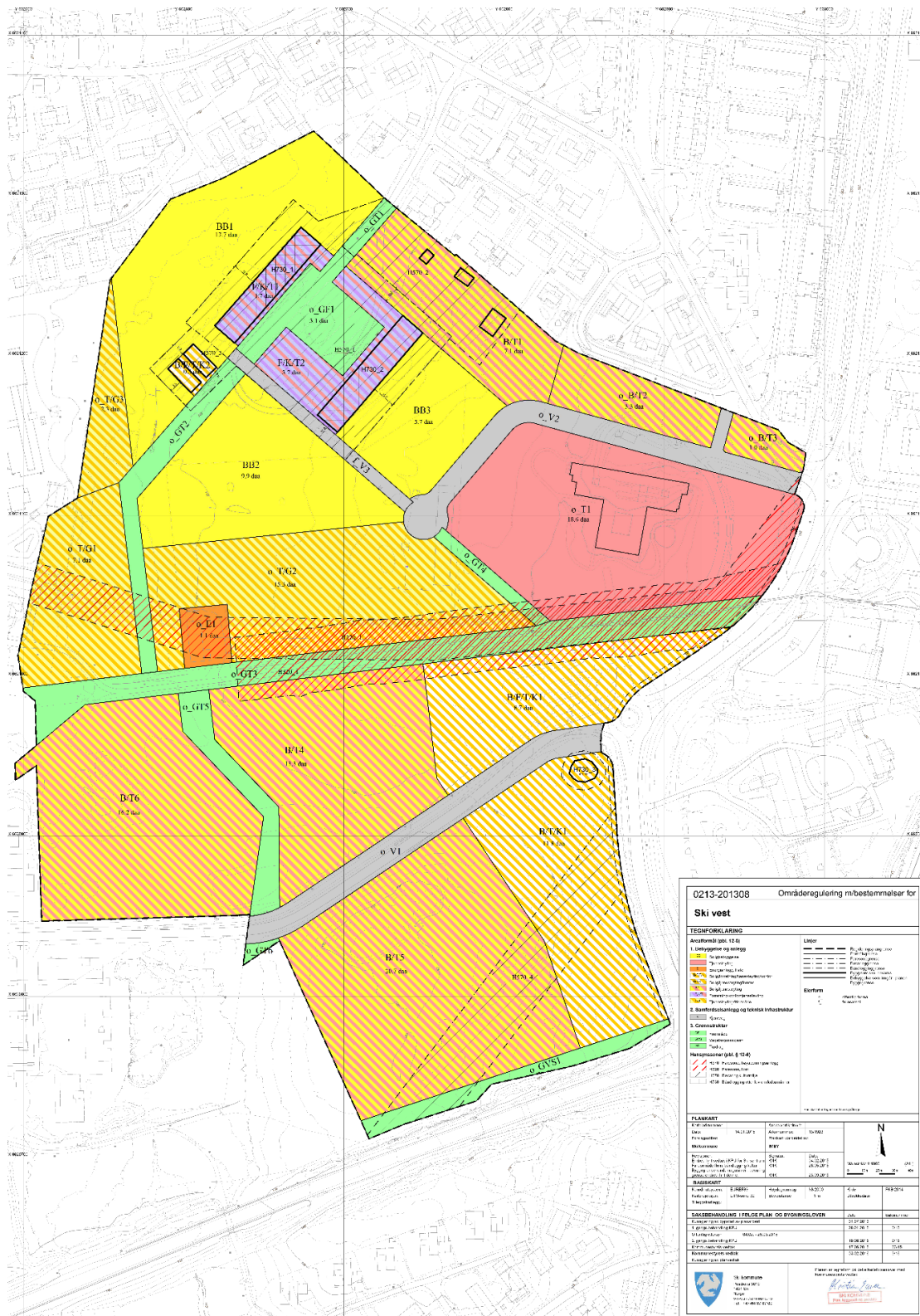


Figure 8. The area zoning plan for Ski Vest. Green shows green structure purposes, red shows service functions purposes, yellow shows housing purposes, grey shows road infrastructure purposes. Striped areas are combined purposes. Retrieved from Ski municipality (2016c).

How are the interests from the Children's Tracks registrations caretaken in the plan for the area?

In this section, there is a comparison between what expressed in the Children's Tracks registration of 2014 and what is decided in the area zoning plan and its provisions. As was shown through Children's Tracks and its analysis (as previously shown) it could seem like the Northern part of the planning area was the main area in use by the children taking part in the registration process. Though, the registration process at the Finstad elementary school *was* framed towards coming up with ideas for the area Magasinleiren and specifically some of the protected buildings here, which could have some impact on this, and there may be issues of spatial accuracy affecting the mapping. Still, one should see what is facilitated through the whole plan in terms of functions in order to see how these interests were caretaken. After reading through the planning documents and taking into consideration the Children's Tracks registration, it was found that the areas in the Northern part of the planning area were the most relevant to further look into. The other areas are not directly concerned with or facilitating considerations of the Children's Tracks registration of 2014, the functions that are allowed for here are more directed toward filling the needs following the future development and uses within these areas, as the author of the thesis sees it. Here the focus is therefore on the Northern part of the planning area.

Returning to the Children's Tracks data:

As highlighted, the perspectives appearing in the mapped material showed multiple and sometimes contrasting uses and perceptions. Summarising these perspectives, it can seem like many of the children taking part in the registration process express views that this area is scary, dark and with trash. Furthermore, the forest near the school seem to be important as a play area for many of these children, and there is a call for the facilitation of activities and meeting places in the development of the area (herein ice hockey, skate board park, swimming, soccer and ball game facilities, café and park is mentioned). In terms of mobility, the patterns expressed in the map was that the participating children cross the area east-west or opposite, through Magasinleiren, the existing roads in the area and North of Magasinleiren.

Considerations from Children's Tracks and their caretaking in the plan:

In the area zoning plan, the area of Magasinleiren is set aside for housing around the cultural heritage milieu, which is not further developed in the plan and preserved as a green pocket, in line with the protection rules and objection by the Directorate for Cultural Heritage. There is added zones

requiring special consideration in the plan, to preserve and safeguard the cultural heritage milieu, restricting the development within these areas and highlighting the protection rule by the Directorate for Cultural Heritage (Ski kommune 2016a). The protected buildings ‘vognhallene’ have the general provision of business, office and service (culture), and no details about the future use other than specifications about the buildings and the allowing of business, office and service (culture) in them (Ski kommune 2016a). The planning description however suggests that it can be used for cageball, theater, café et cetera, similar to some of the ideas of Children’s Tracks as well as ideas coming from the seminar on cultural heritage that was held during the planning process (Ski kommune 2015a; Ski kommune 2014c).



Figure 9. Showing the Northern part of the planning area, and the forest of the area today. The large building left of the forest is the Finstad school. The cultural heritage milieu sits in the middle of the photo, where it is written ‘Ski magasinleir’. Image retrieved from Google (2018) ©.

Furthermore, a development according to the area zoning plan means that the forest, which stretches from the school and behind the cultural heritage milieu, will be significantly reduced in size when the area is developed. The mapped registrations were concentrated in the area of the forest close to the school but the questions of spatial accuracy (Freeman and Vass 2010) mean that it is unclear whether or not the children only use a part of the forest or if they use all of it. The area zoning plan included a provision for the areas T/G1, T/G2 and T/G3 (see the map of the plan previously shown) which encapsulate the forest as well as the area near the creek (Ski kommune 2015a; Ski kommune 2014c). These areas are almost 25 acres in total and stretch beyond the forest,

and they are zoned for open (green) areas and for service functions ((Ski kommune 2015a; Ski kommune 2014c). The provisions in the plan state that minimum 7 acres should be kept as an open space, which is less than a third of the whole area T/G1 T/G2 and T/G3, and furthermore allows some development of functions within this, for sports facilities, which is in line with some of the wishes expressed in the Children's Tracks registration. Within this area it is allowed for a new school as well as a kindergarten (Ski kommune 2015a; Ski kommune 2014c). Furthermore, as was described, the politicians added a provision to the plan stating that the forest should be secured (Ski kommune 2015d). Yet it is unclear if this means that the whole forest in these areas should be preserved or if it means that a part of it should be preserved, as a large part of what is actually the forest is set aside for housing in the plan. In connection to the areas T/G1, T/G2 and T/G3, there is some additional green structure, securing a passage between the cultural heritage milieu and these areas, as well as following the Finstad creek. The path through Magasinleiren and towards the school is here secured through the plan, along with the one near the Finstad creek.

