

Jan Grande

A SLIGHT INTERVENTION  
The Production and application  
of knowledge in environmental impact  
assessment (EIA) in two urban  
development projects in Norway

STS-working paper 5/01

ISSN 0802-3573-176

arbeidsnotat  
working paper

Jan Grande:

## **A SLIGHT INTERVENTION.**

### **The production and application of knowledge in environmental impact assessment (EIA) in two urban development projects in Norway**

In studies of planning and planning procedures, the social sciences have mostly focused on "the politics of planning", that is: how the outcome of planning depends on the distribution of power, negotiations and alliances among lay people and professionals. It is our impression, that a very few studies from the social sciences, so far, have intervened into the arena of knowledge production in planning (à la Flyvbjerg 1998). The two cases in our study explore some possibilities for an intervention in the knowledge production in environmental planning, by a closer study of the statutory documents in EIA. This also represents a possibility for a closer analysis of the way that such knowledge may interact with technology policy in the transport sector, since this sector is the main site for EIA projects in Norway.

Most European countries have implemented legislation, which order specific procedures of environmental impact analysis (EIA) to be carried out, as a supplement to, or as a part of, the national planning system. These regulations usually require the developers of large building-projects to assess the "significant" social and environmental impacts of their projects, and also to adapt relevant countermeasures, in this stage as modifications of the plans, when the public authorities requires so. Such measures are required before any plans can be publicly approved.

We shall first make a general outline of the EIA-system and regulations, before we proceed to the two concrete cases of (relatively) large urban development projects in the city of Trondheim, related to transport and infrastructure. Such projects are now routinely subjected to procedures of environmental impact assessments, if they exceed certain criteria of size, investments or anticipated impacts.

## **1. An outline of the international and national EIA-system**

### *1.1. Prelude*

The "mother" of all contemporary EIA-systems, including the Norwegian, is maintained to be the US National Environmental Policy Act (the NEPA),

established in 1969. Although all public planning-processes include one form or another of assessment of consequences, these new US-regulations made, for the first time, environmental considerations mandatory in public planning. Procedures of environmental impact assessment was subsequently integrated in Norwegian laws concerning the oil-industry and in laws directing road-planning, but such procedures did not, for the time being, make its way into in the law directing the wider national planning system, the Norwegian Planning and Building Act.

But, as most countries within the European Community, and the Community itself, was quick to implement such EIA-regulations, the Norwegians were more or less forced to adopt similar provisions, if they wanted to preserve the industrial and trade relations with the Community. Norwegian regulations of EIA were approved in 1990. Furthermore, the regulations of 1990 were also EC-standardized, when Norway, in 1994, entered a more formal agreement with the EC on economic co-operation (Norway entered the European free-trade zone).

Although the European Council made EIA-provisions in planning mandatory for all member countries (through EC Directive 1985/337), experience since then has shown that such regulations are exposed to a variety of national influences, so that we can even speak of different national "styles" of EIA (Glasson & Therivel). These national differences have made way for several attempts of setting common European standards for EIA, as differences in EIA-practice are said to counteract the EC-principle of creating similar economic opportunities within the Community. Both within countries, and within the European Community, the push for standardizing assessments, regulations and practise is considerably (to create similar, cost-effective and predictable practices).

### *1.2. The EIA-regulations and procedures*

When the Norwegian EIA-practice started in 1990, the Ministry of Environment, as the highest national authority on planning, published an instruction booklet, which outlined the EIA-process, the different actors and their duties and, of course, gave a rough indication of what kind of projects qualified for an EIA. This first publication, and the ones to come later, describe a kind of flowchart-procedure, where readymade boxes of professional (environmental-scientific) information are put into public (political-social) arenas, where decisions on specific projects are made. There are no indications of levels of acceptable or un-acceptable environmental impacts whatsoever in these guides. Nor are there any attempts of setting any clear professional standards for the knowledge produced.

The EIA-regulations put a lot of the responsibility on the contractor, or the builder, for initiating an EIA-process. He is also made financial responsible for any cost of doing assessments and the cost of producing the necessary documents. In real life, the local planning authorities, are handling

the grey-zone where some projects are found EIA-worthy and some not. They are also in some instances very helpful with guidance, and with procuring existing (ready-made) material into the EIA. With the new EC-regulations on EIA of 1994, there is set a list of criteria on projects qualifying for an EIA (Annex I). But the planning authorities are also allowed to make independent judgements, in cases of doubt, to suspend or begin an EIA.

When the builder is made observant of the possibility of an EIA, he has to deliver a notification-document to the local planning authorities. In this notification-document he has to outline a rough sketch of his plans, and lastly, but not least, indicate if his project is likely to produce any "significant" environmental consequences. This last requirement was until 1994, the clue for eluding an EIA, altogether. If you could prove, at this early stage, that you had already carried out all the necessary assessments, and that your plans were modified correspondingly, you could "get off the hook", so to speak, and avoid the full EIA-process. The large number of projects sanctioned at this stage suggests that this was, at least until 1994, some builder's tactical disposition.

After 1994, with the new EC-regulations, all notified projects are subjected to a complete EIA-process. The notification-document is then used to set up an assessment-programme that is to pinpoint the issues at risk in this specific building project. This notification-document is distributed to a pre-set list of public authorities and NGO's. The supervising and responsible authority of each EIA is attached to the Ministry directing that specific activity: the building of water-dams is allocated to the Ministry of Energy, the building of a shopping mall to the Ministry of Commerce and so forth. In many instances, the ministries delegate their authority to a sub-directorate or even to the local planning authority in the area of the construction.

Both qualifying for an EIA, and then doing an EIA, is clearly a haggling-process (or a process of negotiation) between the builder, the public authorities and the NGO's, and sometimes between different public authorities also. For example, the local planning authorities and the governmental authorities in the industrial and commercial sectors, are often seen sharing interests in EIA, while the different environmental authorities on a municipal, regional and national level, plus NGO's, are put in the role of being "watch-dogs" of the others.

