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# Bridging the gap between research and planning practice concerning landscape in Swedish infrastructural planning

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#### ABSTRACT

A number of government documents provide for the fact that the surrounding landscape is to be considered when any infrastructure is built in Sweden. However, only certain aspects of the landscape are dealt within the various types of documents involved in the planning process. There has been considerable research into landscape, both in Sweden and abroad; unfortunately, however, this research has not been utilized by infrastructure planners. This paper discusses the reasons for this gap between research and planning practice as regards landscape, as well as problems with current infrastructure sector efforts concerning the landscape. Furthermore, the paper proposes ways in which current working methods can be changed by improving knowledge of the character of landscapes, a matter that is a structural element of the European Landscape Convention (ELC).

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#### Introduction

Many roads and railways are currently being planned and built in Europe, especially in the Eastern European states which are rapidly expanding. The construction of related infrastructure is one of the publicly financed activities that influence the landscape and people the most. People often have strong opinions on the introduction of such new infrastructure into their local residential environments. Travellers, for whom the scenery can be crucial in determining the travel experience, also have strong views on the matter. Both scenery and the residential environment are parts of the landscape. Many official documents have formulations concerning the landscape with which authorities must or should cope. One such document is the European Landscape Convention (ELC), which Sweden is slowly but surely on its way to ratify. ELC was signed on 20 October 2000 and came into force on 1 March 2004. In February 2008, 35 countries have ratified, accepted, approved or just signed the convention (Council of Europe, 2000, 2007), most of them only few years ago (Déjeant-Pons, 2006). Therefore, many countries have only recently begun to apply the ELC in their social structure. In Sweden, the important question of how the ELC should be implemented has currently been investigated by Sweden's National Heritage Board (Riksantikvarieämbetet, 2008). The

\* Tel.: +46 13 20 41 63/709 43 04 42; fax: +46 13 14 14 36. *E-mail address:* hans.antonson@vti.se. URL: http://www.vti.se/antonson. ELC, which is formulated from the citizens' perspective, will have significance for all types of land use issues.

Among other matters, the ELC stresses the interaction between man and nature. It should also be emphasized that not only especially designated and protected natural phenomena need to be planned, protected, and managed. However, during the planning process for roads and railways in Sweden, the landscape is rarely treated in accordance with the ELC. In fact, only certain landscape aspects are included in the various types of planning documents in the infrastructure sector, documents such as the Environmental Impact Assessment (EIA). The same situation has been observed in several European countries (Bond et al., 2004, p. 40, 43; Byron et al., 2000, p. 90; Simonsson, 2003, p. 40), so the present paper is therefore not only of Swedish interest.

This paper discusses how the landscape is handled in the Swedish infrastructure planning process. The topic comprises the relationships between research, planning practice, and policy. It deals especially with two questions: why landscape research is applied in such a limited way in the compilation of EIAs, and what the ELC can contribute to infrastructure planning. The paper discusses the landscape with reference to three major themes. The first concerns various landscape concepts and relevant policies concerning the landscapes that are of interest in the formal planning process. The second concerns the problems encountered in handling the landscape in the infrastructure sector. The third describes a tool which is one of several ways, in the infrastructure sector, to bridge the gap between research and planning practice concerning the landscape. The sector is still very technology-oriented and





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furthermore must initiate dialogue, in the form of consultation, with the general public, residents, and entrepreneurs in affected areas—i.e., actors and actor groups not at all used to discuss land-scape information. Bridging the research–planning gap necessarily involves knowledge about landscape character, inspired by previous research in the regional geography field.

#### The concepts of landscape

The infrastructure sector has worked with landscape issues in some form since 1987, when the requirement of an EIA was introduced by the Swedish National Road Administration (SFS, 1987a). There are, however, different ways of looking at the landscape, and in Swedish infrastructure planning there is limited awareness of this fact.

I propose to separate the landscape concept into three views: visual, relational and geographical/traditional. The first view of landscape considers the landscape from the outside, with a focus on its visual qualities. This view can be compared to remaining outside or beside the landscape, and looking at it as if it were a landscape painting, a stage, or a backdrop. The landscape thus becomes a way of seeing how different social groups have chosen to represent themselves (Cosgrove and Daniels, 1988; Cosgrove, 1993).