Combining the caretaking and influence of Children's Tracks in the plan:

What has been shown is that many of the interests expressed in the Children's Tracks registration of 2014, expressing uses of the area and wishes for activities and meeting places are generally caretaken in the plan. Either by coincidence, or also some influence even though Children's Tracks came in at a late stage in the process. Both in terms of the mobility patterns and what the plan allows for in terms of the zoning and future development. Still, the forest, which through the mapping seemed to be important for the participants, is significantly reduced, yet still to some degree safeguarded in the plan. The area zoning plan gives a broad framework for the development of the area, though, and the caretaking of these interests is not fully decided before the detailed zoning plan processes following this plan. In terms of the open areas of T/G3, T/G1 and T/G2, the actors have expressed that the degree of preservation of open areas and the forest would in the end be contingent on the municipality as they are the landowners here, and through the area zoning plan these decisions are placed in the future detailed zoning plan for the area (Ski kommune 2015a).

Seen in light of what was expressed by the actors on the subject of the influence of Children's Tracks, and what is expressed in the document preparing the plan for political adoption, the influence of Children's Tracks would have been limited, even though the plan caters to much of what was expressed here. When looking at the descriptions in the document which state the future development in the area, there is furthermore no direct mention of Children's Tracks, which supports

this view, though, it may indirectly have influenced the ideas for the use of these areas, in line with what was expressed by the Planner A.

It was generally expressed by the actors interviewed for this study that the interests of children (as represented through Children's Tracks) were caretaken in the plan to some degree or to quite a substantial degree. It must furthermore be seen in connection to the other concerns of the plan. As shown in the documents of the planning process, there were many considerations that were part of the planning of the area, some more dominant than others. In relation to this, informants of the study point to provisions and guidelines that promote densification as central to the planning of the area, where other interests had to be compromised due to this. It was expressed that a densification agenda, already present in existing guidelines and provisions important to the planning of the area, was promoted by the group of developers taking part in the planning of the area (Interview with the Developer; interview with Planner A). This is also supported by what was expressed in the report laying out future use and development of the area, and what was expressed by the Developer themselves (In'by et al 2014).

In the experience of the Planner A, the promotion of the densification agenda meant that it became a question of *either* preserving the forest that was one of the qualities of the children who took part in the mapping exercise *or* preserving the cultural heritage area of Magasinleiren that was important for the Directorate for Cultural Heritage.

In their perspective:

“... It's kind of, in a process like this it is a bit like 'give and take', and the real estate developers were not at all interested in preserving Magasinleiren in accordance with the provisions of the Directorate for Cultural Heritage, and they were not at all interested in preserving the green field the children have around there, the forest kind of, in the 'hundremeterskogen' [forest close to the elementary school], so we just had to, it's kind of 'the survival of the fittest'. And then it is either preserving the forest *or* preserving Magasinleiren, and then enters a powerful institution like the Directorate for Cultural Heritage who say that: “no, what is most important here is to preserve Magasinleiren, the forest can be planted again, and you should try to preserve in another way”, and so this was what we managed to do.”

Also, the aspect of time constraint was brought up by the Planner A, who highlights the lack of time and resources as a central aspect for explaining how Children's Tracks was incorporated in the planning, stating that these were needed in order to achieve a better maturity process of the participation.

As expressed by the Planner A:

“... the big mistake was that all the area zoning plans and the municipal partial masterplan were being processed at the same time, and we had so much pressure to process them at the same time ... I think that if we had seen Ski Vest and Ski centre [area zoning plan process for the centre of the urban core that was going on at the same time] more in connection, and we had managed to have more planners from the municipality to work on the plans, who could also take part in assessing the process of implementing Children’s Tracks in the plans, then I think we had, I don’t know if we had ended up with a different plan, but we would at least have had a much better maturity process, and that’s kind of the whole point with participation, that it should be a process of maturity.”

Furthermore, though Children’s Tracks may have had some influence in the development of the area of Magasinleiren through the zoning plan process, to which the actors disagreed, in the end this influence or coincidental ideas (depending on whose perspective one departs from) in the planning process, may not really be manifested in the actual development of the area, in terms of the future use of the protected buildings, as this was described in the plan yet not sufficiently secured through the provisions, laying out the legal framework for the development. The Developer expressed that they had generally been positive to the ideas presented through Children’s Tracks for the protected buildings, but that other actors had proposed different ideas for the future use of these buildings, which meant that the children’s ideas might not be used after all.

In their words:

«... we are projecting the park [of the area zoning plan] and then there will be walking paths to the school that we will make, so that one can go, and then they will have lighting, and then there were many wishes for what we were going to do with the protected buildings [of Magasinleiren], to which we have actually been very positive the whole time, but now that we are getting close, because this doesn’t really have anything to do with the detailed zoning plan, it’s kind of a sidetrack, we don’t have to put the use of the protected buildings in the zoning plan, and then it might not be what the children want, because now it’s, we are discussing with the municipality and the department for culture and it is, it might be a museum ...»

They furthermore expressed that the differing agendas of the actors within the municipality meant that it was a struggle in the planning process between differing interests and concerns. In this struggle, children’s interests do not necessarily win:

“... There are those in the municipality who are responsible for Children’s Tracks, or who kind of have children’s interests on the agenda, they are very much engaged in the subject, and they are very, often very strong personalities who make strong demands, and then they meet the department of culture who are concerned with culture, or the department of business who are concerned with the business development in Ski, and then the question is which of them kind of ‘win’ in these discussions within the municipality that we become part of. There is no guarantee that children’s interests always win. There are many facets or many [interests].”

It was furthermore expressed by the Developer that the decision of the future use of Magasinleiren and the protected buildings, ended up being in the hands of the cultural heritage authorities:

“... it is kind of up to the Directorate for Cultural Heritage, so when we mentioned the words ‘indoors ice skating rink’ [one of the ideas from or coinciding with Children’s Tracks] they said that it was not going to happen, and then the Directorate for Cultural Heritage made that decision. They have the power to make an objection to the plan so then we are not spending any more effort on that question, then we try to find something else.”

Analytical perspectives: influence of other interests at the expense of children’s perspectives represented through Children’s Tracks:

What is shown here is not only the multiple and competing interests of the planning of the area, but the asymmetrical power relations between agendas and actors, affecting actors’ means of influencing the planning of the area. For one, the densification agenda, promoted through guidelines and provisions that were there prior to the planning process and by actors involved in the process, was powerful at the expense of other interests – some of the children’s interest as expressed through Children’s Tracks. This is similar to the findings in the case study of Hanssen and Saglie (2010). Furthermore, the Directorate for Cultural Heritage had the power to make objections to the plan, which they did – resulting in alterations to the plan and the even stronger prioritization of these interests in the final plan, while on the other hand the children taking part in Children’s Tracks were relying on ‘the discretion of the planners’ (Babelon 2015 p.77) and other actors involved in the planning process and their willingness to promote and prioritize what was co-produced through Children’s Tracks in the negotiations of the planning process. Here the interviewees point to the differing actors of the process whose perspectives and priorities were not the same. This furthermore became visible in the development of ideas for the protected buildings ‘vognhallene’. Yet again, the concerns of cultural heritage preservation were more powerful than the concerns of the participating children’s interests, as represented through Children’s Tracks. Though there are many concerns that are similar to the perspectives of the Children’s Tracks registration that were caretaken in the plan for the area, it was problematic in terms of participation, as the participation had been specifically directed towards Magasinleiren and these protected buildings, encouraging the children to come up with ideas and influence the development of this area. These ideas were disregarded in the end.

The planning process of the detailed zoning plan of Magasinleiren

The planning process of the detailed zoning plan was formally commenced in 2015, during the time of the planning process of the area zoning plan. Still, the commencement meeting of the planning process was held quite some time after, in April 2016, suggesting that the process of the detailed zoning plan actually began at that time (Ski kommune 2017d). The detailed zoning plan process of Magasinleiren was the first to follow the area zoning plan for the development of the area, building on what had already been decided in the area zoning plan.