When agreement on the assessment programme is reached, the builder and his consultants carry out the full assessment. The results of these assessments are communicated to the environmental authorities, mostly on the regional level, which then decides if the procured knowledge is adequate or not. Then the haggling process (as a public inquiry, statutory public meeting etc.) starts again, to revise the plans according to the knowledge of specific impacts. If the parties do not agree, the whole EIA is raised to, and possibly solved at a national, ministerial level. If the case is not solved, at least some of the projects seem to be "put on the self".

It is rather openly hinted that the whole EIA-system is exposed to longer political cycles. This was very much the case in Norway, where the

first EIA-regulations were prepared in the environmental-conscious 1970s (oil embargo, conflicts on conservation etc.), but put aside during the more conservative 1980s. In Norway this has manifested as a prolonged, and more or less openly, conflict between the old and hegemonic Ministry of Finance, and its allies: the Ministries of Commerce and Industry, and the opponent, the rather young, but ambitious Ministry of Environment (Jansen 1989).

The consequence of these constructed political and professional dichotomies is that the consideration for the environment is put on a balance, counterweighted by industry, commerce, taxes, or even the existence of local communities. In our perspective, the outcome of these political and social "battles" depends not only of the number of human actors, their interests and alliances, and their collective power, but also of what is negotiated. In this perspective, the introduction of EIA as a more or less standardised procedure to mediate between environment and society, is an extremely important arrangement (structuralisation) of this discourse on the environment. Our intention here of taking a closer look at (analysing) the EIA-documents in two cases, as a way of structuring a discourse on society and nature, therefore seems reasonable. In particular, we are interested in the way that this discourse interacts with parallel technology policy discourses. One possible interpretation of EIAs is to see them as an arena of interaction between different actors, including the general public. If EIA is done properly, this means that there has been an opportunity to raise concerns from supply as well as from demand side actors, and even that these concerns are negotiated in the process of making the analysis. From this perspective, EIAs in the transport sector may very well turn out to be an important tool of making transport technology policy more interactive than it otherwise might have been.

## **2. Case no.1 - The social shaping of an urban highway in Trondheim**

Most cities seem to develop to a stage, where the existing system of relatively smaller roads is supplemented by larger highways, circumcising or intersecting the city, then often labelled as thoroughfares. This is a history of such a highway not yet built, planned to intersect the city of Trondheim. The highway was first called *Nordtangenten* (The Northern Tangent). Later on, it was christened the *Nordre Avlastningsvei* (The Northern Diversion Highway).

### *2.1. The "Nordtangent" story*

The EIA-part of this story ends in 1992, when the municipal council of Trondheim agreed to cancel all major road projects, including *Nordtangenten*, at least for the time being. Other large road projects had proved to be increasingly controversial, and the city council had reason to believe that this project also could be. The decision of the council also referred to a general

lack of funds and other more important public projects. This happened in spite of an implementation of a system of toll bars around the city centre, less than a year earlier, established to increase the city's ability to finance new roads. The council decided to postpone this project, and similar road projects, at least until 1995, when a revision of the city's plans for further road construction was scheduled.

The decision resulted in the withdrawal of the formal notification document, made accordingly to the new Norwegian EIA-regulations. The document of notification for *Nordtangenten* was published in January 1992, just months before the project was put on the shelf for the time being.

The story of this highway begins, as it is told in the notification document, in the middle of the 1960ies, when Norway's first Planning and Building Act (1965), instructed all municipalities in Norway to develop general physical plans (*generalplan*). In this first stage, the planners followed the track of the old main highway, going from south to north in Norway, through the city of Trondheim. The main objective then, apparently, was to guide the traffic through the city centre, along the existing highway, but of course, also thinking of improving the standard and capacity of the road.

During the 1970ies there was a radical change of the city's pattern of traffic, as a diversion highway was built to the east of the city centre, guiding the traffic outside the city centre. This left the western, mostly residential, part of the city somewhat disconnected to the relatively large commercial and industrial area to the east. The traffic from west to east had to pass a very narrow patch of land, delimited by the fjord to the north and the river *Nidelven* to the south. This narrow area, the *Skansen*, seemingly restricted the number of alternative tracks for the road. Consequently, this tight neck of land now strangulated the tide of commuting cars, every morning and evening.

A decade later, the idea of the "missing" highway created an alliance between the municipal authorities, politicians and the regional Departement of Traffic (DoT). One of the main problems of transport, which grew out of the 1980ies, was the financing of large road projects in the country's largest cities. This problem was accentuated at the same time as the NGO's challenged the building of new roads, again most accentuated in the larger cities. A mediating artifact to these conflicts of interest, was the social construction of the toll ring in several Norwegian cities.

The toll ring was delegated two functions. The taxing of private cars is supposed to direct commuters to public transportation, and therefore reducing the congestion of traffic during rush hours. The second factor is the considerable income from tolling, which, in its turn, is used to fund new road-projects. These two assumed effects of tolling, created the necessary political support in the city's council and also dampened the opposition of NGO's. Even the DoT promoted the use of tolling, since it laid the ground open for future road-projects.

The negotiations related to Trondheim's future transport policy was settled, at least partly, in 1988, when the so-called *Trondheim package* was wrapped. This package contained the building of highways and other projects

related to transport in the Trondheim area. It outlined a very promising 40 to 60 % split of funding of these projects, between the state and the municipality. The municipality's part coming from collecting toll. The *Nordtangenten* was a very important part of this package. To settle the disagreement of using toll-bars, parts of this *Trondheim package* also included funds for supporting public transport, projects for reducing the environmental effects of transportation, and at last, on improving the safety on the roads.

## *2.2. The notification-document of the Nordtangenten project in 1992*

The submitted notification of the Nordtangenten project in 1992 was a result of the implementation of the Norwegian EIA-regulations of August 1990. It was published January 1992, not more than a year and a half after the regulations was set into force. In the public database concerning Norwegian EIA-projects, it is registered as case no. 8, indicating the novelty of making the *Nordtangenten* notification document.<sup>1</sup> It is also notable that the 13 first projects in this database, were road projects, the next 10 railway projects.

The reason for road-projects being in the front of the Norwegian EIA-system, after the system's initiation in 1990, is likely that the DoT already had practised some form of impact analysis when planning roads, since the early 1980ies.

