Ethics and responsibility within the construction industry


Abstract

All people face moral choices, it can be in private life, work, school or daily life. There are often rules and laws that guide us and declare how we should act in a specific situation. But how should we act in the "gray zone", where there are no clear guidelines and rules, where the boundaries between right and wrong are not so clear.

Like other industries, the construction industry is subjected to moral problems, and it is not always obvious what is right and wrong. Ethics and responsibility have become more important in the construction industry in the last years. Today, people have higher demands on their work situation and are more likely to pay attention to irregularities. Many construction companies are working with ethical issues, and develop systems and strategies in order to achieve better ethical actions.

The thesis is about ethics and responsibility in the construction industry. The thesis investigates problems and practical cases that have connections to ethical and moral issues. That has been done by choosing five different fields. These fields are “Environmental Threats”, “Gender”, “Security and accidents”, “Corruption”, and “Procurement and Tender”. Each field consists of a background part where facts and information are presented, after this a case is presented that represents an ethical problem for each field.

The study also investigates which factors that the construction industry should work with in order to achieve better ethical actions. This part is mainly based on interviews with researchers and people that are active in the construction industry.
Acknowledgement

This thesis is about ethics and responsibility within the construction industry in Sweden. It is written for the Department of Real Estate and Construction at the Royal Institute of Technology (KTH) in Stockholm. This work comprises 30 credits and will lead to a Master of Science degree, in construction project management.

We want to thank all people who have helped us and guided us through this process. First we want to thank our supervisor Tina Karrbom Gustavsson, Associate Professor (Docent) at KTH for the support during the thesis. After that, we want to thank everyone who has taken time and set up an interview to answer our questions.

Stockholm, June 2014

Hamad Amin
Hussein Al-Haddad
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1. Introduction

1.1 Background

This background provides a general introduction to the current ethical problems and challenges in the construction industry in order to give the reader a general understanding of the various ethical aspects that this thesis will focus on.

Ethics has become more important in the industry

Ethical and moral issues have become more important and highlighted in recent years in the construction industry. The employees have higher demands on their working conditions and want to influence their working environment, which usually leads that ethical aspects get involved (Proetica, 2014).

There are currently many large construction companies that deal with ethical issues, it has become a part of their agenda. The operators of these issues are especially the younger staff. Even though there is a lot of work occurring to increase morality of the companies, the ethical problems are far from solved (Leverbeck, 2012). Many construction managers want to highlight ethical issues. For example, 36 young construction managers are involved in a project where they worked through the network ”Ledarskapet” in order to reach to different companies to inform about ethical issues, the goal is to try to change attitudes around this field to develop the industry. The group has; for example, implemented ten ethical commandments on big construction companies. The commandments mean that the employees should be proud of their work and to treat colleagues in a good way and also to pay attention to irregularities. After having worked with big construction companies, the group has focused more into the smaller ones (Karlsson, 2005).

Different ethical areas within the industry

The construction industry is considered to be more vulnerable than other sectors. The industry is for example most affected by corruption among all sectors in Sweden (Fastighetstidning, 2012). Other critical areas include accidents where many people die and get damaged, the accidents just continues to occur (Fransson M., 2012). Moreover, the construction industry has a challenge regarding gender. Today, the industry is dominated by men and all big construction companies in Sweden are led by men (Olsson-Lindh, 2013).

Another important ethical area is environmental threats. Harming the environment is regarded as immoral act, and has evolved into a special class of business ethical problems. Concern for the environment is primarily based on concerns about human survival but has also become a matter of individual benefit, since environmental consequences affect the living people. The difficult part concerning this issue is that it is difficult to apply in practice, because there are no clear standards on how to act (Gustafsson, 1988).
1.2 Problem definition

It is clear from the background part that ethics in the construction industry is a growing field that the industry perceives as important, there are many who want to pay attention to ethical and moral problems within the industry and work to resolve them.

It is also shown from the background part that the industry is subjected to various types of ethical problems, thus it is interesting to examine ethical problems and cases in the industry. Moreover, since the industry strives to combat ethical problems, it is interesting to find out what factors that are important to work with in order to achieve better moral actions.

1.3 Objectives of the study

The study has two objectives:

1) To highlight some ethical cases within the construction industry.

2) To investigate which factors that the industry should work with in order to achieve better ethical actions.

1.4 Purpose of the thesis

The purpose of the study is to give the reader a greater insight and awareness about the problems and challenges regarding ethics in the construction industry and what aspects that is important to work with to improve this field.

The purpose is also that parts of the thesis shall function as an educational and discussion material for students that are taking courses in construction project management at KTH.

1.5 The significance of the study

Ethical and moral aspects in a workplace create certainly conditions for successful business. Because moral actions lead to avoidance of falling in economic and legal disputes. Companies which focus on moral issues will certainly become more popular, since the employees will have their rights more secured and can expect a good working environment where the individuals are on focus.

Furthermore, striving for better ethics allows to improve innovative process approaches and to implement those when there is trust in the organization. In addition, it has become increasingly more popular with newer forms of collaboration where the goal is exploit the parties competences by confidence building. That the parties have good ethics is the basis for such cooperation to succeed (Toolanen, 2014).
1.6 Limitations

1.6.1 Scope

Since the subject of ethics in the industry is very wide, the study will focus on five ethical fields, these are:

- Environmental threats
- Gender
- Security and accidents
- Corruption
- Procurement and tendering

Another limitation is that the study will focus on which factors that is important to work with in order to achieve a higher ethical conduct. The study will not focus on how each factor should be treated since that requires a deep analyze and requires a whole comprehensive study, but rather to identify common aspects between the different fields that the industry should focus on to make better ethical actions.

1.6.2 Location and time

The work is written at the Royal Institute of Technology (KTH) in Stockholm. Interviews that have been made have also taken place in Stockholm. The study is aim to investigate the construction industry in Sweden, which mean that the results might be different if the industry is investigated in another country.

The master thesis corresponded to 20 weeks full-time study, 30 credits for each author. The limitation in time lead that the work was limited to examining some certain ethical subjects and that the study highlights various factors that are important to work with to achieve higher ethical conduct without going into detail on how these factors should be treated.

1.6.3 The interviews

One limitation is that it is difficult to get enough desired interviews because some people do not want or have opportunity to do interviews. Sometimes, it is difficult to get interviews with desired people who have specific positions in the company. Most of the interviews were done with big construction companies since it was easier to contact them and get opportunity for an interview, the results might have been different if mainly smaller companies were interviewed.

1.6.4 The authors

The backgrounds of the authors and the courses they have studied at KTH have contributed to the selection of these various fields of ethics. The analyze and discussions are also based on the knowledge that the authors have in construction processes, project management and communication.
Having another background might have led to another focus or to highlighting other ethical aspects in a larger scale, for instance a behaviorist world certainly focus more on how behaviors and attitudes can be improved within companies.

1.7 Why these five ethical fields?

The reason of choosing these five fields is that they have been discussed during courses at KTH which the writers have completed. These subjects are also present in media and debates and can thus be seen as representative for ethical issues within the industry and regarded as an interesting research and discussion material.

Moreover, the authors strive to have a variation of subjects so that they are not only about similar areas. Having several various subjects is because the authors want to get an overall picture and to be able to catch the applications of ethics in the industry in a broader scale.

1.8 Disposition and content

1.8.1 Introduction

This part begins with the report’s background. The background gives the reader an overall picture of how the construction industry is today regarding ethics and responsibility aspects. It is supposed that the reader will get an overview and understanding of the problems and challenges which will be helpful in understanding the later chapters.

This part also contains objectives, purpose, limitations and disposition and content. These were important points throughout the process for authors.

1.8.2 Method

The authors present which approach and methodology that are used to conduct the work. The research structure is described under this heading, validity and reliability are also concerned.

1.8.3 Theory and literature study

This part provides the reader with a greater understanding regarding current theories of ethics and morality. The reader gets an insight into the historical perspective behind the two aspects, and ethical theories will be presented closer. Theories behind responsibility will also be presented since this report covers both ethics and responsibility. The environment also affects one's behavior in different situations, therefore, behaviorist’s perspective is treated. Learning from social factors affect our actions and this will also be included in order to strengthen the theory and understanding of the reader.
After this part, five chapters will follow, that represent ethical fields in the industry. Each chapter consists of the following parts: Background, cases, questions, interviews, analyzes and conclusion. The following is the content of each of these parts:

1.8.4 Background

The background is intended to give the reader overviews about ethical problems, their history, statistics, challenges etc. The background will give the reader a greater insight into the current situation in the construction industry, and for each chapter of the five selected, there is a background that is relevant to the subject that will be followed.