Figure 10. Showing the planning area of the detailed zoning plan. Illustration retrieved from Ski kommune (2017d p.4).

The Planner B, who held the administrative procedure of the planning process, expressed that the discussions in this planning process were mainly concerned with the safeguarding of cultural heritage concerns, the shape and placement of buildings for housing, outdoor and play areas, the shape and placement of a kindergarten within the area and parking (e-mail correspondence with the Planner B). There were also discussions on order provisions of the plan (e-mail correspondence with the Planner B). These aspects also appear in the documents preparing the plan for political adoption (Ski kommune 2017d; Ski kommune 2017f; Ski kommune 2017g).

Children's Tracks registration and the detailed zoning plan process of Magasinleiren:

In the detailed zoning planning process of Magasinleiren, there was another Children's Tracks registration process conducted at the Finstad elementary school bordering the planning area, in which the informants the Developer, the Planner B and the Children's Tracks organizer took part. It was held in January 2017, a little more than half a year after the planning process of the detailed zoning plan can be seen to have begun (Ski kommune 2017d).

The Children's Tracks registration process was conducted in the same collaborative manner as described earlier. However, it was followed by a workshop with the same children on the same day, involving the same planning actors (Interview with the Children's Tracks organizer and the Planner B). This way of organizing and conducting the participatory process was new to the municipality, both in terms of involving the developer company in the registration process and the addition of a workshop to the registration day (Interview with the Children's Tracks organizer and the planner B).

Furthermore, as explained by the Children's Tracks organizer:

“... the purpose of bringing along the developers [to the registration and workshop day] ... was that they got a firsthand dialogue with the children.”

In the perspective of the Developer, the registration process and workshop were conducted early in the planning process (Interview with the Developer). Still, the planning process of the detailed zoning plan must be seen in relation to the area zoning plan, which in the perspectives of both Planner B and the Developer was the primary process for deciding the land use in the zoning of also Magasinleiren (Interview with Children's Tracks organizer and Planner B; Interview with the Developer). Thus, the issue of a kind of path dependency in the planning process (Innes and Booher 2004; Hanssen 2015; Hanssen and Falleth 2014), occurred again limiting what was (realistically) the space for children's participation to impact the planning through these processes.

As expressed by the Developer:

«... it was actually quite early in the planning process, long before the first adoption of the planning proposal, so we were doing, it was in the phase of dialogue with the municipality, but at the same time the phase of dialogue was based on the project of the area zoning plan which was kind of completely the same, so for our part it wasn't, we kind of had our input ready ...»

Actors in the municipality took the initiative to conduct this registration process, as they saw a need for this in order to better secure the interests of the children at the elementary school bordering the planning area in the detailed zoning plan. As implied in the interview, this had in their view not been sufficiently secured in the area zoning plan. The Children's Tracks organizer describes how the green

area that was zoned in the municipal masterplan had been changed in the area zoning plan process. In the plans, the green areas within the planning area have been reduced and the structure has been changed since the zoning in the municipal masterplan of 2011 (Ski kommune 2011; Ski kommune 2016a).

As the Children's Tracks organizer expresses:

«... it was on purpose, because we saw that the Children's Tracks registration of November 2014 came when the plan had already progressed to a late stage in the process, and then we looked at the land use provisions in the municipal masterplan ... we realized that there had been changes that in a way one could think would have been different if the Children's Tracks registration had been conducted at an earlier stage, in terms of green structure, and then we said that it was important to also conduct a Children's Tracks registration in relation to the detailed zoning plan process! ... what we did as a new thing at this school, because it is placed next to the area, we believe that it strongly affects the children, the detailed zoning plan, and so far the whole area, but especially the detailed zoning plan that borders the forest behind the school, a forest toward the East that we sometimes have called 'hundremeterskogen', and where we from the municipality believed that it was important to involve the children again at this point. Then we had the idea to involve the developers [in the registration process], which we had never done before, and to conduct Children's Tracks in combination with a workshop ...»

What is expressed by the Children's Tracks organizer could imply that there was a struggle between different interests in the municipality or between the actors involved in the planning process of the influence of different concerns and interests in the area zoning plan, where a fraction which includes the Children's Tracks organizer promotes the agenda of the local children's interests and/or preservation of green structure. It can seem like the detailed zoning plan process and herein the Children's Tracks registration and workshop day acted as an arena to bring these issues back on the negotiation table, so to speak, by means of enabling a direct dialogue between the children and the planning actors.

Furthermore, as expressed by the Children's Tracks organizer, there was both a Children's Tracks registration process and a workshop in the same day. The reason was that they saw a need to ensure more dialogue than what was enabled through the Children's Tracks registration process.

In the words of the Children's Tracks organizer:

«... we see some weaknesses with the Children's Tracks registration process, especially perhaps the opportunity for dialogue with the children, so we split, first they [the children] did the mapping exercise where the planners and developers were present, but then it is not so available, at least in my experience they [the children] are not so available, to talk to the children when they are mapping ...»

I will briefly address the workshop which was conducted afterwards. The workshop did not utilize the information from the registration process of Children's Tracks, rather it must be seen as a separate process, though the Children's Tracks registration process could have acted as a kind of preparation process for the children before the workshop. The workshop was added to the program to enable a more direct dialogue between the children and the planning actors, and during the workshop there were group discussions where planning actors took part.

As described by the Children's Tracks organizer:

«... it was groups of four to six where there were either executive officers or planners at all the tables, it had a much more, with different tasks and then it was a dialogue, between children and adults. »

Yet there is the question of the quality of the dialogue through this. When talking about the workshop, the Planner B expresses that much of what was expressed by the children was, in their view, not relevant and difficult to accommodate in planning.

Planner B talking about the workshop:

«... that round we had in January, I think that information partially was quite ... and then everything was not equally relevant, that's also quite important, so it is, it was very interesting in January that when you ask them what they care about, they mention everything between heaven and earth! Including those things we can't really affect in planning. One wanted an automatic soda machine in the school, so stuff that has nothing to do with planning, that's perhaps also about the method ...»

What is portrayed here shows that it may be challenging to enable an open dialogue between the children and the planning actors directly, where tools and methodologies such as Children's Tracks may act as the kind of filter translating the children's perspectives into a more planner friendly format, in line with perspectives of previous research (see Kahila and Kyttä 2009; Aune et al 2015), though as shown in the first part of the analysis this translation can in many ways be problematic.

The Children's Tracks organizer presents the workshop somewhat differently to the Planner B, focusing on how the dialogue in the workshop in their perspective enabled a further exploration of the perspectives of the children, than what was enabled through Children's Tracks. It was expressed that the workshop had some of the same information as the Children's Tracks registration, but in addition it allowed for follow up questions which are not enabled to the same degree in the Children's Tracks process.

In the words of the Children's Tracks organizer:

“... it was my experience that, it is some of the same [perspectives] that appear, but you can, typically, we had the opportunity to ask i.e. when you are in the woods, or where ... those details where you have an opportunity to ask: “yes, OK park, what do you mean by this?” ... more specifically what they want to do when they are there, and so forth.”

The Developer also expressed that they saw a value in the dialogue through the workshop. As in the area zoning plan process, the Children’s Tracks registration and workshop day was the participatory measure representing children of all ages in the planning process (Interview with the Children’s Tracks Organizer and the Planner B; Interview with the Developer).

What happened with the ‘output’ afterwards – how was it incorporated in the planning process:

Due to time constraints in the schedule of the Children’s Tracks organizer, not much happened with the material from the registration process in which the Developer and Planner B took part, until it was added to the municipal mapping service quite long after. The information or analysis of it was furthermore not requested by the planning actors (Interview with the Children’s Tracks organizer and the Planner B), which can be seen in relation to where they were in terms of formulating the plan for the area.

As expressed by the Developer:

«... we just went straight to the commencement of work on the plan, because the project had been drawn, and then we have kind of worked, so what we discussed afterwards has been more like: “should it be a distance of 7 meters or 8 meters, and should, where should the water go, it hasn’t really been any, and the height is set, there hasn’t been a discussion on heights, adapting the heights, it has just been a discussion on playgrounds and which hours the outside areas will have sun and the percentage, because these things were not properly decided in the area zoning plan.” »

Still, the Developer expressed that the results from Children’s Tracks were discussed during the detailed zoning plan process, yet it is unclear to which degree it was made a theme here (e-mail correspondence with the Developer).