The notification document for *Nordtangenten*, from 1992, is a joint production of the municipality of Trondheim and the regional DoT of the county of Sør-Trøndelag. The document starts with referring to the new provisions of the national Planning and Building Act, which also specifies the contents of this document. It is further emphasized that all actions taken in this case have been discussed, and cleared, by the regional environmental authorities (*Fylkesmannens miljøvernavdeling*), which evidently has a commanding role in this business.

This notification was later treated by the Directorate of Transport, with delegated authority from its superior (the Ministry of Transportation). In the EIA-database, it is marked that this notification document was approved as late as in November 1994. As we know, the revision of the plans was re-scheduled to 1995.

In the introduction of the notification document (which totalled 26 pages, A4-format, plus a few larger maps), the developers (the DoT and the municipality of Trondheim) describe the various factual elements of this project. They cite the Norwegian regulations, also emphasizing that they hoped to "improve the possibility for participation of the public services, civil organisations and other private persons in this process of planning". The public part of EIA is certainly assumed important. The notification was prepared in a public inquiry, where several public authorities and private NGO's took part. But the introduction also reveals that there had been several

---

<sup>1</sup> A database at The Norwegian Institute of Town and Regional Planning (NIBR), Oslo. This institute is doing most of the publicly funded research on EIA in Norway.

informal talks very early in this notification process with the direct superior of the regional DoT, the national Directorate for Transport, the regional environmental department, and finally also with the Ministry of Environment in Oslo. The latter is the advocate as well as the supervisor of these EIA-regulations.

These early, informal talks settled what procedure to follow, and it reads:

*"... it has been agreed upon [among the discussants] that further planning is best taken care of within the regulations of EIA in the Planning and Building Act. As partial changes of track and an eventual expansion of the planning area, set the demand for new impact assessments, the program of assessment is best settled in the notification stage".<sup>2</sup>*

The most important argument for doing this notification was, consequently, that it set the track of the road for later assessments, both reducing the cost and time spent in assessing different alternative tracks, and also reducing the possibility of having to assess alternatives not anticipated, later on.

The consequence of this style of thought is revealed later, when the developers described the project:

*"The notification covers only one [!] alternative. A prolonged process of planning, including extensive public engagement and commenting has in our opinion determined the track of the road".<sup>3</sup>*

They continue:

*"The Nordtangenten project is one of the most important projects in the Trondheim-package, which is a co-operative project including the building of main roads, public transport, traffic safety and environmental actions in Trondheim".<sup>4</sup>*

The Nordtangenten highway is therefore a vital part of the larger Trondheim-package, also linking it up to other projects. These projects, although somewhat different and contradictory in their environmental character, are within what is recognised as the "natural" domain of transport, and therefore, the attempt to link them together seems reasonable from the outside.

### 2.3. Embedding the road

The notification document is divided into 9 sections, totalling 26 pages. The first two pages contain the introduction earlier referred to, the next section describes this development project more closely. The description outlines some of the background, which more correctly are a collection of arguments

---

<sup>2</sup> Page 3.

<sup>3</sup> Page 4.

<sup>4</sup> Page 5.



for building this particular highway. The argumentation is subdivided into four separate statements:

*"A shortlist of the main reasons for this highway development is:*

- To reduce the traffic through the inner city, and also through residential areas near the city centre.*
- To connect and service the harbour area. Heavy trucks and dangerous goods (oil & petrol) must be guided outside the inner city and residential areas nearby.*
- To promote commercial activity in the harbour area by improving the present standard of communication.*
- To promote the development of new residential areas."<sup>5</sup>*

The inevitability of this project, from the developers' perspective, is then stated:

*"The problems connected to heavy traffic, the transport of heavy goods, and the accessibility to the terminals in the harbour area, will not change in the future, even if public actions of transport policy manage to reduce the use of private cars. The developer will consequently maintain that there will be a need for the Nordtangenten highway in the future, regardless the destiny of the private car."<sup>6</sup>*

The third section of the notification document continues with a more extensive deliberation on the arguments for building this road, but with a slightly different topical sub-division. The first three arguments in the synopsis that was quoted above, are summarised under the headline "Unnecessary traffic through the inner city and the residential areas nearby". Subsequently, four sections headed "The safety of traffic", "Environment", "The development of commerce" and "The development of residential areas near the city centre" follow.

Let us take a closer look at the first two sections of these four. First "The safety of traffic": The statistics of traffic accidents show that the city of Trondheim is by far the most dangerous place for road users in this region. As an estimated 50 % of the traffic through Trondheim is just passing by. A re-direction of this traffic must certainly reduce the number of accidents in the city centre. This is correlated with the statistical fact that roads in central commercial areas have ten times the number of accidents, compared to diversion highways outside city centres.

The second section headed "Environment" refers to measurements of high levels of noise and pollution in the city centre. Several areas here are exposed to levels well beyond the national recommended values, and even beyond levels assumed inducing health risks. Present roads with the highest levels of pollution, are also the very same roads which would be relieved of traffic, if the Nordtangenten-highway was functional.

The most important effect of building this new road, as described with statistical numbers in this section, is apparently more or less a process of

---

<sup>5</sup> Page 5.

<sup>6</sup> Page 5.

dispersion of traffic. Both the numbers of traffic accidents and the high levels of pollution, must be brought under control, that is, the numbers must principally be lowered by dispersing the activity over a larger area or displacing the traffic to what is considered less dangerous areas in the city.

#### *2.4. The social construction of planning - mobilising existing structures*

Section 4 in the document describes how this *Nordtangenten*-highway is woven into or already connected to the existing web of planning of the city. As these plans cover most of the city area and its structures, plans and maps are ideal for anchoring a highway not yet built. Let us see how:

##### *2.4.1. Mobilising history*

According to the notification document, the history of this road goes back to 1965-67 when the first plans were made. The document reads:

*"We can find this road as early as in the city plan of 1965. The importance of this highway was repeatedly emphasised in municipal plans prepared in 1979, 1983 and 1987".<sup>7</sup>*

There is established a continuity and identity between the "old" road, planned in 1965 and the new one, planned in 1992, even if the other roads (1979, 1983 and 1987) have been situated in different material and social contexts. The continuity of the idea makes it more reasonable, as it is proven not to be just a fling or an impulse. The subtext is obvious; it is about time this road is built.