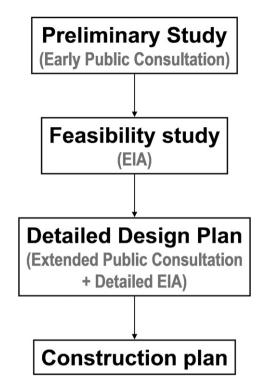
In the relational view of landscape, the landscape is instead observed from the inside by the people living in it, i.e., in a defined territory (Olwig, 1996; Jones, 2006). The way the landscape is perceived is thus based on people's collective values with regard to work, ethics, law, and customs. This view has a long tradition, finding expression as early as the Middle Ages in the provinces of the Scandinavian countries. The view also comprises place, an active tie between a person and the material environment, and forms a sense of identity and belonging (Tuan, 1974, 1979; Relph, 1976).

The focus of the geographical/traditional view is on the land and its structures, forms, and functions (Sauer, 1925; Hart, 1998). The land is the resource that, through work, constitutes the basis of biological production, which in its turn contributes to capital formation and the accumulation of fortune (Widgren, 2004). Certain researchers consider that this view attaches no importance to social contexts or processes; others are of the opposite opinion (Price and Lewis, 1993). Research into landscape history according to the traditional view has been as important as research taking a more comprehensive view—i.e., that the landscape is situated in the interplay between nature and people.

#### The formal planning process and relevant policies

The transportation infrastructure sector has a very formal planning procedure, with specific management routines and many regulations to consider. The planning process contains four major steps, according to the Roads Act of 1971 (SFS, 1971b) and the Rails Act of 1995 (SFS, 1971a). First, there is the Preliminary Study, in which the conditions applicable to further planning are briefly described. At this stage early consultations are also held. Second, the Feasibility Study examines alternative routes and has to contain an EIA. Third, there is the Detailed Design Plan that indicates how much land is needed for the chosen route. At this stage, broadened public consultation is required as well as a more detailed EIA. After this stage, the authorities make their decision and if the decision is positive, the road or railway can be built (see Fig. 1).

Landscape is just one of many issues the road builder must deal with. The work with landscape is based on the formulations – or



**Fig. 1.** The four major steps according to the planning process of new roads and railroads. The figure also shows the place for EIAs and when public consultations should be held.

rather the lack of formulations – set forth in a number of regulatory documents concerning the environment and land.

The most important of these documents is The Environmental Code (SFS, 1998), which prescribes the process for conducting an EIA, as well as its content. These formulations are in agreement with EU legislation from 1997 concerning EIA (Council of the European Union. 1997: European Parliament and the Council of the European Union, 2003). The EU legislation specifies that an EIA shall, inter alia, contain information regarding the direct and indirect impact of a planned activity or measure on animals, plants, land, the landscape, on the cultural environment, and on the management of land, water, and the physical environment in general. The anticipated environmental impact of any infrastructure shall be described. In addition to the Code, planners must also comply with 16 National Environmental Quality Objectives (Regeringen, 1998), some of which refer to the landscape. Besides, there are also the EIA handbooks of the Road Administration (Vägverket, 2002a,b, 2004), which, for example, describe the values affected, the mitigation methods to be used, as well as the Road Administration's own regulations and targets for nature, cultural heritage, and recreation (Vägverket, 1999, 2007).

As both the Road Administration and the Swedish National Railway Administration (Banverket) are central government authorities subordinate to the government offices, their activities are partially determined by (1) the national government's annual appropriation directives, which put appropriations at the disposal of the spending authorities and specify the allocation of the appropriated funds, and partially by (2) an ordinance containing instructions for the central government authorities, instructions that outline organizational rules, working methods, areas of activity, etc. In a review of these two types of documents for several authorities responsible for issues concerning land, landscape was found to be passed over in almost complete silence except in documents for Banverket—the Swedish National Railway AdminDownload English Version:

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