In the planning description document, preparing and legitimizing the detailed zoning plan for political adoption, Children’s Tracks is included under the theme ‘children and young people’ in the same manner as in the planning description of the area zoning plan, under a section describing consequences of the plan in relation to various themes (Ski kommune 2015a; Ski kommune 2017d).

Both of the registrations at the school bordering the planning area are mentioned here. Furthermore, the following is stated about the results from these registration processes:

“What the two registrations have in common are that they show that the Finstad forest [forest close to the school in the area] is important to the children at the school. Many have their school road through Magasinleiren and this area is perceived as both dark and scary. The area is not much used for play for the children in the neighbourhood.” (Ski kommune 2017d p.36)

It is furthermore argued that the planning proposal will secure walking paths through the area and a cycling path along the creek which will contribute to safe school roads for the children. It is also argued that the plan will yield safe open and play areas that will be publicly accessible (Ski kommune 2017d). As in the planning description for the area zoning plan (Ski kommune 2017d), some perspectives from Children’s Tracks is used as a kind of knowledge of children’s place-based uses and experiences, and herein interests, in the area, drawn upon in the planning description. Here it can also be seen as part of the legitimization of the planning proposal, where the arguments for the proposal are connected to perspectives of children’s place-based uses and experiences of the area translated through Children’s Tracks. There is no mention of the workshop following the Children’s Tracks registration process (Ski kommune 2017d; Ski kommune 2017f; Ski kommune 2017g).

In the perspectives of the planning actors, what was accomplished by the Children’s Tracks registration process in relation to the detailed zoning planning:

However, when asked about whether they had used information from the Children’s Tracks registration in the detailed zoning plan process, the Planner B replied that they had not. This was explained in relation to the area zoning plan, where the Planner B expresses that there was not much room for changes from the area zoning plan to the detailed zoning plan, as the first of the plans had laid out land use provisions with a high level of detail.

As expressed here:

“... the area zoning plan had given quite the detailed provisions, for that area ... I feel that in the detailed zoning plan we are working on now it is, it isn’t really possible to, to take new Children’s Tracks registrations into consideration, and they [the developing company] really just proposed the same things as in the area zoning plan ...”

What was expressed by the Planner B was supported by what was expressed by the Developer. In the perspective of the Developer, the level of detail in the first plan made it unnecessary to conduct the additional detailed zoning plan process for the area of Magasinleiren.

In the perspective of the Developer:

“... the area zoning plan for parts of Ski Vest, at least for our property, the first areas, they are really so detailed [in the plan] that I think it wasn't really necessary to have the detailed zoning plan, because we had already put so much work into it [prior to the detailed zoning plan process].”

The level of detail in the area zoning plan can be seen in relation to the practice of the development company.

As expressed by the Developer:

«we always make very detailed area zoning plans or detailed zoning plans, we have kind of drawn the project the way we want it, and then that is regulated in the zoning plan ...»

They further express that the project that was proposed through the planning proposal for the detailed zoning plan had not changed much since the area zoning plan.

«... the project that is part of the detailed zoning plan process we are conducting is pretty much an exact copy of the area zoning plan.»

Political adoption of the planning proposal, and characteristics of the proposal:

The plan was first politically adopted in June 2017 and then finally adopted in November 2017. There were some comments made during the public hearing and scrutiny of the planning process, few of which touch into subjects of Children's Tracks or directly children's interests in the development resulting from the plan (Ski kommune 2017f; 2017g)

The planning proposal is a follow-up of the area zoning plan, zoning the Northern/Northwestern part of the area more detailed for housing – placing the buildings, and facilitating a kindergarten in the area east of the cultural heritage milieu. Some areas are kept open and publicly accessible – the passage through Magasinleiren is safeguarded and the open area between the protected buildings, the latter being left out of the detailed zoning plan (Ski kommune 2017d). The areas set aside for play areas in the land lot of the kindergarten is also safeguarded as publicly accessible (Ski kommune 2017d).



Figure 11. Showing an illustration of a part of the future development in accordance with the detailed zoning plan. Illustration retrieved from Ski kommune (2017f p. 4).

As shown in the illustration above of the project of the detailed zoning plan, the part of the forest crossing into the planning area is not kept in the future development of the area, if done according to the potential of the detailed zoning plan. The subject of this forest and children's interests was touched upon by the Planner B.

As expressed by the Planner B:

«... on the North side [in the planning area of the detailed zoning plan] it was more, what is really most relevant to children was the forest, but this is maintained, to some degree ... it will be somewhat smaller with the development, but then we will most likely protect the [remaining] areas [of the forest], and so to what degree the forest is protected depends on the municipality, and it does have a quality, and other than this you remove the forest North of the protected buildings in Magasinleiren, in connection to the construction of buildings for housing, you just have to accept it.»

Analytical perspectives: path dependency affecting the role of Children's Tracks, and the participation and influence of Children's Tracks:

What is shown through the expressions of the Developer and the Planner B, is a high level of path dependency in the zoning planning of the area. In the document describing the planning proposal before the final political adoption with comments from the administration, similar ideas are expressed (Ski kommune 2017g). It is referred to the allowed square meters for development and

the building restrictions around the cultural heritage milieu, both cemented in the area zoning plan. It is expressed that because of this there is realistically few possible alternatives for the plan and development of the area (Ski kommune 2017g). In terms of the provisions from the area zoning plan it is worth mentioning that the area zoning plan allowed for a certain amount of square meters for development in these areas, but this does not mean that the detailed zoning plan and future development had to accommodate all of this in the detailed zoning plan and development of the area. In terms of participation, the path dependency (framed by the land use provisions for the area in the previous plan and quite possibly in the mentality of central actors conducting the planning), meant that there was not much room for changes to be made at this stage in the process. The Children's Tracks registration process of 2017 of which they took part, therefore realistically had little opportunity to influence the decision-making of the detailed zoning plan process, even though it came in early in the detailed zoning plan process.

What was furthermore shown is that the participation facilitated through the second Children's Tracks was not used at all as part of the decision-making in the detailed zoning plan process, which is problematic, potentially building distrust rather than democratic awareness among the participants. The workshop occurring the same day was furthermore not mentioned. It is as mentioned explained by structural causes and path dependency (Hanssen and Falleth 2014) – the planning and decision-making in the detailed zoning plan had, in the views of the actors, already been framed in a strict manner by the prior decisions of the area zoning plan, and furthermore the developing actor proposed the same things as in the previous planning process. A perspective that can be added to this is that it was not only about how these decisions were framed, but as can be found in the area zoning plan process, the asymmetrical power relations between different actors where children are relying on the planning actors to promote and safeguard their interests. Children's interests and/or concerns of green structure in the plan and future development of the area were promoted and sought renegotiated through Children's Tracks by actors in the municipality. Yet this did not impact the planning of the area, in the struggle between multiple and competing interests and concerns. Among the concerns, those of density and cultural heritage were, as in the area zoning plan powerful, at the expense of parts of the forest and current green structure. Still, the plan accommodates qualities that were secured in the area zoning plan, coinciding with or influenced by some of the interests of the first Children's Tracks.

As in the planning description of the area zoning plan, Children's Tracks was still incorporated in the planning description, which was preparing the plan for political adoption and providing professional legitimization of the proposal, even though it had not been used in the decision-making. It acted as a kind of knowledge of local children's place-based uses and perspectives of the area that can be seen

as a part, albeit limited, of the legitimization of the planning proposal. Though it is pertinent to mention that here it was also referred to the first Children's Tracks registration, which was used or coinciding in the area zoning plan laying out provisions for the detailed zoning plan. Still, with regards to the area zoning plan and how the Children's Tracks process was conducted and used in the plan, this is also somewhat problematic in terms of participation.

SUMMARIZING DISCUSSION AND CONCLUSION

In this chapter, the research questions of the thesis are revisited. In order to give an assessment of the findings in the thesis, some repetition is necessary. The chapter begins by revisiting aspects that were found in the analysis, in connection to the research questions. It then moves on to the implications of the findings.

The two research questions for the thesis were the following:

- How does the municipality organize and conduct Children's Tracks, and what are implications that the tool and methodology can have in terms of the participation and of the co-production and translation of the children's perspectives?
- How were children involved in the zoning planning of Ski Vest through Children's Tracks, and how did the children's perspectives from Children's Tracks influence the plans?