This fourth section concentrates on the story from 1987 and onwards, as this notification document is constructed as the end-stone of a continuous process between 1987 and 1992 (the wrapping of the Trondheim-package and onwards). The plan prepared in 1987 was treated as a public document and commented on. The process revealed some disagreement on which track this road should follow. This conflict was then resolved by further investigation into the possibility of fresh alternatives. A special project group (task force) was established, consisting of the largest property owners in this area, *Trondheim Havn* (The Harbour of Trondheim) and *Norges Statsbaner* (The National Railway Company), Trondheim kommune (The Bourough of Trondheim), and also *Sør-Trøndelag vegkontor* (The regional DoT). The most difficult problem then considered was, as it surfaced, "the heated responses from residents in this area".<sup>8</sup> The residents demanded that the proposed plan had to cover a much larger area, and not just focus on the area very close to the road. The project group complied with this objection.

During 1988-1991 the different alternatives, in the text called "solutions", was discussed with "individuals, local housing co-operatives, residential associations, political initiatives and several public bodies". This

---

<sup>7</sup> Page 8.

<sup>8</sup> "...fra miljøet i Ila...", page 8.

discussion ended in the proposal put forward by the project group, outlined in this notification document:

*The proposal of the project group has been the object of an extensive "unofficial hearing". The solution is sent to, and discussed with, all the relevant planning bodies, and it has been put a lot of weight on the views presented".<sup>9</sup>*

As this highway had been a part of several plans from the 1970ies and 80ies, all these plans had been routinely subjected to political approval on a municipal level. These local decisions had all also been sanctioned on a higher, regional level. The highway had furthermore been incorporated in the national planning document of highways and important roads, prepared by the Ministry of Transportation and later sanctioned by the national parliament in 1989. At present (1992), the city was engaged in preparing a new general plan of transportation for Trondheim. The *Nordtangenten* project was one of the most central projects in this plan, the notification document reveals.

#### 2.4.2. Generating alternatives

Sections 5 and 6 describe the different tracks appreciated during the planning process. There are two areas of special interest, the harbour area, and the residential area. Building the road through the harbour area is both technically difficult and also controversial. First of all, the road had to cross a channel that is used by boats on a daily basis. Today a railway line traverses this passage, but using a risible bridge made periodical boat passage possibly. Secondly, the building of a road by the sea front would create a very noticeable barrier between the sea and the city.

The alternatives assessed, according to the notification document, are a road in the open, at ground level, or a road in a tunnel, excavated out of the sea bottom, under the channel:

*"Grounded in a positive attitude, co-operation and a collective effort on finding a solution for these problems, the project group agreed to an alternative which is partly at ground level, partly underground in the area of the railway".<sup>10</sup>*

But in the end the developers recommend to build a risible bridge, along the railway line.

This highway would in one way or another traverse the second controversial area, the mostly residential Ila. As this seems unavoidable, it is remarked that the solution outlined in this document is said to be the result of "the professional guidance of the project group":

*"Important elements in the process of alternative selection, have been an aggregated assessment of environmental impacts, and of*

---

<sup>9</sup> Page 9.

<sup>10</sup> Page 12.

*issues related to traffic. The design alternative is also influenced by the comments from people in this area".<sup>11</sup>*

The assessments of traffic that were made were mainly based on a projection of two variables. First, the estimated effects of building other major roads in the city, the diversion highway and so forth. Second, a forecast of future traffic volume. Correlating these projections, the developers then proceed to make a cost-benefit analysis regarding:

- the cost of accidents
- the cost of driving
- the cost of maintenance
- the reduction of pollution

All these calculations have demonstrated that "the building of *Nordtangenten* is clearly producing most benefit for the cost".<sup>12</sup> This section later concludes:

*"In our opinion, there is no other relevant alternatives than the Nordtangenten ... . Even if one should succeed with the aim of transport policy to divert the traffic through the inner city by introducing high tolls and taxation, the whole existence of the city in the future, and its further development, is grounded on a rational handling of goods and commodities".<sup>13</sup>*

From mobilising the past, to a mobilising of the future: They are appealing not only to the past, the Trondheim package, but to an anticipated risk for the city, if this highway is not constructed.

## *2.5. Preliminary commentary on the Nordtangenten case study*

The role of the notification document, as demonstrated in this case, is clearly a method of strengthening of the developers' arguments for building this road. This document is by far an impartial rendering of existing alternatives. Even if the public side of planning is emphasised, the discursive power of these arguments to define "reality", or so called "realistic alternatives", seems overwhelming. When the difficult questions surface, the discussion tends to get technical, far beyond the layman's scope of handling.

The other method used in this notification document, is the mobilisation of existing structures. This creates a story where the *Nordtangenten* project is "a missing link" in a much larger web of things and circumstances. It leaves the impression of that these things and circumstances are not negotiable ("they are beyond our reach") and they furthermore represent a considerable technical and societal force, which some time in the future will make its way through this area, without any regard for the outcome of this EIA-process.

The rendering of the public discussions, the meetings between the developers and the residents in the area, are minimal, and no other alternatives

---

<sup>11</sup> Page 13.

<sup>12</sup> Page 14.

<sup>13</sup> Page 14.

seem to have surfaced in this process. It makes the construction of this road seem more enevitable than ever.

### **3. Case study no. 2 - The shaping of an IKEA store in Trondheim**

This case study concerns the shaping of a large store, which is not yet built, through a process of Environmental Impact Assessment (EIA). The EIA-process shall ensure that the developer takes proper measures of environmental mitigation, as early as possible, when they are planning large projects. The dilemma is obvious. How is it possible to construct a large department store, and at the same time complying with the existing environmental regime? Since traffic volume is one of the relevant concerns in the planning process, this case is also very relevant as an issue of transport policy. Moreover, it may provide a different perspective on local transport policy and transport technology policy than cases that a singularly focussed on the construction or rebuilding of roads and road systems.

At an early stage, this department store seemingly exists only as an idea in the heads of the engineers and the developer, and as a plan, outlined in maps, on drawings/photos and most likely as small cardboard models. The developer's problem is to get his store to fit to the preferred site, and not just seeing it slip away.