1.8.5 Cases

The cases are mainly intended to answer the first objective, which is to highlight cases that have ethical connections within the industry. The cases are supposed to be a discussion material for students. Five different cases have been selected.

The first case is about the “million program” houses and the challenges with the renovation, this is related to the topic, environmental threats.

The second case is about two women who have been harassed and discriminated by men. This relate to the topic gender.

The third case is about an incident that occurred at the company Nordkalk in Luleå, where one of the employees lost his life in a tragic accident and seven others received burn injuries on their body. This relate to the topic security and accidents.

The fourth case involves the construction company Peab's bribery scandal. Peab have been accused of bribery since they have offered dinners, music event, and hockey match to municipal officials in Falun in order to secure a contract. This topic is related to the corruption chapter

The fifth case is about Hallandsås tunnel which has become one of Sweden's most expensive and delayed projects of all time, this is because they did not invest enough resources on the geological investigations which later proved to be very costly for the project. This concerns the subject procurement and tender.

1.8.6 Questions

This part includes practical questions with problems and dilemmas. Having questions after each case is because parts from this thesis will be used as a discussion material for students.
1.8.7 Interviews

For each case, interviews have been conducted in order to gain a greater understanding of how the industry relates to the five selected cases, the strategies and factors that they think are important to work with to combat the ethical problems.

1.8.8 Analyze

For each case there is a following analyze to compile the study and by using the collected material to answer the questions that have been formulated in the purpose. This is done to give the reader a greater understanding of what has been accomplished regarding each chapter.

1.8.9 Conclusion

The conclusion is composed of a number of points that the authors consider important. These points are the identified factors that the industry should work with in order to improve ethical conduct.

1.8.10 Final discussion and analyze

After the five chapters, a final discussion and an analyze is done. The final discussion is about linking, and making summary and conclusions of the five selected fields.

1.8.11 Proposal for further research

Since this study opens up new interesting subjects regarding ethics and responsibility in the industry, the authors have made a list with suggestions about further research and what they think would be interesting subjects to investigate.
2. Methodology

2.1 Research methods

In the modern scientific research there are two main scientific philosophies, positivism and hermeneutics. Positivism is considered to be the fundamental principle of true knowledge, the thinking is based on "facts", and thus the knowledge is based on sensory experience (Patel, 2003).

Hermeneutics is the opposite of positivism. Unlike positivists, the researcher is not interested in explaining phenomena. The research is based on interpretations of experiences where the researcher use own subjective understanding. The basis for the interpretations is the researcher’s impressions, feelings, thoughts and knowledge. The research method focuses more on the whole picture than to understand each part of a research object (Patel, 2003).

This study has the positivist research method as a starting point since the study focus more on concrete facts regarding problems and challenges in the construction industry, without including own interpretations based on own impressions and feelings. But of course, people that will be interviewed will have their own opinions and impressions, but the authors will not interpret their answers and make own explanation.

The study is based on secondary sources. Secondary sources are based on primary sources, which in turn represent the original materials. These primary sources are closely related to the original event, or phenomenon that is studied (mdh, 2014)

The secondary sources are used in the background parts and also the part “Theory and literature study”. The facts and information in these parts has been gained from books, journals, reports and websites.

2.2 The reason behind the used methods

The background parts in each field and the cases will be based on journals, websites, reports and books.

The reason of choosing this course of action regarding background is because the background part will include historical facts and statistics which are easier to get from a literature study than from researchers or people in the industry, because they might not have so much knowledge about these issues. It is also more appropriate to get insight of the challenges and problems by using different literature sources since this kind of material is more accessible in this kind of sources.

The cases are mainly intended to answer the first objective, which is to highlight problems that have ethical connections within the industry. Choosing to get information about cases from journals, websites and reports is because that will give a more comprehensive picture about the case for each field. Interviewing people about such issues might not give a reliable picture since these people might represent companies and thus do not want admit problems and cases that have occurred within the company.
Interviews with researchers and people in the construction industry aim to primarily answer the second objective, which is to identify the factors that are important to work with to promote ethical behavior in the industry. Why choosing this way is because people who have insight in the industry will certainly have ideas and opinions about what should be done to improve ethical awareness and actions. That is because they are working with real cases and projects and will thus know what aspects that the industry need to focus on to promote ethics. Doing surveys with managers to get such information is considered to not be effective, since such issues requires deep information and reasoning, the surveys usually do not give room for this kind of analyze. Furthermore, interviews gives the possibility to ask follow-up questions and to clarify things which is important to get reliable and clear information.

Of course the interview part will also include the interviewees’ perspective of the problems and challenges within the company and other facts, for instance the vision of the company and how the company worked earlier with the specific issues. This is to get a broader perspective of the industry and a more comprehensive picture about problems and challenges.

The following is the disposition and way of working regarding the chapters in the thesis:

<table>
<thead>
<tr>
<th>Sectioning of each chapter</th>
<th>Background</th>
<th>Case</th>
<th>Questions</th>
<th>Interviews</th>
<th>Analyze</th>
<th>Conclusion</th>
</tr>
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<tbody>
<tr>
<td>Which objective that is primarily treated</td>
<td>1 &amp; 2</td>
<td>1</td>
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<td>2</td>
<td>1 &amp; 2</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>The way of getting information, facts etc.</td>
<td>Journals, websites, reports and books etc.</td>
<td>Journals, websites, reports and books etc.</td>
<td>By the authors</td>
<td>Interviews with researchers and people working in the industry</td>
<td>By the authors</td>
<td>By the authors</td>
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</table>

### 2.3 Interviews

Face to face interviews will also be part of the research; the interviews will be performed with people in the construction industry who are involved and have interest in the ethical subject. The questions that are asked will be open-ended and the time for each interview will be limited to about 30 minutes, this is considered as enough time to get material from the interviewees and making longer interviews might tire them out. Since the time is limited, it is important to formulate well thought-out questions. The strategy that will be used to interview the people who are interesting for the study will be done by calling them first and present the purpose of the study shortly. After getting their interest, they will receive an email for further details about the interview and the questions that they will be asked.
The following is a representation of the position of the interviewees and which company they work for. Their background is also included and the source for the information in the background is their LinkedIn Profile.

The interviewees will be anonymous as it might be sensitive information that they say, and also because their name and gender is irrelevant regarding the purpose of the study. The interviewee number 1 will be named I1, number 2 will be I2 and so on.

The selection of each person is mainly based on the person’s experience and position. These two factors must be relevant to the investigated ethical field.

**-Environmental threats -**

<table>
<thead>
<tr>
<th>Naming:</th>
<th>I1</th>
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<tbody>
<tr>
<td>The interviewee number 1</td>
<td></td>
</tr>
<tr>
<td>Position and company:</td>
<td>Environmental Manager at NCC.</td>
</tr>
<tr>
<td>Background:</td>
<td>The interviewee number 1 (I1) has several years of experience regarding environmental efforts in the construction industry. This person has worked at two of Sweden's greatest construction companies, NCC and Skanska. I1 has worked as environmental manager at NCC during the past 14 years.</td>
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<tr>
<th>Naming:</th>
<th>I2</th>
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<tbody>
<tr>
<td>The interviewee number 2</td>
<td></td>
</tr>
<tr>
<td>Position and company:</td>
<td>Business Development Manager at NCC.</td>
</tr>
<tr>
<td>Background:</td>
<td>I2 is originally educated as an architect, and has previously worked for Skanska with business development in various sustainability projects. Today, I2 works with business development at NCC. This person has been working with sustainability in construction industry. I2 is the main person behind many of Skanska sustainability projects, during the person’s recent mission at Skansa, I2 worked on the development project called “a million home”, a renovation concept for the Swedish million programs.</td>
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<tr>
<th>Naming:</th>
<th>I3</th>
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</thead>
<tbody>
<tr>
<td>The interviewee number 3</td>
<td></td>
</tr>
<tr>
<td>Position and company:</td>
<td>Research leader at KTH.</td>
</tr>
<tr>
<td>Background:</td>
<td>I3 works as a researcher at KTH today and is doing research on helping housing associations in renovation projects, so that they are carried out in an environmentally sustainable manner.</td>
</tr>
</tbody>
</table>
### Gender