As these questions are somewhat interconnected, they are treated as such here. In the analysis, it was demonstrated how the tool and methodology of Children's Tracks (as it was practiced in the case municipality), could have implications both in terms of the participation facilitated through this, and in terms of how perspectives from children taking part in Children's Tracks were being co-produced as knowledge of children's place-based uses and experiences. As it was argued in the theory section, these two aspects should be seen as somewhat interconnected. What happens in the co-production and translation of children's perspectives may inherently have some effect on the participation afforded through the use of such a tool.

In terms of the co-production and translation of children's perspectives, it was found that Children's Tracks provided output that was mixed – sometimes it was easy to comprehend and incorporate into a planning context, but it could also be quite difficult to comprehend, lacking details and providing comments that were difficult to interpret. Spatial accuracy in the mapping was also touched upon, and it was shown that this could sometimes be problematic in terms of the use of these maps for participation and as a knowledge base, though others have argued otherwise. It was also shown that the process of handling the output could be challenging, inevitably leaving out some perspectives that could be important to those who mapped them. It was found a weakness in that the tool and methodology does not really provide the opportunity to ask follow-up questions to clarify what the participants meant to map, having limited opportunities for dialogue. In terms of participation, it would mean that the perspectives of the children taking part in Children's Tracks, already going

through some kind of selection (through the framing of the tool and methodology), may sometimes be distorted.

Furthermore, and in line with previous studies, it was demonstrated that those who co-produce a kind of knowledge of children's place-based uses and experiences through the whole process of Children's Tracks – from the registration process to an analysis of the data for use in planning, were central for the translation process, having power over the process (see Aune et al 2015). It confirmed that they needed to have the resources, attitudes and competencies that would favour the children and their perspectives through this process.

Altogether, these findings demonstrate that, in terms of spatial accuracy and representation of the children's perspectives, there are inherent challenges with using the mapping exercise and what comes out of this as a means of accessing children's place-based uses and experiences, which would as well affect the participation of children. Children's perspectives have to be translated in a way that favours them and ensures that as little as possible is lost in translation if they are to have a possibility of gaining influence and taking on a meaningful role in the decision-making of the planning process. It can seem like the tool and methodology in the case does not necessarily ensure that such challenges are bridged, though this could have been investigated further. It could also be seen in comparison to other means of accessing children's place-based uses and experiences and applying them to a planning context, which would inherently involve some form of translation as well. As a side note to this context, it was shown in the second Children's Tracks where it was also organized a workshop involving direct dialogue between children and planning actors, that the kind of direct dialogue facilitated through this could be experienced as challenging, not necessarily enabling a bridging between the planner and the children, as shown through what was expressed by one of the planning actors. Here, the framing through Children's Tracks and the analyses of the output may act as a bridge between the children and the planners, albeit allowing access to a translation of these perspectives that may involve distortion and selection of perspectives to some degree.

Implications: the participation afforded through the Children's Tracks tool and methodology:

In terms of participation, it was shown in the first section that that the tool provided quite fixed categories, framing what is mapped by the children – and the knowledge co-produced through this as well as the participation afforded through the use of the tool. It must be seen in relation to the methodology of Children's Tracks practiced in the case municipality. The (in most cases cooperative) methodology in the case municipality gave the participating children some preparation in advance of the actual mapping exercise. On the one hand, the preparation could enable the children to engage

in matters of the decision-making processes and inform them of what they were taking part in and how their contribution would be used. On the other hand, it was shown that this would inevitably frame the participation and what is mapped through Children's Tracks in some manner. The ideal of authentic dialogue was not realized through this.

The participation facilitated through Children's Tracks in the zoning planning of Ski Vest, seen in light of perspectives of the tool itself and the methodology of the case municipality:

As was shown in the theory section, in Hart's ladder of children's participation, there are basic requirements that have to be met for this to be seen as actual participation rather than non-participation. The requirements are that the children understand the intentions of the project, they know who made the decisions concerning their involvement and why, they have a meaningful role in the decision-making process, and they volunteer for the project after it was made clear to them. What is implied in Hart's ladder and furthermore in the other theoretical contributions, as previously highlighted, is the importance of the context to which the participation is applied. To assess the kind of participation afforded through Children's Tracks it is not only necessary to look into the tool and methodology, but also the application of Children's Tracks in the specific contexts of the planning processes, as was done through the analysis.

A central aspect to participation according to Hart is that the children must know what they are part of and how their contribution will be used. As was expressed by the Children's Tracks organizer in the first part of the analysis, it could seem like some children did not understand the meaning of Children's Tracks (Interview with the Children's Tracks organizer and the Planner B). Not only could this be a factor influencing what is mapped through the tool, in terms of participation it is problematic if the children do not understand what they are contributing to and how their contribution will be used. In Hart's ladder of participation (1992) this would place the participation process on the steps *manipulation* or *decoration*, which describes situations where children are intentionally or unintentionally misused by adults to legitimize a process or outcome. It could imply that the cooperative preparation processes are not sufficient for ensuring that the children understand what they are part of, how their contribution is used. Still, not enough is known of this in this study to draw a conclusion on this aspect. It should be further investigated by other studies, observing Children's Tracks and interviewing participants.

Additionally, the description of the methodology of Children's Tracks as it is conducted in the case municipality show that the children have little say in the structuring of the participation process through the tool and methodology. The children are not part of the organization of the process.

Though the methodology allows for some flexibility in the structuring of the participation process, the tool of Children's Tracks very much frames the participation, towards mapping certain activities, uses and perceptions. The children may be allowed to participate, but the terms are set in advance through the tool and furthermore the adults facilitating the process and handling the output and its use in decision-making later on. It also showed that they realistically had little say in their own participation, when the mapping exercise is conducted through the schools, and the children are not actively volunteering for participation.

From all of this it is shown that the tool and methodology of the case municipality would place limits to the kind of participation afforded through the use and conduct of Children's Tracks, furthermore placing power over the co-production and participation happening through the use of Children's Tracks in the hands of adult planning actors. It acts as a confirmation of what has been found in other studies of PPGIS tools.

The registration process of Children's Tracks covered here, for the area zoning plan process, showed the way the methodology was applied in practice in the context of Ski Vest. It showed that the children's participation came in at a late stage and was framed towards certain aspects and a certain area of the plan. Much of what appears in the plan seems to have been decided prior to Children's Tracks. In terms of influence, it was shown that the perspectives from Children's Tracks had been somewhat safeguarded in the plan, but it is not entirely clear from the available data material whether this was through coincidence and/or some influence. It appears as the perspectives were treated seriously in the process, being incorporated in the planning description. Still, it is not directly known how the children perceived this process, which places strains on what can be drawn from this in this thesis, in terms of what kind of participation was facilitated through this Children's Tracks. Given that the perspectives were somewhat influential to the process, it may seem like some level of participation, according to Harts understanding of the term, may have been afforded through the process. Still, it may be seen as a kind of selection where some interests represented through Children's Tracks are secured in the plan, while other interests are not secured or secured to a lesser degree, if they are in conflict with other, more powerful interests. When Children's Tracks is used as part of the legitimization of the planning proposal, this poses challenges in terms of participation.

In the detailed zoning plan process, the Children's Tracks registration was followed up by a workshop which acted as a separate participation process. These participation processes were not studied in the same manner as the first registration process. Still, what is shown through the analysis of the planning process and the interviews by central actors highlight the role of this process and gives the needed clarity in terms of understanding what kind of participation was (not) facilitated through this.

The input from Children's Tracks was not used in the detailed zoning plan process, meaning that the children taking part in the second Children's Tracks did not have a meaningful role in the process. Rather it can be seen as the kind of process Hart criticizes. It was set up as a participation process but in the end, it did not contribute to anything in terms of the decision-making process. It did not really have a means to influence the decisions, as central actors perceived it so that most of the decisions had been made in the previous process. Given the role of the output in the decision-making, the Children's Tracks process in the detailed zoning plan falls somewhere between decoration and tokenism on Hart's ladder of children's participation, a kind of non-participation. What is shown is the importance and dependency of the context to which Children's Tracks is applied. It further highlights the asymmetrical power relationship and the reliance of the children on adult planners to promote and prioritize their interests in such processes. As have been argued by others (see theory section), the latter is a question about planning actors' attitudes and culture. Further research should look into how children's interests and participation may be strengthened in the planning culture. It may very well be that tools such as Children's Tracks may have such an effect, as has been presented in the preliminary study (Aune et al 2015), though this was not sufficiently investigated in this study to make an argument of this.