The developers' consultants have estimated that this store is going to be visited by about 1 million customers per annum. They further estimate that 95-98% of those customers will be driving their own car, equivalent to an estimated average of 3730 cars per day. These are all potential customers, and as so, contributing to the total turnover of the store. The arithmetic lesson is: the more customers, the better for the company. But, on the other hand, while better for the company, the worse for the environment, as many of these people are driving their noisy and fuming, private cars. The outset of this story is the now "classical" gridlock of modern consumerism, transport and concern for the environment.

The story may start in 1996 when the Swedish furniture giant IKEA sets its eyes on a patch of land, situated near the largest highway in Trondheim, in an area called *Tunga*. This is also the end of another, older story, as IKEA asserts that its intention of building a store in Trondheim is almost 30 years old. On this newly found patch of land, the *Tunga* area, the company initiates a plan to build a store of about 20.000 sq.m. Subsequently IKEA bought this area.

As set by the criteria in the Annex I of the Norwegian EIA-regulations, the developer IKEA must execute an EIA-process.<sup>14</sup> The definitive EIA-report

---

<sup>14</sup> I.1.9 in the Annex I to the Norwegian Planning and Building Act reads: "Shopping centres with a net floor area of more than 15.000 sq.m. and built during a period of 5 years or less" is mandatory subjected to an EIA. The "Competent authority pursuant to these provisions" and type of project, that is, the authority which approves the EIA in the end, is the Ministry of Trade and Industry in this case.

made by the developer IKEA and its consultants was published in May 1998. This study is based mainly on an analysis of this report.

At the time of writing this story, a year later, the neighbours have filed strong objections to the building of this store, as they are entitled to. Nevertheless, the municipal planning authorities have approved the plan and the mitigating measures taken by the developer, IKEA. The final verdict in this case, is to be decided on a regional and national level. Thus, the various deliberations on this EIA did not produce any unanimous agreement among all the actors, but the project still most likely will get "a go".

### *3.1. The idea of an IKEA store*

Sometime in, or just before 1997, the company IKEA must have notified the "proper authorities", most likely starting with contacting the municipality in Trondheim, telling about IKEA's intentions.<sup>15</sup> The situation thereafter must have been that IKEA this time realised a strong possibility of building, as they consequently bought the *Tunga* property. This incident is preceded by an older story, as the EIA-report states: "The company IKEA has tried to establish a store in Trondheim during the last 30 years".<sup>16</sup>

The EIA-process started with preparing a notification document, which in EIA-language, is a lot more than just a simple message telling what you have in mind. Of course you do notify the authorities up front, or better, you do some inquiries, you "test the terrain", so to speak, as IKEA's representatives clearly did. But as you enter the formal EIA-regime, a formal notification is a very complex document, made by a specific structure, answering certain questions, outlined in the EIA-guidebooks.

One of the most vital parts of this notification document, is a proposal for a study programme, directing the later EIA-process. December 18 1997, the Ministry of Trade and Commerce sanctioned the proposed programme from IKEA. Four months later, March 20 1998, Selberg is dating his signature on the final EIA-document. What has happened so far in this process, according to the EIA-report?

### *3.2. The EIA-report*

The EIA-report consists of a book, just over 100 pages thick, and of two smaller booklets, about 10 and 20 pages each. The larger book is the main EIA-document, while the two booklets are named "Analysis of Traffic" and "Analysis of Commerce". Even if the Swedish IKEA is the developer and, as so, in charge of this EIA-process, the documents produced are signed by local Norwegian consultants; an architecture firm, an engineering firm and a commercial consultant firm, and their logos are displayed on the front-pages

---

<sup>15</sup> Page 15: The proposed project has increased from 11.000 sq.m. in 1996, to 15.000 sq.m. in 1998.

<sup>16</sup> The EIA-document, page 7.

of the documents. These documents give the impression of being a kind of joint, collective effort.

If we start with taking a closer look at the table of contents, the structure of the main EIA-document is:

0. *The developer's thoughts about this particular EIA, and about doing EIA in general (1 page).*
1. *The developers approach to this particular EIA, and a summary of this document (11 pages).*
2. *A description of the area as it is today (19 pages).*
3. *A closer description of the present environment, of existing natural resources and of the community encircling the area (13 pages).*
4. *A description of the development project itself (25 pages).*
5. *A description of direct and indirect impacts on environment, natural resources, and the local community (7 pages).*
6. *Mitigating measures (4 pages).*
7. *A list of public and private actions, essential to the development (1 page).*
8. *Impacts on other public plans, regulations and policies from this particular project (3 pages).*
9. *A summary of this document (6 pages).*
10. *The developer's recommendation for approval and the reason why IKEA chose this particular location (12 lines).*
11. *A proposal for a programme for further assessment and supervision of the development (1/3 page).*

As far as the story has been told (by looking at the table of contents), this seems to be a story about facts and things. The design of an object, the IKEA store, and the facts revealed by the professional assessments of impacts on the environment. Let us take a closer look at the text of the document, to see how this story of facts is told.

### *3.3. The mobilisation of roads and buildings*

The EIA-document begins with situating the store by using maps and photos. One map shows the store tangled in the web of roads in Trondheim. The main roads are highlighted, showing the IKEA store nearly touching one, indicating its central locality and accessibility. The inhabited area of the city is marked with the colour green, the store placed well within this area, but slightly to the right (east) of the centre.

A large (aerial) photo succeeding the map displays an area dominated by what seems to be industrial structures and office buildings. The area of the planned store is highlighted. In the upper left corner we are able to see that residential areas surround parts of this area. Highways are also intersecting the area. It is possibly to interpret this choice of perspective as part of an argumentation. Already, we are watching how the developer and his consultants are trying to get this store stick to the "landscape", and not just slip away, being out of place (as it would be in the middle of arable land). The two main arguments are, interpreted from the map and the photo, that 1. the store

will be in accordance with its surroundings, and, 2. it will be connected to the overall structure in this area, mainly the highways.

### *3.4. The mobilisation of borders and symmetry*

A second map, showing the administrative divisions of the city, and also other large store present in this area succeeds the photo. The border of city centre is distinctly marked, as also the main highway intersecting the city is. Once more, the store is connected to this highway, and at the same time it is just within the administrative border of the city centre. The other large furniture stores is situated along the same highway, dividing it in almost three equally long distances.