<table>
<thead>
<tr>
<th>Naming: The interviewee number 4</th>
<th>I4</th>
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</thead>
<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Diversity manager at Skanska</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I4 has previously worked as an Associate Professor (Docent) at KTH, the person has also worked as Diversity Director at Volvo Group. Moreover, I4 has been guest lecturer at twice at Stanford University.</td>
</tr>
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<table>
<thead>
<tr>
<th>Naming: The interviewee number 5</th>
<th>I5</th>
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</thead>
<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>HR Director at JM.</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I5 has for many years worked as HR. The person has worked at JM during the last three years.</td>
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### Security and accidents

<table>
<thead>
<tr>
<th>Naming: The interviewee number 6</th>
<th>I6</th>
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<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Responsible for security and safety at Skanska.</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>Has for several years been responsible for Skanska's safety and environmental work to develop strategies and ensure that the work is in accordance with prevailing laws and regulations.</td>
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<tr>
<th>Naming: The interviewee Number 7</th>
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<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Vice President Health and Safety at NCC.</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I7 has many years’ experience in security issues in the construction industry and he has worked in this field for several different companies. Since 2012 I7 works as Vice President of Health and Safety at NCC, and has focused a lot on getting the company to a more centralized activities concerning safety on construction sites.</td>
</tr>
</tbody>
</table>
### Corruption

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<th>Naming: The interviewee number 8</th>
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</thead>
<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Chief Security Officer (CSO) at Peab.</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I8 has 15 years’ experience as a police officer before working as a CSO at Peab for 4 years ago. The person is responsible for the enforcement of Peab's operations at the regional level.</td>
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<tr>
<th>Naming: The interviewee number 9</th>
<th>I9</th>
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</thead>
<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Regional Manager at ÅF-Infrastructure</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I9 has worked as regional manager at ÅF since 2003. The person has also worked for many years as manager and project manager on several different construction companies.</td>
</tr>
</tbody>
</table>

### Procurement and tender

<table>
<thead>
<tr>
<th>Naming: The interviewee number 10</th>
<th>I10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Project Coordinator at Akademiska Hus</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I10 has over the last 9 years worked as project manager and project coordinator at Akademiska Hus. The person has several years of experience regarding procurement and tendering because of the persons position within the company.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Naming: The interviewee number 11</th>
<th>I11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position and company:</strong></td>
<td>Purchasing manager at Trafikverket</td>
</tr>
<tr>
<td><strong>Background:</strong></td>
<td>I11 has worked as a director at the Swedish Transport Administration, and also as director at the Swedish engineers’ administration. The person has also worked as procurement and contract manager at the Railway Administration.</td>
</tr>
</tbody>
</table>
2.4 Validity and Reliability

Validity means the extent to which a measuring instrument measures what it intended to be measured; it can be described as the absence of systematic measurement errors (NE, Validitet, 2014). The validity of the used methods is considered to be high, since the investigation will be based on information and facts from serious sources and thus will capture the issues that are of interest regarding ethical aspects. To get serious sources, the authors will critically examine the information and facts before using them, the starting point is to use sources from established and knowledgeable people who have insight in the industry. Reports and websites from “certified” sources such as state authorities and institutes will be used.

Also interviews are a good form to get information and this method is considered to have a high validity if it is done in a good way with clear questions and without leading the interviewees to specific answers. To achieve a high validity from doing interviews, it is of importance to make time for doing questions in a clear way that captures the issues that are relevant. The questions should be formulated in a neutral way in order to avoid leading the interviewees into specific thoughts or opinions.

Reliability is a measure of how strongly or reliably the measured values are (NE, Reliabilitet, 2014). The reliability will be high if different people are included in the interviews. This means that you do not leave anything to chance, to occasional odd beliefs, but to get an overall picture of what the problem and challenges are.

When doing interviews, it is important to consider bias and be critical to the gained information. The people from the industry might represent a company, and thus might not want to admit bad things about the management and try to beautify the reality. This is known as social desirability bias.

2.5 Project proceeding

The study will be performed during the period January-May 2014. During this period the authors will participate in four seminars at KTH, which aims to discuss and exchange views and feedback on the work with the supervisor and other students.

The first step is to make a literature review, which aims to collect secondary data and useful facts about the research field. Such information will be collected from books, articles and websites. Also other thesis in this field will be helpful. The way of research will be determined and most of the introduction and method part will be written.

The second stage is to present the relevant theories and backgrounds which are connected to the fields. The third stage is to present real practical cases from the construction industries which are characterized by ethical issues. The fourth step is to make interviews with people who have knowledge in the fields in order to get a wider perspective about the challenges and what aspects that are important to work with to achieve a higher ethical conduct.
The fifth step is to discuss and analyze the results from the study for each field and to make a conclusion. At the end, the authors will analyze and discuss common aspects that has been found and that are considered as important to the industry to work with to achieve higher ethical actions.
## 2.6 Timetable

The following table shows the different steps and what to do in each period:

<table>
<thead>
<tr>
<th>Step</th>
<th>Period</th>
<th>What to do</th>
</tr>
</thead>
</table>
| 1    | Jan    | A proceeding plan  
|      |        | A literature review will been done. Secondary data and information about the fields will be collected from different sources such as books, articles and websites.  
|      |        | The introduction and most of the method part will be written. |
| 2    | Feb    | Relevant theories from the collected information and facts will be presented in the thesis. Choosing different cases which are of interest. Start to write ethical cases. |
| 3    | Mars   | Continue writing ethical cases, and make preparation for the interviews. |
| 4    | Apr    | The interviews will take place, information from the interviews will be presented. Start writing analyze of each chapter. |
| 5    | May    | Continue writing the analyze parts and making conclusions.  
|      |        | Write a final discussion and analyze part, edit and correct errors in the report, fix the layout, abstract, references, attachments etc.  
|      |        | Hand in the thesis |
3. Theory and literature study

3.1 Ethics and moral

Ethics comes from the Greek word ἔθικo's which means custom. Ethics refer to the theoretical reflection on morality and its basis. It deals with the question of how we ideally should think and behave in problem situations (Ne, Etik, 2014)

Many people may equate ethics with emotions. But ethics is not about following one's emotions and consider it as a basis for an action, because emotions can lead to negative consequences and bad actions. It is also not the same thing as religion. Most religions advocate high standards of ethics, but ethics is also important for non-believers. Ethics is not the same as following the laws of a society, because laws can be unethical, such as the apartheid laws in South Africa. Finally, ethics is not the same as doing what is socially accepted. Most people in a community may have standards that are ethical, but it can happen that a whole society becomes unethical in their behavior, for instance as Nazi Germany. So, what is ethic about? (mdh, 2012).

Ethics is based on well-founded standards of what is right and wrong when it comes to human actions. Examples of such standards are that one should refrain from murder, theft, fraud, etc. Virtues such as honesty and loyal can also be considered as standards. Ethics is also associated with the process of thinking and developing own standards of behavior. Emotions, laws and social norms may deviate from what is ethical. It is therefore necessary to continuously rethink about the own standards so that they are reasonable and well-founded. Ethics emphasizes that individuals should make own efforts in order to examine their own beliefs about how to act correctly (mdh, 2012).

While ethics deals with the theoretical aspect, morality focuses on practical actions of individuals in different situations. It is possible to have good ethics (rules of life at a high level) but a bad moral (behave badly and break the good ethical rules) (Mossberg, 2013). Conflicts can occur between ethics and moral, an example of a conflict is when a lawyer defends a murder. The morals may tell her that murder is reprehensible and that murderers should be punished, but the ethics requires that the lawyer defend him, even if he is guilty (Diffen, 2013).

People have always pondered about our behavior and conduct, we are guided by some kind of authoritarian moral principle, and this tells us how we should act in a given situation. A "good" person is considered to be a person who behaves morally correct and an "evil" person is considered to be a person whose conduct in a given situation is reprehensible. Morality is thus a measure of human behavior, and for most of us it is not difficult to determine whether a human behave morally correct in a given situation. Humans beings have a natural ability to distinguish right from wrong (Getsemane, 2013).