Furthermore, it can be argued that a strength to Children's Tracks is the potential to reach many children, though within a limited age range. In terms of participation and representativeness there is a need to also engage children in other age groups, that are not part of the Children's Tracks target groups, rather than using the knowledge produced through Children's Tracks as representative of 'children's interests' in a planning process (see also Aune et al 2015). Seen together with the challenges of the co-production and translation of children's perspectives through Children's Tracks and the participation afforded through the tool and methodology, there is a danger that Children's Tracks is used as a singular participatory measure for ensuring children's participation and children's perspectives in planning (Aune et al 2015), which is problematic in terms of representativeness and in terms of ensuring sufficient participation. In both of the planning processes, Children's Tracks came to represent the interests of all children of all ages. Though there may be advice and intentions that would suggest a more proper use of such tools given by its creators, this may not be followed up in the real life situations of planning.

Altogether, the findings show that such a tool does not change existing asymmetrical power balances in planning, the children still relying on the actors' prioritization of their interests and perspectives in the mix of other interests and paramount discourses or concerns that shape the planning, both in terms of applying Children's Tracks in the decisions of the planning process and co-producing and translating children's perspectives through Children's Tracks. When such tools are used in a planning

context one must be aware of the challenges they pose and the context to which the participation should be applied.

BIBLIOGRAPHY

- Akershus fylkeskommune & Oslo kommune. (2015). *Regional plan for areal og transport i Oslo og Akershus*. Available at: <http://www.akershus.no/ansvarsomrader/samferdsel/samferdselsplanlegging/regional-plan-for-areal-og-transport-i-oslo-og-akershus/> (accessed: 28.08.17).
- Aarsæther, N. (2012). Planlegging som handlingstype. In Aarsæther, N., Falleth, E., Nyseth, T. & Kristiansen, K. (eds), *Utfordringer for Norsk Planlegging. Kunnskap, Bærekraft, Demokrati*, pp. 26-48. Kristiansand: Høyskoleforlaget AS.
- Alexander, E. (2008). The role of knowledge in planning. *Planning Theory*, 7 (2): pp. 207-210.
- Allmendinger, P. & Twidwr - Jones, M. (1998). Deconstructing communicative rationality: a critique of Habermasian collaborative planning. *Environment and Planning A* 1998, 30: pp. 1975-1989.
- Aune, J. M., Olimstad, M., Refseth, M. S. & Zamudo, U. H. (2015). *ECTP- Children's Tracks: Advancing children's right to participate in land-use planning?* Young planners workshop 2015: E-governance and spatial planning decision-making, Dublin, pp. 168-191.
- Babelon, I. (2015). *Mapping place values for the green, compact and healthy city: Interlinking softGIS, sociotope mapping and communities of practice*. Master thesis. Stockholm: KTH.
- Brown, G. & Kyttä, M. (2014). Key issues and research priorities for public participation GIS (PPGIS): A synthesis based on empirical research. *Applied Geography* 46 (2014), pp. 122-136.
- Bogsrud, N.E. & Ulveseth, M. (2015). *Consultation – Innsigelse til forslag til områderegulering for Ski vest* [consultation letter]. Oslo: Statens vegvesen. Available at: http://195.1.20.83/Planarkiv/0213/Innsigelser/201308_innsigelse3.pdf (accessed: 01.09.17).
- Cele, S. & van der Burgt, D. (2015). Participation, consultation, confusion: professionals' understandings of children's participation in physical planning. *Children's Geographies*, 13 (1): pp. 14-29. doi: 10.1080/14733285.2013.827873.
- Centre for Design and Architecture. (2018a). *For Læreren*: Norsk design- og arkitektursenter. Available at: <https://www.barnetrakk.no/larer/> (accessed: 10.01.17).
- Centre for Design and Architecture. (2018b). *For Planleggeren*: Norsk design- og arkitektursenter. Available at: <https://www.barnetrakk.no/planlegger/> (accessed: 10.01.17).
- Chawla, L. (2002). Toward better cities for children and youth. In: Chawla, L. (eds), *Growing up in an urbanizing world*, pp. 219-243. London: Unesco publishing/Earthscan publications.
- Connelly, S. & Richardson, T. (2004). Exclusion: The Necessary Difference between Ideal and Practical Consensus. *Journal of Environmental Planning and Management*, 47 (1): pp. 3-17.
- Falleth, E. & Saglie, I.-L. (2011). Democracy or efficiency: contradictory national guidelines in urban planning in Norway. *Urban Research & Practice*, 4 (1): pp. 58-71.

- Flyvbjerg, B. (1991). *Rationalitet og Magt: Et case-baseret studie af planlægning, politik og modernitet*, vol. 2. København: Academic Press.
- Freeman, C. & Vass, E. (2010). Planning, Maps, and Children's Lives: A Cautionary Tale. *Planning Theory & Practice*, 11 (1): pp. 65-88. doi: 10.1080/14649350903538079.
- Freeman, C., van Heezik, Y., Stein, A. & Hand, K. (2016). Technological inroads into understanding city children's natural life-worlds. *Children's Geographies*, 14 (2): pp. 158-174.
- Hajer, M. (1993b). City Projects and Discourse (Avebury, IL, Aldershot & Brookfield). (Cited in: Hanssen, G. S. and Saglie, I. 2010).
- Hansen, M. (2006). *Rikspolitiske retningslinjer for barn og unge*. In NIBR-rapport (ed.), 2006/127. Oslo: Norsk institutt for by- og regionforskning.
- Hanssen, G. S. & Saglie, I.-L. (2010). Cognitive Closure in Urban Planning. *Planning Theory & Practice*, 11 (4): pp. 499-521. doi: 10.1080/14649357.2010.525373.
- Hanssen, G. S. & Falleth, E. I. (2014). Market-oriented urban planning – constraining citizen participation. *Local government studies*, 40 (3): pp. 403-428.
- Hanssen, G. S. (2015). Medvirkning i planleggingen av den kompakte by - hvordan er praksis? In Hanssen, G. S., Hofstad, H. & Saglie, I.-L. (eds), *Kompakt byutvikling : muligheter og utfordringer*, pp. 97-114. Oslo: Universitetsforlaget.
- Hart, R. (1992). Children's Participation: From tokenism to citizenship. In UNICEF (ed.), vol. 4, *Innocenti Essays*, pp. 1-41. Florence, Italy: International Child Development Centre of UNICEF.
- Hart, R. (2008). Stepping Back from 'The Ladder': Reflections on a Model of Participatory Work with Children. In Reid, A., Jensen, B. B., Nikel, J. & Simovska, V. (eds), *Participation and Learning: Perspectives on Education and the Environment, Health and Sustainability*, pp. 19-31. Dordrecht: Springer Netherlands.
- Healey, P. (1996). The communicative turn in planning theory and its implications for spatial strategy formation. *Environment and Planning B: Planning and design*, 23 (2): pp. 217-234.
- Hedén, A. & Lien, E. (2015). *Consultation – Fylkesmannens uttalelse til offentlig ettersyn av områdereguleringsplan for Ski vest – Ski kommune* [consultation letter]. Oslo: Fylkesmannen i Oslo og Akershus. Available at: http://195.1.20.83/Planarkiv/0213/Innsigelser/201308_innsigelse1.pdf (accessed: 01.09.17).
- Hongslo, E. (2017). Background information or future vision? Mapping wild reindeer landscapes in a planning process. *Landscape Research*, 42 (4): pp. 349-360.
- Horelli, L. (1994). Children as urban planners. *Architecture et Comportement*, 10: pp. 371-377.
- Horelli, L. (2006). A learning-based network approach to urban planning with young people. In: Spencer, C. & Blades, M. (eds), *Children and their environments*, pp. 238-255. New York: Cambridge University Press.