The last paragraph in the introduction reads: "This [...] plan assumes that IKEA is not affected by the national provision on a "Temporarily halt on the establishing of shopping malls outside central parts of cities and other densely built-up areas".<sup>17</sup> With this in mind, the closely mapping of the store within the borders of the administrative centre of Trondheim suddenly makes sense.

The developer makes an effort in making this store stick to the landscape, in a way so that it seems to us that it must be built as to make the photos, the maps and the city complete. If it is not there, the developer has succeeded to construct a hole, an open space, which has to be filled.<sup>18</sup>

### *3.5. The mobilisation of actors and institutions*

The short introduction is signed by what seems to be the leader of the architectural firm, *Mr Selberg*, as the firm is called *Selberg Arkitektkontor AS*. This makes me look at the front page once more, and, right, the name of this firm is printed with larger letters, than the other firm mentioned, *Reinertsen engineering*, both indicating the leading role of *Mr Selberg* and his firm in this process.<sup>19</sup>

*Selberg* writes about what he, and the developer, thought was an imperative in this process of EIA. First of all, there should be openness and co-operation. He stresses the dialogue with neighbours, the planning authorities and the municipality of the city of Trondheim. This indicates the considered important actors in this process, and the nature of the relation among these. But *Selberg* reveals that there has also been a certain amount of informal contact between the consultants and public authorities, and that this contact has been of vital importance for the process.

---

<sup>17</sup> Page 6. This provisional ban on the building of warehouses and shopping malls, regulates all structures larger than 3000 sq.m.

<sup>18</sup> Which later is called the zero-alternative in EIA-language. See page 10.

<sup>19</sup> But *Selberg Arkitektkontor* is owned by *Reinertsen Engineering*.



The building of a store in this area required the approval of a local plan in addition to the EIA. Since 1965, all central regions in Norway have had physical plans made. This was especially important when the separation of residential housing and commercial and industrial areas began during the 1960ies, and when planning and developing the physical structure of roads, electricity, water and sewerage systems became more complicated. The existing plan for this area had to be revised with the development of the IKEA store. So it seems that the developer had to handle three processes (networks) at the same time; the planning of the store (several material network), the production of the EIA-documents (the EIA-network) and the revision of the local plan (the local planning network). But, unlike the EIA, which is supervised from the central authorities, local plans are mostly a matter for the municipality.

The local planning process has involved slightly different actors, than the EIA-process. The document reads: "There has been a continuous dialogue among the municipality, and the Department of Transport (DoT) in the region of *Sør-Trøndelag*, during the EIA-process and the planning stage".<sup>20</sup> The highway passing the actual area is under the supervision of the DoT. This demonstrates the existence and the importance of placing the store in accordance with a fourth important network; the network of roads.

### *3.5. The shaping of size and form*

The introduction to the EIA-document, as described earlier, makes a lot more sense when we read this paragraph: "This [...] plan assumes that IKEA is not affected by the national provision on a "Temporarily halt on the establishing of shopping malls outside central parts of cities and other densely built-up areas" ".<sup>21</sup> With this in mind, the closely mapping of the store within the border of the administrative centre of Trondheim suddenly makes sense (once more!).

The next chapter, "The developers approach to this particular EIA, and a summary of this document", is interesting, as it displays the developers thoughts on the most controversial matters when building this store. First of all there is sheer physical size. Size matters, as large buildings require more floorage and delimit the possible alternatives. "Space construction" is a crucial variable, also because large building of this size often is constructed more or less quadrangular. This is certainly one of the reasons why such buildings are situated outside cities where floorage is rife and sites are comparatively cheap.

In the beginning, IKEA planned a joint project with *REMA 1000*, one of the largest chains of supermarkets in Norway. This joint project met local opposition, possibly because other supermarkets and shopping malls in this area felt threatened by this large commercial concentration. In the end, *REMA 1000* was left out. One of the reasons for this, the document reads, was that IKEA itself, had to increase its floor space from 11.000 to 15.000 sq.m. in the

---

<sup>20</sup> The EIA-document, page 6.

<sup>21</sup> Page 6.

total of 21.000 sq.m., not leaving the required space for REMA.<sup>22</sup> This shows us that IKEA, initially, had planned to use a floor space well below the limit of 15.000 sq.m. as specified by the EIA-provisions. Why did IKEA chose to do so, when they probably could have evaded the whole EIA-process by scaling the store according to this limit?

### *3.6. The de-mobilisation of other building-sites*

The answer to this question probably lies in the generation/construction of alternatives or alternative sites. The developer IKEA and its consultants concentrate on three alternatives, in addition to their chosen spot, in the district of *Tunga*, and at last, the so called zero-alternative, which is if the project is not completed at all. The three alternatives to *Tunga*, are the *Midtbyen* (the inner city centre), *Brattøra* (an area by the harbour) and the *City Syd* (consisting of other, similar stores south of Trondheim).

The alternative of building a large store in the inner city area is of course not possible at all. An area in the vicinity of the harbour is more likely, but that conflicts with the development of the usual functions connected to a harbour. The single and most trustworthy alternative to *Tunga* is the *City Syd* area, where there exist stores of similar size and function. The *City Syd* area is situated a few kilometres to the south of the city centre, and was developed during the 1960ies and 1970ies. While first a residential area, it was soon followed by the development of large stores. One of these, became the largest in Norway. The main highway between Trondheim and Oslo, the E6-road, also intersects this area.

When comparing this, and the other alternatives, IKEA has made a rough copy of the drawing of the *Tunga*-development, and very simply put it on the map, looking for the required space. With parking lots and trees, this is a considerable structure, not fitting directly into any space considered at all. Consequently, IKEA states that "it is very difficult to find sites in this area that is large enough, and at the same time is visibly from the main roads in this area".<sup>23</sup> They also found that the roads in other areas were already partly congested, and any that new stores in this area would increase the present traffic-problems.