When questions of morality are discussed, a behavior can be divided in the following three steps:

What has happened before - the purpose, (usually limited in time).
What is happening now - The action (usually limited in time).
What will happen after - The results, effects, consequences (not always clearly separated in time). (Mossberg, 2013)
3.2 Historical review

In antiquity, many ethical issues were formulated that moral philosophers would continue to deal with for years to come. The ancient ethics was based on the question of what the ultimate life goals are and what life happiness is about. The philosophers developed rules and virtues that help to achieve these goals. Supporters of the philosophical approach stoicism believed that it is the wisdom which is the highest virtue, which is also considered to be the life goal. The Epicurean school also emphasized the importance of wisdom, but believed that it was the greatest possible pleasure and absence of pain that was the human life goal (Ne, Etik, 2014)

A new epoch in ethics begins with Christianity. Ancient ethics never had a clear concept of the relation between God and human, of the destiny of man, of the nature and meaning of the moral law. Christianity was first to highlight such questions. St. Paul teaches (Rom., ii, 24 sq.) that God has written his moral law in the hearts of all men, even of those who did not belong to Christianity. This moral law is a norm that God will judge mankind for on the judgment day (Open-site, 2013).

In the newer moral philosophy from the 1700s and onwards, the discussions has often been about the criterions of a right behavior. Philosophers such as Jeremy Bentham and John Stuart Mill believed that an action is correct, if it helps to maximize good consequences in terms of happiness over suffering. The German philosopher Immanuel Kant had a different view; he believed that morality must be based on something other than authority figures and utility. Kant argued that what made an action moral is that it is based on a moral law, he said that one should "Act only according to that maxim whereby you can, at the same time, will that it should've become a universal law" (Ne, Etik, 2014).

Also todays debates within philosophical ethics is characterized by arguments between what is the criterion of right moral action (Ne, Etik, 2014)

3.3 Ethical theories

Today, there are many types of ethical theories. The four most common are: Ethics of conviction, deontological ethics, consequential ethics and virtue ethics (Mossberg, 2013).

The ethic of conviction means that the moral value of an action is determined by the intention or motive, if an action is performed by the good will as a base then the behavior is considered as right, even if the consequences are bad. For example, it is illegal to steal but if someone steals in a good cause then the action is considered to be good, such as “taking from the rich and giving to the poor (RÅD, 2008).

Deontological ethics determines the righteousness of an action depending on whether the action is in line with the rules of duty or not. For example, it is always wrong to kill people, even if this turns out to be a malicious child murderer, or if you kill in self-defense. "Killing” is wrong because there is a law that says you not allowed to kill (RÅD, 2008).

Consequential ethics is an ethical theory which focuses on the consequences of an action in order to determine whether it was right or wrong, usually comparing the impact of other options with the selected action. The maximizing form of this ethic is often identified with utilitarianism, which means
that the right action is the one that maximizes the utility. An example of this ethic is that it is illegal to kill another human being. But if there is a malicious child murderer, then the effect of killing him/her will be that no more children will be murdered. If you kill in self-defense, the consequence is that you will survive. According to this theory, you do something right when the consequence is good (Ahlbom, 2013).

The opposite of consequential ethics is the deontological ethics, which consider that some actions - such as murder – should not be committed even if they lead to better consequences than other options (Ahlbom, 2013).

Virtue ethics do not focus on which action that is right or wrong but instead tries to answer how we should be as people. The action is not considered to be the main issue; the main question is what kind of person you want to be. Virtue ethics mean that, good people do good actions. In order to become good, we have to work with our characters and consider the motives we have with what we do. According to this theory, we get our ethics primarily from others’ best practices. A person who is virtuous should reason about both rules and consequences (Forskning, 2014). The approach of virtue ethics is mainly to divide the human character in different character traits, which some is regarded as morally tractable, virtues, while others are considered to be morally reprehensible. A problem that exists with virtue ethics is the lack of respect to situations where virtuous persons are performing atrocious acts and persons who are mischievous and performs virtuous actions (Cyclopedia, 2013).

### 3.4 Research areas

There are different research areas in the field of ethics, depending on what kind of questions that are investigated and in what way the investigation is done. The four common types of ethical areas are:

1) Normative ethics, which investigates the kind of behaviors that is most correct or appropriate. This kind of ethics are intended to provide guidance in choice situations by clarifying various action alternatives, and giving arguments for or against them to answer what is the right principle of action.

2) Moral science, which examines the moral phenomena and its relation to psychology, biology, history and social background

3) Moral theology, which investigates the relationship between the actions and their connection to religious beliefs and other philosophies.

4) Meta-ethics, which deals with theoretical problems raised by moral phenomena and ideas, as well as statements about them.

There are no clearly defined boundaries between these areas; it may be that several of these areas are used in the analysis of ethical issues (Ne, Etik, 2014)
3.5 Applied ethics

The part where ethicists investigate and attempt to create thoughtful ethical theories are called normative ethics. The purpose of normative ethics is to teach us how to act morally right. When ethicists try to show how different ethical theories work, they often use fictitious and rather extreme moral situations so that there is a conflict or a dilemma where it is unclear what action that is right. This is done to make it easier to see the different theories and unwanted consequences (Nordström, 2014).

The interest of ethics has increased enormously over the years and focuses on various areas of application. A field where it has been widely reported is in medical, but also within environmental debates. Ethical issues have been widely reported in other areas too, for example politics, social structure, economy, gender roles, research and technological development (Ne, Etik, 2014).

3.6 Ethics at various levels of development

Many claim that training in ethics is pointless and mean that either a person is ethical or not, they cannot learn that. The great Greek philosopher Socrates discussed ethics and he had a different view. He stated that ethics involves knowing what to do, and such thing can be learned. Most ethics scholars agree with Socrates. However, different levels of ethics distinguished depending on how receptive a person is, and this is linked to a person's age and development (mdh, 2012).

Ethics exist at different levels in humans, on the first level of development is the child. The characteristics of this level are the belief in authority and control through rewards and punishments, and some people will be at this level for life. But normally people achieved another level in adulthood. What determines what is right and wrong is now based on group loyalties, for example, family, friends, nation, or profession. When a person continues to evolve, this person will reach a level where moral principles have a more universal meaning. Instead of family, friends or nation, ethics will be more related to human rights, welfare, democracy, etc (mdh, 2012).

There are factors that can stimulate or inhibit an individual’s development between the various stages, factors that stimulate this development are training and research. In the research field, more and more areas have developed ethical standards, which in turn affect the researchers and the investigators work. For example the standards declare which people that you are allowed to contact, what is appropriate to ask about and how to spread the results of an investigation (mdh, 2012).

3.7 The importance of responsibility

Responsibility is a concept that is often used when discussing moral and ethical issues. Moral responsibility is a central part in a business practice. The concept of responsibility has many different explanations, one of them is that responsibility can be seen as an obligation to respond and take care of things, property, people etc. The assessment of our responsibility should be connected with questions about meaning and value: What means a good life? What represents a rich social life and a good
society? It is about finding and giving meaning to life for both the individual and for others. To be able to take responsibility in business activities, it is important that there are articulated ethical values and ethical forms of collaboration. Responsibility can be seen as a virtue and can be adapted depending on the situation but should not be relative (Kåreklint, 2008).

Most researchers agree that the moral responsibility is primarily private taken for others and for oneself, as an individual or in a role as a worker in an organization. Being able to take responsibility and understand its meaning is based on having knowledge about it. Therefore, there are several models, concepts and ethical theories that provide guidance on how to act morally. People who are often portrayed as morally responsible are whistleblowers. There are various definitions of whistleblowers, one of them is: “One who speaks out against illegal or unethical practices in the organization where he or she works”. The stories of the whistleblowers are characterize by the feeling of having no choice but to act, which usually occurs contrary to the organization's demands for loyalty (Kåreklint, 2008).

The concept of conscience is central to understand what characterizes a moral responsibility. Motives, needs, or desires cannot explain the conscience. It can neither be explained by the way of thinking that builds our values. Conscience is rather the ability to see or to pay attention: to listen to the own conscience is to understand the meaning of an action. A person without any conscious will not be better by getting more knowledge or new values (Kåreklint, 2008).

3.8 The behavioristic perspective

Behaviorists focus on how people are formed by the environment. They consider a newborn like a blank paper where the environment and the personal experiences throughout life contribute to create personality and character. According to this perspective, learning is a process in which the individual adapt to the circumstances of the environment. Behaviorists focus on how people learn. There are mainly four ways of learning that are often highlighted: Habituation, classical conditioning, operant conditioning and social learning (Arosues, 2013).

Habituation means that regularly occurring or repeated stimulation is eventually no longer noticed. An example is when a person moves into a house near a railway and have initially problem to sleep because of the passing trains, but after a while no longer notice them (Ne, Betingning, 2013).