- Huxley, M. & Yiftachel, O. (2000). New Paradigm or Old Myopia? Unsettling the Communicative Turn in Planning Theory. *Journal of Planning Education and Research*, 19 (4): pp. 333-342. doi: 10.1177/0739456x0001900402.
- In'by, Strak, Helen og Hard & Code Arkitektur. (2014). *Områderegulering Ski vest: Delutredning - områdeanalyse - funksjonssammensetning (foreløpig)*. Ski: Ski municipality. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/omradeanalyse-funksjonsinnhold.pdf> (accessed: 01.09.17).
- Innes, J. & Booher, D. (2003). Collaborative dialogue as a policy making strategy. In Hajer, M. A. & Wagenaar, H. (eds), *Deliberative policy analysis: understanding governance in the network society*, pp. 33–60. Cambridge: Cambridge University Press.
- Innes, J. & Booher, D. (2004). Reframing public participation: Strategies for the 21st Century. *Planning Theory & Practice*, 5 (4): pp. 419-436.
- Kahila, M. & Kyttä, M. (2009). SoftGIS as a Bridge-Builder in Collaborative Urban Planning. In Geertman, S. & Stillwell, J. (eds), *Planning Support Systems Best Practice and New Methods*, pp. 389-411. Dordrecht: Springer Netherlands.
- Kahila, M. (2015). *Reshaping the planning process using local experiences: Utilising PPGIS in participatory urban planning*. Finland: Aalto University.
- Knudzon, L. & Tjerbo, T. (2009). De unge stemmene: Innflytelsesorgan for barn og unge i kommuner og fylker. Oslo: Norsk institutt for by- og regionforskning.
- Kommunal- og moderniseringsdepartementet. (2014). *Veileder om enkeltbestemmelsene for medvirkning i planlegging etter plan- og bygningsloven*. Available at: https://www.regjeringen.no/globalassets/upload/kmd/plan/medvirkningsveileder/medvirkning_veileder_juridisk.pdf (accessed 10.10.17).
- Kommunal- og moderniseringsdepartementet. (2017). *Reguleringsplanveileder*. Available at: https://www.regjeringen.no/contentassets/0f066ff0c1b84446bc7a886402dca611/regulering_splanveileder_15feb2017.pdf (accessed: 18.12.17).
- Kvitte, M. (2011, 09.11.). *Tripper etter boliger, næringsbygg og kanskje en barnehage på Ski Magasinleir*. In: Østlandets blad. Available from: <https://www.oblad.no/ski/nyheter/nyheter/tripper-etter-boliger-naringsbygg-og-kanskje-en-barnehage-pa-ski-magasinleir/s/2-2.2610-1.6600009> (accessed 27.12.17).
- Kytä, A. M., Broberg, A. K. & Kahila, M. H. (2012). Urban environment and children's active lifestyle: SoftGIS revealing children's behavioral patterns and meaningful places. *American Journal of Health Promotion*, 26 (5): pp. 137-148.
- Lane, M. B. (2005). Public participation in planning: an intellectual history. *Australian Geographer*, 36 (3): pp. 283-299.

- Miljøverndepartementet. (2012). *Barn og unge og planlegging etter plan- og bygningsloven*. 28.
Available at:
<https://www.regjeringen.no/contentassets/bccd028e3b494d2fa8c6840851f2f2/t-1513.pdf>
(accessed: 02.12.2017).
- Mydland, L. & Johansen, K. (2015). *Consultation - Områdeplan for Ski vest, Ski kommune. Innsigelse*
[consultation letter]. Oslo: Riksantikvaren. Available at:
http://195.1.20.83/Planarkiv/0213/Innsigelser/201308_innsigelse4.pdf (accessed: 01.09.17).
- Myrmæl, A. (2014). *Risiko- og sårbarhetsanalyse for "Områderegulering Ski vest" i Ski kommune*.
SWECO. Available at: https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/ros-analyse-ski-vest_281114.pdf (accessed: 01.09.17).
- Nordvi, S. & Selvik, K. (2015). *Consultation – NVEs innsigelse – Offentlig ettersyn – Områderegulering for Ski vest – Ski kommune, Akershus* [consultation letter]. Oslo: Norges vassdrags- og energidirektorat. Available at:
http://195.1.20.83/Planarkiv/0213/Innsigelser/201308_innsigelse2.pdf (accessed 01.09.17).
- Norsk form. (2010). *Barnetråkk Veileder 2010: Registrering av barn og unges arealbruk*.
Available at:
https://www.regjeringen.no/globalassets/upload/MD/Bilder/Planlegging/Veiledere/barn/barnetrakk_2010.pdf (accessed 05.01.18).
- NOU 2003:14. (2003). *Bedre kommunal og regional planlegging etter plan- og bygningsloven II – Planlovutvalgets utredning med lovforslag*. Oslo: Planlovutvalget.
- Pedersen, O. J., Sandvik, P., Skaaraas, H., Ness, S. & Os, A. (2010). *Plan- og bygningsrett, del I – planlegging og ekspropriasjon*. Oslo: Universitetsforlaget AS.
- Planning and Building Act. (2008). Act of 27. June 2008 no 71 relating to Planning and the Processing of Building Applications.
- Pløger, J. (2012). Planlegging, kunnskap og makt. In Aarsæther, N., Falleth, E., Nyseth, T. & Kristiansen, K. (eds), *Utfordringer for Norsk Planlegging. Kunnskap, Bærekraft, Demokrati*, pp. 256-272. Kristiansand: Høyskoleforlaget AS.
- Rantanen, H. & Kahila, M. (2009). The SoftGIS approach to local knowledge. *Journal of environmental management*, 90 (6): pp. 1981-1990. doi: 10.1016/j.jenvman.2007.08.025.
- Rydin, Y. (2007). Re-examining the role of knowledge within planning theory. *Planning theory*, 6 (1): pp. 52-68.
- Sharp, L. & Connelly, S. (2002). Theorising participation: pulling down the ladder. In Rydin, Y. & Thornley, A. (eds), *Planning in the UK*, pp. 33-64. London: Ashgate.
- Silverman, D. (2014). *Interpreting Qualitative Data*, 4th ed. London: SAGE Publications Ltd.

- Sinclair, R. (2004). Participation in practice: Making it meaningful, effective and sustainable. *Children & society*, 18 (2): pp. 106-118.
- Ski kommune. (2011). *Kommuneplan 2011 – 2022*. Vedtatt: 22.06.11. Available at: <https://www.ski.kommune.no/globalassets/om-ski-kommune/styringsdokumenter/kommuneplan-vedtatt-110622-web.pdf> (accessed: 20.09.17).
- Ski kommune. (2013a). *Melding om vedtak i FU-sak 155/13 – Ski kommune – Områdereguleringsplan – Ski Vest*. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/forhandsuttalelser-samlet.pdf> (accessed: 01.09.17).
- Ski kommune. (2013b). *Områderegulering Ski vest: Oppsummering av høringsuttalelser med rådmannens kommentarer*. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/oppsummering-horingsuttalelser-ski-vest-131115.pdf> (accessed: 01.09.17).
- Ski kommune. (2013c). *Områderegulering Ski Vest: Forslag til planprogram*. Available at http://195.1.20.83/Planarkiv/0213/AndreDokumenter/201308_planprogram.pdf (accessed 10.10.17).
- Ski kommune. (2014a). *Analysis of Children's Tracks 2014*. Unpublished manuscript.
- Ski kommune. (2014b). *Children's Tracks data. (Interactive map)*. Unpublished manuscript.
- Ski kommune. (2014c). *Delrapport om områderegulering Ski vest: Kulturminner*. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/kulturminnerapport-301114.pdf> (accessed: 01.09.17).
- Ski kommune. (2015a). *Områderegulering for Ski vest: Planbeskrivelse med konsekvensutredning*. Ski. Available at: https://www.ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/planbeskrivelse_160115.pdf (accessed: 01.09.17).
- Ski kommune. (2015b). *Områderegulering m/bestemmelser for Ski vest*. 0213-201308. Available at: http://195.1.20.83/Planarkiv/0213/Vedtaksdokumenter/201308_plankart.pdf (accessed: 01.09.17).
- Ski kommune. (2015c). *Samlet saksframstilling: Områderegulering for Ski vest – Offentlig ettersyn*. Available at: http://195.1.20.83/Planarkiv/0213/AndreDokumenter/201308_saksframstilling1.pdf (accessed: 01.09.17).
- Ski kommune. (2015d). *Samlet saksframstilling: Områderegulering for Ski vest – kommunestyrets sluttbehandling*. 13/1923-94. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/kommunestyresak-17062015.pdf> (accessed: 01.09.17).