### *3.7. The de-mobilisation of the other commercial centres in the city*

When building a store, you are unavoidably creating changes within several streams, not just traffic. A reiterated theme in the first pages of this EIA-document, are the anticipated consequences for the already established commerce in the city, as also the enclosed report on the analyses of commerce

---

<sup>22</sup> Page 7.

<sup>23</sup> Page 12.

addresses. Even a rather small city, as Trondheim, has developed several commercial centres, battling for their own survival.

The EIA-document therefore analyses the anticipated consequences for the different existing commercial centres, in each of the alternatives. The simple picture is, one should believe, that a new store would draw customers from other parts of the city. If so, you would expect a considerable resistance from the "old" commercial lobby in this city, as no one would like to share their profits (customers) with one more, large competitor in a limited market. But the picture is more complicated than this, as the EIA-document demonstrates.

First of all, there is the issue of incompatible commodities. IKEA is simply not always a competitor, as we are led to believe. Second, a large furniture store like IKEA is expected to draw customers from a very large region, both in Norway and possibly from Sweden. The document therefore refers to a commercial synergy effect, where part of IKEA's turnover would stem from "fresh" customers, travelling to Trondheim.

### *3.8. The all-or-nothing-game*

The EIA-report leaves us with two alternatives: either IKEA is allowed to build the store at the *Tunga-site*, or they will not be building the store at all. As the developer already has made up his mind to choose the *Tunga*-alternative (IKEA has bought the site), IKEA makes no secret of saying that it will be *Tunga*, or no store at all. That makes it rather difficult to see the purpose of the work put into the generation of alternatives in this EIA. IKEA calls the alternatives "hypothetical" and not relevant for the decision to be made by the authorities. For the developer, there are only two "real" alternatives, *Tunga* or not building the store at all.

Why then choose the *Tunga*-alternative? First of all, the document reads, the *Tunga*-alternative is situated along one of the main "axis of commerce" in the city. This physical axis of commerce, cutting right through the east side of city, is meant to separate residential and commercial areas, as well as being situated along the largest highways in the city. This is clearly also an axis of transport. Contact with the regional DoT has revealed that the highway along this site will be upgraded from two to four lanes in the years to come. In stark contrast to the other alternatives, the roads of *Tunga* are "of good standard, without any problems of capacity in present and future situations".<sup>24</sup> This is the optimum choice, IKEA says.

### *3.9. The no-go-alternative*

IKEA has acquired a site and wants to build a store on it. IKEA has clearly stated that there is no other alternative for building a store in Trondheim. The only "realistic" alternative is not building it. IKEA plays a game of all or

---

<sup>24</sup> Page 13.

nothing. In constructing this no go alternative, IKEA succeeds in making of a story that ends up in the same spot as if the store was in fact built. This makes it a no option-situation. How is that?

The *Tunga* site is presently described as a wasteland. It contains some few old storehouses, mostly from a period when the army used it, but small bushes and plains dominate the area. This is in the midst of an industrial area, but to one side of the site, there are six dwellings, the remains from the army period. As these dwellings are not connected to other residential areas in the neighbourhood, we are left with the impression that they will be removed in the near future. The most possibly scenario for this wasteland is that it will be used for any kind of industrial or commercial venture. This narrows the scope of inquiry for IKEA, to say something about what kind of venture this will be. This is, what IKEA calls, the development of scenarios.

We shall not delve into all these scenarios in detail, as all of them describe a very bleak future. These scenarios include the building of a shopping centre, a car/caravan dealership, several small firms, a hotel or more dwellings and even a prison. The different scenarios are evaluated on the basis of their "level of conflict", towards either the existing industrial structures on one side, or the dwellings, on the other. The store is then constructed as the ideal, or nearly the ideal, transitional area, between industry and the residential area, by minimizing the potential conflict.

The no-go-alternative must also try to handle a potential expansion of the existing industry in this area. Although IKEA makes a point of this being an industrial and commercial area, there is no other store of this size, which would generate this amount of traffic in this area. The existing industry is dominated by the dealing of agricultural produce; milk, eggs, vegetables, and so on. One scenario takes hold of the consequences of the present decline of this kind of industry. If this trend is reinforced, this could lead to the decline of the area as whole. The building of the IKEA store would counteract this trend, upholding the activity in the area.

### *3.10. The avalanche of traffic*

When describing the situation, IKEA refers to the measurements of the present traffic in this area. The *Tunga*-site is located near a traffical T-structure, where the largest road has a volume of traffic estimated to an average of 18.800 vehicles per day. The traffic on the smaller road is estimated to 10.500 vehicles per day. These numbers are not commented in any way in the document, and the conclusion reads:

*"IKEA's [store] is a logical step in the development of the axis of commerce, and satisfies the public demand for being close to the main highways in this area".*

The increase of noise and pollution are not regarded as a problem at all, as new levels would marginally exceed the present situation. Anyhow, the localisation near the main highways in Trondheim seems in this perspective to

minimise the "problems" created by the traffic to the store. The increase will be so small, compared to the present traffic, that we can neglect the consequences. This shows the importance of choosing the right perspective, of choosing which network of objects you want to be included in. Otherwise, you could choose to belong to the dwellings. In this network, any increase of traffic in this area would probably be considered harmful.

If we take a closer look at the special analysis of traffic that accompanies the EIA documents, we see that the generated traffic is of considerable proportions, at least in other circumstances. The whole store is estimated to be visited by 1.127.000 persons per year. Of these, 920.000 persons are estimated to be visitors of the IKEA-part of it. Between 95 to 100% of the visitors is assessed to be using private cars, creating an extra traffic of 559.400 cars per year. The extra daily traffic is estimated to be an average of 3730 vehicles.

In this analysis, the 1 million potential customers or 500.00 cars, almost vanishes. The increase is considerable, but the capacity of the present roads and its standard, is so high that this increase is rated at most, to be a 75% load of the total capacity in rush hours. The noise generated by the traffic is estimated to increase, from 63,6 dB, to a mere 64,2 dB, but then including the building of walls suppressing the noise. Also, the levels of dust in the air (as PM10) and the pollution from burning petrol (as NO2) will be under the maximum value, as set by the national environmental authorities.