In classical conditioning, the starting point is a natural reflex, for example salivation when eating. The reflex is considered as an unconditioned response and the stimulation that naturally triggers a reflex as unconditioned stimulation (Cherry, 2013).

Operant conditioning means that behaviors can be strengthened or weakened depending on the consequences of the behavior. Through reinforcement, a response and a stimulus can be linked. An example of this is when children do their homework and get a reward from its parents. The reward reinforces the action and willingness to do homework (Cherry, 2013).

Social learning states that a behavior is learned from the environment through observational learning. Humans are not considered to be a machine without a will, instead the theory emphasize that humans have ability to plan, think and predict possible consequences (Arosues, 2013).
Understanding the behavioristic perspective leads to an understanding of how learning is and why some people act in the way that they do. That in turn will make it possible to use the knowledge in everyday life in order to change own behaviors and to pay attention to irregularities from other people (Arosues, 2013)

3.9 Learning from social contexts

Human learning not only takes place individually but also in social contexts. We learn from each other, we observe and imitate. Usually it is easier to show another person how to do something rather than explain (Arosues, 2013).

It was the social psychologist Alber Bandura who linked the behaviourist theories with the cognitive in order to create the concept of social learning theory. Social learning is about learning, and learning itself requires attention, memory and motivation to work. We observe how others people act in a situation, we analyse their behaviours and imitate if the behaviour is beneficial. There are three requirement conditions for learning. The first is attention and memory. In order to be able to learn anything of any person you must be attentive to it, which is why we are more capable to pay attention to people who attract attention, such as, celebrities, people with higher status, etc. When we are tired, sick or distracted our learning capacity will be reduced since that, we are not as attentive. It not enough to just pay attention to a behaviour and realize its advantages, you have to remember it to recreate it later on. People save events in terms of internal mental images and linguistic descriptions. The second is, physically re-enactment. When individuals remember a behaviour then they try to accomplish it, sometimes they do not have the ability to do what they observed. It is not easy to imitate something performed by a professional such as a stuntman. The third is motivation. People do not assimilate all behaviour they see, they must be motivated to perform the action. The motivation might be that some behaviour has given reinforcement to those who performed it and thus it is motivating to do the same (Arosues, 2013).

There is constant interaction between human behavior and that makes the learning process complicated. When a person imitates another's behavior, the person is affecting the world around with this, and the external response to the behavior may in turn affect the person's own behavior. When learning something new, the genes are not affected. Thus, it is not possible to genetically transfer learnings that are gained through experience. But, if a learned behavior makes it easier to integrate with the surrounding, then the chances of reproduction and survival are likely higher from an evolutionary perspective (Aroseus, 2013).

3.10 Ethics in the construction industry

Ethical and moral issues have become more important in recent years in the construction industry. For example, in 2011, representatives from some of the world’s leading construction companies met at the House of Lords in Britain. They discussed ethical issues and the challenges that the industry faces. The vast majority of the companies stated that there are many ethical challenges and that the companies face and that they could do more to manage the problems (Goodcorporation, 2011).
In many businesses, there are professional ethics, which is a set of rules that professionals use when they are working. Business ethics is an ethics that everyone in the company should be able to follow regardless position within the company. It consists of a set of rules and standards that in detail shows how the employees should behave in different situations. The rules that are set up can be positive, ie, duties and obligations, and negative that is formulated as prohibition and rejection. Sometimes they are called "codes of conduct". Company ethics should be applied in specific positions, for example, when it comes to treatment, information processing, representation and so on. This scope of work must be done continuously and the company must regularly review the norms and rules when circumstances change (Proetica, 2014).

3.11 People's view regarding the industry

A public survey from the Swedish Construction Federation, made in 2012 shows that 25 percent of the respondents have fairly or very small trust to the Swedish construction industry, which is a loss in confidence compared to the measurement in 2006 when the proportion was 17 percent. The Tax Agency conducted in spring 2012 an attitude survey among citizens and companies in order to explore public approach to taxation and tax evasion. The survey reveals a reduced acceptance (compared to previous Survey) to unreported employment and corruption (Wersäll, 2011)

3.12 The industry is often subjected to irregularities

The construction industry is considered to be more vulnerable and subjected to irregularities than other sectors in Sweden. (Fastighetstidning, 2012). Why the industry is often a victim of unethical behaviors is mainly due to the increased complexity of this industry in which different actors are involved in the projects and where processes take a long time to implement. This makes it difficult for the management to observe and control all actors and processes. Moreover, the competition between companies has increased in this industry. These difficulties have in turn led to increased irregularities in order to achieve the desired results. Other factors are the industry culture, where the culture is characterized by ideals of loyalty and confidentiality. Therefore many employees avoid reporting irregularities to the management. A common phenomenon is the prevalence of informal networks between different actors, which give room for unethical actions. The industry is also sensitive to the economic situation and costs often involve large amounts, which gives the ability to hide bribes and then blame that on other factors (Wersäll, 2011).

3.13 Measurements to combat irregularities

Many companies have also joined the ID06 which stands for “Compulsory ID and attendance reporting on the construction site”. It is a system of rules that require registration, compulsory identity requirements and attendance reporting for those working in the construction site. This will make it more difficult for unauthorized persons to be at the construction site (ID06, 2014), which in turn will reduce unreported employment and economic crime. There are calculations that declare that the state
loses about 66 billion SEK every year because of unpaid taxes from unreported employment. This is money that could have made a major difference in the community if they had been properly used instead to support illegal business. Undeclared work also leads to unfair competition in the market where legitimate employers do not get a fair chance to compete against other companies that can put a low bid to pay out unreported wages (Renbyggbransch, 2010)

Making unannounced inspections and it is considered by the industry to be an effective way to access the undeclared work in the construction industry. The industry thinks that it must be shown that it is risky to be unserious. Today, steps has been taken to overbuild undeclared work, attendance ledgers and ID systems have been introduced that will tell Swedish tax agency who is on the construction site. But this does not help as long as no one has the opportunity to review and check which one are actually working at the construction site. It is about to go out on the site and check which ones are there and that their social security contributions are paid, undeclared work is very lucrative, it is not possible to detect only with presence ledger (Lundgren, 2014).

At a construction meeting in May 2013 the Swedish Construction Federation (BI) decided to introduce a code of conduct for all members. The code requires that companies and their employees must follow rules that advocate impartial competition and temporal relationships between the companies in relation to customers and suppliers. From 1 June 2014 the code of conduct is included in BI’s criteria in order to get a membership, when departing from these criteria the ultimate consequence may mean exclusion. The code of conduct means that member companies should act fair in tendering and procurement, countering bribery, undue influence and manipulation of tenders to create distortions in competition. The criteria include also conditions about agreements that are signed between companies, customers and suppliers should be followed and applied correctly (ID06, 2014).
Environmental threats

“The construction industry can be half the solution to the environmental issue”

- Johan Rockström, Professor of environmental science

Source: (Bennewitz, 2012)
4. Environmental threats

4.1 Background

Introduction

The following text is mainly based on articles from the website of the Swedish Construction Federation which is a business and employers organization for companies operating in the Swedish construction market. This source is considered to be useful since it reflects the opinions of environmental researchers and the industry itself. The articles include opinions from different scientists and experts such as Johan Rockström (professor of environmental science) and also project managers in the industry. The articles are written by the journalists Gallagher, Bennewitz, Köhler and Åkerlund.

To get a more comprehensive picture, and include the state perspective, sources from the National Energy Authority (Energimyndigheten), the Swedish Environmental Protection Agency (Naturvårdsverket) and the Swedish National Board of Housing (Boverket) has been used.

Why is the environmental aspect important?

The world's cities are growing and getting larger, unsustainable exploitation of natural resources has led to many environmental problems and the demand for healthy buildings have increased in recent years (Gallagher, 2013). According to Johan Rockström who is a professor of environmental science, the construction industry has a great responsibility to global climate change and environmental threats, since it accounts for a third to a half of the global environmental impact. Therefore, the industry can also be half the solution to the environmental issue (Bennewitz, 2012).

If the proportion of greenhouse gas emissions continues at the same level as it is today, then there will be a great risk to reach four degrees of warming, leading to a disastrous future. To avoid this, the total energy consumption in the industry has to decrease to about 50 percent by 2050. To accomplish the goal, the west world must reduce their energy use by more than that, at least 70 percent, because some parts of the world must be allowed to increase their emissions in order to achieve a decent standard of living (Bennewitz, 2012).