- Ski kommune. (2015e). *Sammendrag av innkomne merknader med rådmannens kommentar*. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/sammendrag-av-merknader-ski-vest.pdf> (accessed: 01.09.17).
- Ski kommune. (2016a). *Reguleringsbestemmelser til områderegulering for Ski vest*. 12/201308. Available at: http://195.1.20.83/Planarkiv/0213/Vedtaksdokumenter/201308_bestemmelser.pdf (accessed 01.09.17).
- Ski kommune. (2016b). *Samlet saksframstilling - Områderegulering - Ski vest - Oppfølgende vedtak*. 13/1923-106. Available at: <https://ski.kommune.no/globalassets/byutvikling/omradeplaner/ski-vest/kommunestyrevedtak-02032016.pdf> (accessed: 01.09.17).
- Ski kommune. (2017a). *Detaljregulering m/bestemmelser for Felt BB1 og B/T1 i områdeplan Ski vest*. Available at: http://195.1.20.83/Planarkiv/0213/Vedtaksdokumenter/201508_plankart.pdf (accessed: 01.12.17).
- Ski kommune. (2017b). *Forslag til reguleringsbestemmelser for Felt BB1 og B/T1 i Ski vest*. Available at: <https://ski.kommune.no/globalassets/byutvikling/planer/bb1-ogbt-ski-vest/c-forslag-til-reguleringsbestemmelser.pdf> (accessed: 01.12.17).
- Ski kommune. (2017d). *Forslag til detaljregulering for Ski vest*. Available at: http://195.1.20.83/Planarkiv/0213/AndreDokumenter/201508_planbeskrivelse-1-rev-A-240517.pdf (accessed: 01.12.17).
- Ski kommune. (2017e). *Reguleringsbestemmelser for Felt BB1 og B/T1 i Ski vest*. Available at: http://195.1.20.83/Planarkiv/0213/GieldendeBestemmelser/201508_bestemmelser.pdf (accessed: 01.12.17).
- Ski kommune. (2017f). *Samlet saksframstilling (førstegangsbehandling). Detaljregulering m/bestemmelser for Felt BB1 og B/T1 i områdeplan Ski vest*. Available at: http://195.1.20.83/Planarkiv/0213/Vedtaksdokumenter/201508_plankart.pdf (accessed: 01.12.17).
- Ski kommune. (2017g). *Samlet saksframstilling. Detaljregulering for Felt BB1 og B/T1 i Ski Vest - Sluttbehandling*. Available at: <https://www.ski.kommune.no/globalassets/teknisk-og-eiendom/planavd/ski-vest-felt-bb1-og-bt1/a-samlet-saksframstilling.pdf> (accessed: 10.01.18).
- Turnhout, E., Van Bommel, S. & Aarts, N. (2010). How participation creates citizens: participatory governance as performative practice. *Ecology and Society*, 15 (4): 26.

List of figures:

Figure 1. Hart's Ladder of Children's Participation, adapted from Hart (1992 p.8), produced by Kinga Kot.

Figure 2. Showing the zoning plan process and requirements for participation. Here the planning process is without a planning program, which would otherwise be included in step 1. The dotted line can show the main arenas for the planning and decision-making of the process. Illustration retrieved from Hanssen and Falleth (2014 p.8).

Figure 3. Showing a demo version of the mapping tool. Here the children are asked to map their mobility patterns. Retrieved from Centre for Design and Architecture (2017).

Figure 4. Showing a demo version of the mapping tool. Here the children are asked to map their perceptions and use of their local environments through attributes. Retrieved from Centre for Design and Architecture (2017).

Figure 5 and 6. Showing the planning area of the area zoning plan to the left and an illustration of how it was proposed to be developed to the right. Some changes were made before the final adoption of the plan but the plan generally facilitates this kind of development of the area. Illustration retrieved from Ski kommune (2015a p.2)

Figure 7. The main land owners in the planning area. Retrieved from In'by et al (2014 p.13)

Figure 8. The area zoning plan for Ski Vest. Green shows green structure purposes, red shows service functions purposes, yellow shows housing purposes, grey shows road infrastructure purposes. Striped areas are combined purposes. Retrieved from Ski municipality (2016c).

Figure 9. Showing the Northern part of the planning area, and the forest of the area today. The large building left of the forest is the Finstad school. The cultural heritage milieu sits in the middle of the photo, where it is written 'Ski magasinleir'. Image retrieved from Google (2018) ©.

Figure 10. Showing the planning area of the detailed zoning plan. Illustration retrieved from Ski kommune (2017d p.4).

Figure 11. Showing an illustration of a part of the future development in accordance with the detailed zoning plan. Illustration retrieved from Ski kommune (2017f p. 4).

ATTACHMENTS

Comments from the Children’s Tracks registration processes of 2014, within the planning area of the area zoning plan studied in the thesis (translated from Norwegian to English):

Type of attribute	Subcategory	Attached comments
Positive attribute	“I like this” “I like this” “nice view” “nice place” “nice forest” “nice forest” “nice forest” “nice park” “nice forest”	“the military camp” “quite like the forest” No comment No comment “nice place to play” “very nice forest I think” No comment “where children can walk from schools or kindergartens or be a place to relax” “nice forest”
Negative attribute	“want to change” “dark” “dark” “want to change” “trash” “scary people” “want to change” “I dislike this” “want to change” “want to change” “dark”	“it [Magasinleiren] should be made into a park with a café?” “it is dark here (in the military camp)” No comment “Ice hockey field” No comment “it is scary people in the military camp by the Finstad elementary school when it’s dark” No comment No comment “I want the military camp to be a nice family park” “the buildings in the military camp” No comment

	<p>“I dislike this”</p> <p>“want to change”</p> <p>“trash”</p> <p>“trash”</p> <p>“I dislike this”</p> <p>“dark”</p> <p>“want to change”</p>	<p>“this is the military camp”</p> <p>No comment</p> <p>No comment</p> <p>“it is thrown trash here”</p> <p>“it’s scary to walk past”</p> <p>“very dark in the night”</p> <p>“want artificial grass here [used for ball games] and a small hall with a roof”</p>
	<p>“trash”</p> <p>“dark”</p> <p>“I dislike this”</p>	<p>No comment</p> <p>No comment</p> <p>“don’t like the military camp because it is very scary there and I don’t like that it is completely empty houses there that no one are using”</p>
	<p>“dark”</p>	<p>“think it’s a lot of children who think this place is dark!”</p>
	<p>“trash”</p>	<p>“it’s a lot of trash in the forest often plastic bags and water bottles”</p>
	<p>“trash”</p> <p>“I dislike this”</p>	<p>“it can be trash here”</p> <p>“it’s very muddy on the path between the Finstad elementary school and the military camp”</p>
	<p>“angry dog”</p> <p>“I dislike this”</p>	<p>No comment</p> <p>“some say it’s thieves there it’s scary to walk there should be regenerated [Magasinleiren]”</p>
	<p>“angry dog”</p> <p>“I dislike this”</p> <p>“dark”</p>	<p>No comment</p> <p>No comment</p> <p>No comment</p>

	<p>“dark”</p> <p>“want to change”</p> <p>“want to change”</p> <p>“want to change”</p> <p>“want to change”</p> <p>“dark”</p> <p>“dark”</p> <p>“want to change”</p> <p>“dark”</p> <p>“want to change”</p>	<p>“it’s dark because there isn’t any street lights”</p> <p>“artificial grass?”</p> <p>“want a place to swim”</p> <p>“I would like that we fix the military camp”</p> <p>“can we have artificial grass here?”</p> <p>No comment</p> <p>“dark”</p> <p>“a shop”</p> <p>“in almost all of Villenga it is dark because the street lights are not on”</p> <p>“road across the street”</p>
Activity attribute	<p>“skate board”</p> <p>“ball games”</p> <p>“ball games”</p> <p>“ball games”</p>	<p>“I want a skate board park right about here [Magasinleiren]”</p> <p>“there are so many children here now so we need more fields”</p> <p>“soccer fields”</p> <p>“there are so many children here so we need more fields”</p>



Norges miljø- og biovitenskapelige universitet
Noregs miljø- og biovitenskapelige universitet
Norwegian University of Life Sciences

Postboks 5003
NO-1432 Ås
Norway