As the increase of traffic is one of the potential issues of conflict, these matters are deliberated more closely in the EIA-report. IKEA says it has arranged two public meetings<sup>25</sup> where all the neighbours have been invited. IKEA is also referring to other more informal meetings with some of the neighbours. In the end, three groups of neighbours filed objections to this plan; the industry, a transport firm, and the dwellers. The developer, IKEA, maintains that it had put considerable effort into finding mitigating measures to satisfy each of the neighbours (in the text called "special interests"), as to reduce the level of conflict. Such mitigating measures are also, in this text, called "conflict reducing solutions".

One serious objection was filed by the neighbouring industry, fearing for its accessibility to receive and deliver fresh produce. The EIA-report is referring to local problems of traffic (the word "problem" written with exclamation marks). They assert that:

*"The presence of IKEA in this area will not result in any inconvenience, compared to the present situation, because of improved connection to the main roads, improved accessibility to this area, and a larger parking capacity in this area".<sup>26</sup>*

A few pages later, IKEA is referring to the objections of the neighbours, in an interesting chapter on the site and its relations to its surroundings. The three neighbours, all strongly support the zero-alternative. Commenting this, the text reads on:

---

<sup>25</sup> For one reason or other, the word public is written within exclamation marks.

<sup>26</sup> Page 18.

*"Status quo is considered [by IKEA] as a non-realistic alternative. This site will be developed in some form, even if IKEA are allowed to do this, or not".<sup>27</sup>*

### 3.11. End story

The local municipality (conservative governed) sided with IKEA. The mayor declared to the local newspaper, *Adresseavisen*, that she did not comply with the provisions from the central authorities, which banned the development of new large stores over 3.000 sq.m. For her, and for the municipality, this was matter of principle, to demonstrate local autonomy and self-determination, against the central authorities. This was also, she said, a matter of stimulating local commerce and creating jobs.

But an opposition to the plan was also formed. The planned store was situated in the middle of an industrial area, mostly dairy products and agricultural merchandise. As prospective neighbours, and according to the EIA regulations, these neighbouring companies also commented the store plan. In their opinion, the traffic to and from this store would create difficulties for their own lorries and trailers in the same area. They stated that this problem was underestimated or even neglected in the present EIA documents from IKEA.

Finally, the local environmental NGO's plunged into this debate.<sup>28</sup> They had no grievances over the IKEA-store as such, but advocated the possibility for customers of using public transport in this particular setting. Situated at *Tunga*, some kilometres east of the city centre, the possibility for extensive use of public transport from the larger residential areas to the south and west was small, in their opinion. The consequence of building this store would therefore most certainly be even more use of private cars, and consequently the NGO's opposed the project.

Nevertheless, in the end, the local building council, approved IKEA's plans in mars 1999. The regional environmental authorities and the Ministry of Environment approved the EIA-report in 2000, and the IKEA-store is scheduled to open in late 2001.

## 4. Some concluding remarks

The case studies describe two controversial building projects from an environmental perspective. A highway and a store will unquestionably, one way or another, impact their surroundings. By reading these two EIA-reports, the EIA seem to be a method of mitigation, mainly in the direction of the so-called concerned or interested actors (neighbours and NGO's), and in the direction of mapping impacts on the environment.

---

<sup>27</sup> Page 21.

<sup>28</sup> Naturvernforbundet.

The analysis of these two different mitigations in the two EIA-reports leaves a strong impression of something very close to a window dressing. In both cases, it is strongly suggested that to realise the plans is better than doing nothing at all. Or it is something like carrying out a formal, statutory process devoid of any "real" significance for all parties involved. An interesting story omitted from the EIA-reports, is for example the description of the process of transformation of the original plans or ideas, while the mitigation took place, and thereby reinforcing the impression that of a more symmetrical mitigating process. The EIA-processes accounted for in the documents are extremely asymmetrical, where the concerned parties are offered no more than the prescribed "talking cure".

The mitigation directed towards nature seems to be the rather myopic concentration on statutory standards for noise, waste, exhaust etc., referring only to the actual project in question. No attempts on adding systemic effects from other sources are displayed in any of these documents, nor do we find any display of any effects in the long run.<sup>29</sup>

It is not clear, on the basis of studying the documents in these two cases, what the contribution of EIA is to the usual process of planning. It is possibly that the effects of doing EIA is more systemic, and also more detectable in the long run, than these two documents indicates. It is also possibly that other points of excursion can be more profitable to detect any changes, than the EIA-documents themselves.

In relation to technology policy we have observed that our initial assumptions to some extent were confirmed. EIA do create a kind of arena where actors may interact and negotiate, but this interaction will only to a small extent take place in the EIA documents. It is instigated by the EIA process, as this invites comments and actions outside the small constituency of builders and hired planners. The EIA creates space for (re)shaping of construction projects, but not to the extent that the principles behind EIA suggest. This is due to the fact that the rhetorical quality of EIA documents seems to be directed towards persuasion of authorities into saying yes, rather than to invite a sober, calm evaluation of the arguments pro and con.

The two cases in this paper also invite some comments regarding the way mobility concerns are catered in environmental impact assessments and transport planning. The Nordtangenten case is based on the unquestioned presumption that mobility will increase and transport volumes grow. Thus, this is a clear case of a self-fulfilling prophecy since the building of this road will facilitate traffic flow and consequently contribute to its increase.

The IKEA case is perhaps even more interesting in this respect, since we see how one is planning the building of a department store where the planning is based on a substantial increase in traffic volume. However, this is not considered to be a problem due to the large capacity of the road system in the area. The fact that this increase in traffic volume has repercussions throughout the transport system and also contributes to increases in the

---

<sup>29</sup> With one exception: The mapping of the system of commerce in Trondheim, in the IKEA-case, is far more elaborate than any descriptions of "the system of nature".

emission of CO<sub>2</sub> seems to be of no concern. Basically, increases in traffic volumes seem to be understood as part of the order of the day, it is a technical problem if the road system is unable to take care of it, but otherwise not. No wonder that traffic volumes continue to grow!

## References

Flyvbjerg, B (1998): *Rationality and power: Democracy in practice*, Chicago: Chicago University Press

Jansen, Alf-Inge (1989): *Makt og miljø: en studie av utforming av den statlige natur- og miljøvernpolitikken*, Oslo: Scandinavian University Press