The critical environmental issues

The most important environmental issues regarding the construction industry is to improve the construction process and the energy use, and reduce emissions and other environmental disturbance during the construction period. In addition, the environmental impact of building materials from raw material to finished products has become an increasingly important issue in the selection of building materials where lifecycle analysis (LCA) will have a greater significance in the future (Gallagher, 2013). It is not just the energy consumption of the buildings that affect the environment, another critical issue is transportation of materials and supplies within the construction industry. These may account for 4-5 percent of the total emissions of greenhouse gases in Sweden (Köhler, 2009).
The way of exploiting land also affects the environment negatively. The construction industry can save valuable land, for example by building denser and higher. This way helps to reduce the damage on the ecosystems and more land can be used for food production. Apart from the ecological perspective, to build environmentally friendly is more sustainable in the long term perspective since it resist against external circumstances. Urban environments with trees, grass and streams are less affected by climate change and extreme weather events (Bennewitz, 2012).

The chemical question is also an important issue for the construction industry, but this question is more difficult to manage because scientists have not been able to put any limit yet. There is insufficient knowledge to be able to put a limit because there are many different groups of subjects and even unknown synergies between them. What should be done is to have a more restrictive use of chemicals in the industry (Bennewitz, 2012).

Environmental classification

One area that continues to grow is environmental classification of buildings. Such classifications are made by companies and experts in the environmental field. There are currently several systems whose purpose is to provide a wholeness picture of how the building works which will help to save energy, and improve human health. The classification is mainly focused on energy efficiency and reduction of carbon emissions. Other areas such as indoor environment and waste management are also included to varying degrees. Such a classification helps companies to strive to build environmentally friendly since it has a commercial value and it is also a good contribution for the environment (Wallström, 2009). The company “Sunda Hus” has the leading database in Sweden of environmentally assessed building products. Its goal is to remove dangerous and environmentally harmful substances from the construction sector. In 2013, the company has added new assessment criteria for hazardous substances. These substances include blacklisted wood, emissions of formaldehyde and volatile organic compounds, and content of endocrine disruptors (Åkerlund, 2013).

The “million program”

One of the most important questions regarding energy issues is the renovation of the houses from the “million program”. The program was a large housing construction project in which houses were built rapidly during the 1960s - and the 1970s, when oil was cheap and the climate issue was not even on the agenda. Today, the houses are leaking energy. They are worn and need to be renovated. But the energy investment and total renovation together is so expensive that many property owners cannot afford to do more than the most important measures (Köhler, 2011).

The financial investment in sustainable and environmentally friendly construction has grown. For example, the organization “Swedish Construction Federation” has doubled the investments in sustainable construction. Besides houses, also roads, railways and energy systems will be integrated in a way that it does not threaten human health or the environment (Köhler, 2011).

But regarding the million program, the Government and the Swedish Construction Federation is against government subsidies to rehabilitate it. This is because there is a risk that the money ends up in the construction companies' pocket. They believe it is better to subsidize families who need support in the form of housing assistance. On the other hand, many companies think it is time for the government to step in with money to meet the challenge. For example, the big construction companies in Sweden,
Laws and regulations

In order to achieve a better environment, the Swedish parliament has decided that the buildings in Sweden should use half as much energy by the year 2050. Since the lifetime of a house is at least 50 years, new buildings must have a halved energy use already today. But that is not the case when companies build today (Köhler, 2011). The parliament has also established a number of national environmental objectives. There are 16 objectives. For instance, half of the energy should be renewable by 2020, fossil fuels in heating should be ceased by 2020. In addition, the cities, towns and other areas must provide a good living atmosphere and contribute to a good regional and global environment (Boverket, 2013). The monitoring of the goals for 2013, coordinated by the Swedish Environmental Protection Agency shows that 14 of the 16 environmental quality objectives will not be reached until 2020. What should be done is that companies and industries should have a greater environmental awareness in the entire chain of production and consumption - from raw material to waste (Miljömål, 2013).

"This result shows the importance of cooperation between different actors in society. Actions in both environmental policy and in other policies are prerequisites for achieving environmental goals," says Maria Ågren, Director-General of the Environmental Protection Agency. Agreements within the EU and internationally provides a good foundation for many of the Swedish measures, but there is also much that can be done (Miljömål, 2013).

Different types of incitements

According to the national energy authority, there are three kinds of incitements; the first one is political requirements that the housing companies must live up to. They must follow national laws and regulations. Moreover, subsidies from the government can encourage companies to work towards the objectives. The second type is the financial incentive, which is mostly about energy efficiency. The energy cost is usually a large part of the operating budget, reducing energy make it possible for companies to save money. In addition, energy efficiency is also an insurance against rising energy prices. The third type of incentive is ethical, more and more companies have in recent years taken a greater responsibility to the environment and have a greater awareness of how environmental degradation affects humans. Building green is advantageous in a long term perspective as it can be seen as a beneficial marketing (Energimyndigheten, 2010).

Even that there are incitements; the companies face many obstacles in their work for the environment. It may be economical, where great measures make the investment costs too high or the savings too little. Transaction costs may also make the investments to become unprofitable. In addition to the economical perspective, it takes time and requires specific competences in order to make changes towards greener alternatives. Depending on the resources that a company has, the knowledge which is required to perform the environmentally friendly measures can be expensive, difficult or time consuming to obtain. Moreover, it is always a high risk to invest in a new untried technology, the investments may turn out to be unprofitable (Energimyndigheten, 2010).

Regarding energy efficiency, Sweden is in the forefront. But, the current efforts are considered to be insufficient. Today, there is not enough political leadership on environmental issues in Sweden or
globally, which means that the building codes in Sweden is an important part in this work. Since policies do not provide enough support for environmental issues, initiatives from trade and industry is very important in order make the construction sector more environmentally friendly (Bennewitz, 2012).
4.2 Case

During the 1960s, many people moved to the cities in Sweden. There was a housing shortage and the houses that existed then had a low standard. To solve the problems, the parliament decided in 1965 to build one million homes over ten years. Almost identical houses were built across the country. This is known as the “million program”. The houses were built in a time when there was no shortage of oil, and the climate issue did not even exist. When placing the apartments, factors such as opening areas and lightness were taken into consideration, also that the apartments should be close to recreational areas. These apartments were in the beginning very popular. Moving here from run-down and outdated apartments was considered as a rise in standards (Energimyndigheten, 2010).

Today, 30 years later the houses are consuming too much energy and thus do not meet today’s requirements. About 80 percent of the apartments that belong to municipal housing companies need regular replacement, façade renovations, windows should be repaired or replaced and wet rooms need decontamination (Roxvall, 2010). There are also few green spaces in many of these areas. The service is bad since it is few shops, cafes and other social places. Many lampposts does not work which means that it is dark in many areas (I2, 2014).

There are great opportunities to reduce energy consumption significantly. How much energy that can be saved when renovating depends on the condition of the building, but also on how much the investments are on energy saving measures. It is possible to save more than fifty percent of today’s energy costs (Offerman, 2010). The renovations can also lead to better indoor environment which will improve the living comfort (Energimyndigheten, 2010).

It is often difficult for property owners to make a profit in comprehensive measures to improve energy efficiency. Many companies in weak markets cannot make important environmental measures, simply because they do not have the financial capacity that is required. Renovations in Stockholm have sometimes led to increased rents of 40-50 percent, which means that many tenants cannot pay and thus choose to move out from the apartments. Many municipalities feel unable to take too many initiatives, because they are waiting for government initiatives and subsidies (Wikstrand, 2012).

Many companies think that it is important with political measures to solve the problems (Axelsson, 2013). “We do everything to reduce the energy consumption, but we must also take the economy into consideration. If we have to meet the national objectives quickly, then we must also get national money”, says Kicki Björklund, CEO for the housing company Sigtunahem (Wikstrand, 2012).

In today's society it has become more difficult for the government to make decisions and implement incentives, this is because the power is decentralized in a completely different way than before. There is a diversity of actors that need to be involved, especially the residents but also municipalities, construction companies, property owners and authorities (Roxvall, 2010).
4.3 Questions

1. You are a newly graduated student from KTH. You are employed as a supervisor at a company that has changed its profile and has chosen to focus more on green building construction. This is a change for many who work for the company. The management wants you to spread environmental awareness among the other workers that you are responsible for.

How will you do to increase environmental awareness? What strategies and tools will you use?

2. You work at the Swedish National Board of Housing (Boverket). You get a task from your boss to identify environmental aspects that you feel are critical and which you think that the agency should focus more on. Why do you think these issues are important? What rules and laws can help the treatment of these aspects?

3. You work as a project manager at a company that works with renovations of the “million program” houses in Vårberg which is a suburb in the south part of Stockholm. The Company has limited financial capacity.

The residents are dissatisfied with the buildings and the surrounding environment. The buildings need reparations and to be more energy efficiency. There are few green spaces and social meeting places, the service is also poor.

How will you as a project manager work in order to create a successful project? What aspects are important to prioritize? What are the difficulties and challenges?
4.4 Interviews

Introduction

The following part is based on interviews with I1 (Environmental manager) and I2 (Business development manager), both working at the construction company NCC. The first interview with I1 is made to get a deeper understanding of how a construction company deals with the environmental issues in general. What the challenges and difficulties are and the environmental vision of the company. The second interview with I2 is made in order to identify the challenges with the renovations of the houses from the “million program” and how the industry should do to act more morally.

A third interview is done with I3 (Environmental researcher at KTH) to get the researcher perspective of the challengers with the renovation of the houses from the million program and how to solve the problems. Unfortunately, no one from the state site had opportunity to make an interview, but the state perspective is included in the background part. The texts of the interviews are no quotes but reflect what the interviewees have said without being exactly verbatim.

Interview 1

With: I1
Environmental Manager at NCC Construction Sweden AB

The environmental issues is an important part of the company’s activity, their vision is to "Renew the industry and offer the best sustainable solutions"

The company's environmental work is based on green building and to reduce environmental damage. In addition, the company is concerned of being seen as trustworthy by customers and thus strives to offer a product that they can stand for. They also work to meet the demands of the market and try to reduce risks in the whole building process that may affect the environment.

Regarding environment and sustainability, the company focuses on four main areas. These are:

Climate and energy

Chemicals
Efficient use of materials

Systems for environmental certification

The environmental view has changed over time, for a couple of decades ago, the company was smaller in terms of number of employees, decisions and strategies could be made faster and in a more flexible way. But today, there is more awareness about environmental pollution and what causes it, the environmental issue is more central. The situation today requires a customer-driven work, and that they follow energy requirements from authorities and laws from parliament. The company must also adapt more to what the market demands in order to make successful projects. There has been more important to involve the residents and there opinion about the houses and the area, the company has won a price for “Fittja People’s Palace” which is a renovation project where the buildings are from the "million program". The renovation concept was built on the basis of the residents' wishes and what they can afford financially.

Environmental sustainability is very important to the company, the concept of sustainability also includes social and economic aspects. These factors have become increasingly important in recent years. With social factor it means that buildings and areas should be comfortable for the residents, where people can interact and meet. It also means that the company's own employees should feel comfortable and satisfied with their work situation. The company follows the concept of corporate social responsibility (CSR) to cover legal and moral responsibility more narrowly. For example, they do not want to use some stone products made in Africa since the workers works under sub-human conditions. The social perspective of producing is extremely important for the company.

It is a constant balance between economy and environment during construction, economic benefit is the basis of all projects, the company is thinking from a long term perspective, so even if the economic benefit may come several years in the future, green building is considered to be something positive and highly demanded in the market and create a good reputation for the company. There is very tough competition in the market, to stand out as a company they have to offer technological solutions to the construction that fulfills the law by a wide margin; this is a way to do a company competitive in the market.

The company believes that environmental improvements are needed in all stages of the project. Selection of building place is important, it is considered to be better with an industrial area because it can be sanitized and made clean. Selection of energy system is also vital, the company wants to increase investments in renewable energy such as solar cells and wind power. Regarding the construction phase the industry is still traditional but changes happens, for instance today they build more energy efficient buildings and green areas are becoming more common.

The company does not receive subsidies or grants from the state for projects carried out with an environmental focus. According to the company the subsidies would help to get over thresholds and obstacles but it would not have a major effect on the proportion of environmentally driven projects, as these are based on what the market demand.
One of the biggest mistakes that company has committed in recent years was the construction of apartments in the West Coast part of Sweden. A few years later, they had moisture damages which had been caused by the plaster facade, this occurred because moisture was released into the construction. The cost of the reparation was 50-100 million SEK, which is almost the cost of the construction.

Hammarby Sjöstad is another example of a failed project that the company will take into account in future projects. Several of the buildings did not meet its energy consumption were that had been set as a goal at start. This was due to wrong strategy and approach which in turn was due to insufficient knowledge.

The company’s strengths are that they are successful in energy efficient buildings and passive houses. They are also good at using environmental certification systems

But the most difficult environmental issue is choosing sustainable materials, there is a lack of information on many products, but the company uses a number of environmental classification systems such as BASTA and BREEAM to get reliable information about sustainable materials. To ensure that the properties meet the energy requirements, the energy certification system “Green Building” is used.

Climate change is also controversial; the company has chosen to rely on climate expertise and thus consider the issue to be sensitive and important to handle, when it comes to chemicals they follow the REACH Regulation which provides rules for the use of chemicals.

It is mostly the young persons who are taking environmental issues more naturally, the older ones are more traditional and are not as good at dealing with the issue, some of them believe that the way they have built on has worked before so why should changes be made now. The company works to spread knowledge and lessons about the environmental aspect and the importance of it to all their employees, for instance by meetings and environmental courses.

The construction trends that the company anticipates are that ecosystem services are becoming increasingly important when building. With ecosystem services it means services and benefits of various natural ecosystems (e.g. forests, oceans, plants) and organisms that provide us humans. The trend is also going towards more green construction where green roofs and areas are becoming more important.
Interview 2

With: I2
Business development manager at NCC Construction Sweden AB

Changes in the environmental work

The changes that have taken place in the NCC’s environmental work is that they now focus more on telling the client what they can do and what they are good at and then make an agreement and create a project. Previously they were more traditional and build projects on the basis of the client requirements. NCC puts great emphasis on ecosystem services, to build parks and green spaces between the buildings. These green spaces will be for all kind of people, from young to old. It is important to integrate areas and consider about which type of people that are living there and not just build soccer ground for youth, but also parks and meeting places for older.

Social aspects have been given a larger role, it is important to have right lightning on parks and recreational areas where people can feel safe at any time.

Environmental work is an essential part of NCC activities and existence, it is just a minority within the company who do not see the profitability in this work. It is mostly older people who have not worked in this way before and thus underestimate the value of this work. The younger ones are more likely to see the positive affects from the environmental work since they have grown up with this kind of thinking. The company sets high standards on what is built. Environmental certification is an aspect which will be developed and standardized within the company and more energy efficient buildings will be created.

To increase the environmental work

In order to increase environmental awareness, the company must have clear policy instruments and guidelines but also clear monitoring at each project. NCC thinks that it requires stricter control measures and punishment for the ones who do not follow environmental requirements from authorities and the parliament. The company considers that the requirements from the National Housing Board are too low, the requirements should be harder to promote environmental efforts even more.
Challenges and solutions - The million program

The challenges regarding the million program is that the houses must be more energy efficient, and to improve green spaces which are in poor condition and are also too few, this is vital to get a better social atmosphere. Another problem is that it is messy in these areas and many who already live there have a tendency to want to move out because it is very messy, high noises (from scooters) and the service is poor. There are few shops, cafes and other social sites in the area. Several lights of the lampposts does not work correctly that makes that some people do not dare to go out at night. Many of the buildings are much worn and are in need of major renovations. Some parts of the buildings have been renovated today, but many of the buildings require major renovation than what is done today. It is important that these renovations are carried out as soon as possible and not deferred to later stage. There is also segregation in these areas; many feel that they are outside and do not thrive there. The reason why it has become such an area is because the state and government has not invested enough resources to maintain and develop it, but much focus has been placed on building up other new areas, and these areas have been overshadowed.

To solve the problems it requires greater collaboration between municipalities, state, property owners and the housings companies. This means that the parties must have a consensus with each other and greater sharing of knowledge and information between each other. Moreover, they should have more frequent meetings with documentation and following tracking. Government subsidies for the renovation of these areas are needed. The state should also have a clearer policy direction regarding the rearmament. It is important to conserve and maintain the existing things and optimize surfaces.

There are five aspects which are important regarding the renovation. The first is security, which means that everyone should be able to be out there without having to be worried even at a late time. The second is availability; services such as metro should be available for all, young, elderly, handicapped etc. The third is well-being. Things such as litter and graffiti in the area should not be accepted. The fourth is silence, it means that cars and mopeds should not be running until late times. Fifth, is the stairwells, it should not be trashed and used as toilets.
Interview 3

With: I3
Environmental researcher at KTH

Challenges and solutions - The million program

In order to create environmental awareness, it is important with effective incitement on individual level as well as on state level to make right choices when building. Implementation of environmental certification systems is a way that will lead to a regulation of the work on both of these levels. The environmental question gets attention in a later phase which is alarming.

When producing new houses, the actors usually have better collaboration compared to a renovation processes, this is because the renovation process is more controversial, there are different views and wills on how much that is worth to do, is can also affect the resident in a large scale since the renovations can lead to higher rents for them. Here the question is both about economic benefits and environmental impact.

To handle the problems with the houses from the million program, systems such as ISO 14001 is needed, which is an international standard that an organization can follow to create an environmental management system. Such system includes organizing, monitoring, evaluation of an environmental work.

When renovating the houses in the million program houses. The most critical aspect with the renovation is the economic aspect, therefor subsidies from state are needed. Furthermore, how the execution should occur is another difficult question. It depends very much on the view and valuations of the property owners and what they see as important to do. It might be different views about what measures that should be taken. Since certification system are not mandatory to follow, own responsibility from all actors in the industry is vital when it comes to making environmental measures.

There are opinions from actors in the construction industry that the financing of the million programs shall be done through a long-term management fund, where residents pay a higher fee for the rent that goes to the fund for a future renovation. At the same time, there are opinions that believe that residents should not economically being charged for such renovations.

Another challenge is the way of organizing available competences to make as effective measures as possible, right competences at the right time and place is necessary. All kind of technique is available to do green renovations but the difficulties lies in implementing these techniques in an organization that have a consensus view. To develop the renovation methodology, a model in Excel has been created by I3 and some researcher to calculate life cycle costs about different measures and how they relate to costs. This tool is useful for companies and property owners that will do renovations.

An important measure is to implement environmental requirements in the beginning, all actors such as property owners, project managers and housing companies should have common goals in the
beginning of the renovations process which in turn will lead to an effective process where competences can develop and be exploited. What is needed to be done is a better collaboration between the different actors where they meet more often and set up common goals. By having a certification system it will automatically lead to a creation of common goals and a better collaboration.

To make a good renovation with a better living environment, for example, if there are air leaks in windows or if there is moisture. It is of great value to involve the residents by asking them about their opinions about how they feel about the houses.

Environmental decisions are based on the values of the future. Banks and insurance companies can provide lower interest rate on the house that is environmentally certified, which creates incentives among different stakeholders as a property owner to build environmentally friendly. Another type of incentives can be tax deduction, so-called ROT-reduction that can be utilized by property owners and housing associations for actions to improve energy efficiency and green measures. Today, this deduction is most for individuals who are doing renovations in their home, for example renovating kitchens.
4.5 Analyze

It appears from literature and interviews that the construction industry has a great responsibility to the climate issue and it affects the environment in a big scale. According to Rockström, Professor of environmental science, the construction industry can be half the solution to the environmental issue. I1 (Environmental manager at NCC) emphasized that environmental improvements are needed in all stages of the project, from choosing the place to build until the building is finished. As found from literature, there are many environmental regulations in Sweden but the environmental issue is still a great challenge. Many companies do not have the opportunity to build green houses and reduce the energy consumption. That is mainly because of high costs, the time consuming process, high risks and lack of knowledge.

From the interviews it appeared that construction companies today do not get subsidies from the state, such measure can be an effective tool that will help companies to spend more on green construction, because it is costly to make such investments. In addition, it is economically risky. But this question is controversial and there are other opinions, the state thinks that such measure is not effective since construction companies can exploit that and make own benefits.

When making interviews with representatives from the industry, it appears that industry today pay more attention to environmental issues, there is a common culture regarding this aspect where the great majority in the construction industry believes that green building is essential part of a company’s activity. The industry focuses today more on social factors, certification systems, customer-driven work and ecosystem services. Even though there are development in the environmental aspect, the industry believe that stricter laws are needed, for instance NCC thinks that the rules from the national housing board are too low regarding energy consumption and they always fulfill them by margin. Why laws and regulations is not in relation to what the industry believe is necessary might be due to the process of implementing laws. It takes certainly a lot of time for politicians to agree on what are necessary law supplements and then the following implementation process takes a long time while the market has developed and passed the level of requirements that the politicians require. It can be that it is needed a greater engagement from politicians and managers in the environmental field to introduce stricter rules.

According to the literature, the most controversial environmental case in Sweden is the houses from the “million program”. There are a lot of problems with the houses and its surroundings. The houses are consuming too much energy, many renovations are needed to be done such as façade renovations and reparations of windows. Furthermore, it is messy in many of these areas and the service is poor. Social meeting places and green areas must be improved. Many lampposts do not work and several places are thus dark can create anxiety among the residents.

Based in the interviews, there are several measurements that are important to do in order to solve the problems. I2 (Business development manager at NCC) believe that a greater collaboration is needed between municipalities, state, property owners and the housing companies. Making a better collaboration is not a simple thing and requires certainly many changes in systems and routines within and between companies. I3 (Environmental researcher at KTH) shares the same idea and thinks a better collaboration is needed between different actors in the industry and that they set up common goals in the beginning of the renovation process. By doing that the actors such as the housing companies, property owners and project managers will collaborate better and more frequent since all have the same goals to achieve. Both the interviewees believe also that the state should play a larger
role and help the industry with some kinds of grants and subsidies. It can be for example that the state gives grants to property owners who make green renovations, or a tax deduction that can be utilized by property owners and housing associations for actions to improve energy efficiency. On the other hand, the state and government believe that this measure is ineffective since they believe that the money will end up in the construction companies' pocket.

I3 thinks that economic incitements from banks and insurance companies can be a good measure, by providing lower interest rates on houses that are environmentally certified, it will encourage actors to make green renovations to make the houses to become certified. But at the same time, the banks and insurance companies might think that it is not beneficial since the money can go to the construction companies' pocket.

I3 emphasizes the role of taking own responsibility because environmental measures such as certifications systems are not mandatory for companies, thus the different actors must take own responsibility and think about the consequences of their actions. She also believes that an important action to solve the problems with the houses in the million program is to organize available competences so that everyone knows their role and what common goals that they should strive to fulfill.

A critical aspect that both I3 and I2 mentioned, is to involve the residents when making renovations, the residents have certainly opinions about their situation and what improvements that are needed to be done. The measures should not include only things inside the houses but also the areas between the houses such as green areas.

Developing different models such as the Excel-model that has been created by I3 and other researchers to calculate life cycle costs seem to be an effective tool that will help to make right measures and gives a clearer picture of the costs of the renovation.
4.6 Conclusion

Treated ethical problem in this field:

- The renovation of the houses from the million program, highlighted by a case about the condition of the houses today.

The following points are the identified factors that are important to work with in order to improve ethical conduct regarding the million program case which in this thesis is considered to represent the environmental field in the construction industry. The points are based on the analyze part which in turn is based on the results from the interviews.

- Greater collaboration is needed between municipalities, state, property owners and the housings companies in order to make successful renovations of the million program houses.

- The industry and researchers thinks that state financial support are important, it can be in terms of grants, subsidies or/and tax reduction.

- Setting up common goals among all actors in the beginning of the renovation process is vital.

- Organizing available competences within companies in a right way is necessary.

- The actors within the industry should take own responsibility to make successful renovation projects.

- The social aspect is important; the residents should be involved in the renovation project.

- Developing technical computer models can be a helpful tool to choose right measures.
“They did not listen to what I said and did not trust my knowledge”

- Malin Berglind, former surveyor and supervisor in the industry

Source: (Boati, 2013)
5. Gender

5.1 Background

Introduction

The following part is based on sources from researchers who are active in the gender field such as Annicka Cettner (Researcher at the University of Luleå) and Ulf Mellström (professor in gender and technique). Facts and opinions from the construction industry is used to investigate the problems and challenges regarding gender, for instance facts from “Ledarna” is used which is an employee organization for managers in the Swedish business market and also the construction company Titania. Another source is articles from SVT (Swedish television) written by the journalist David Boati. Using different kinds of sources from different professions will give the reader a general picture of the problems and challenges regarding this field.

Historical and cultural aspects

Women were for a long time excluded from engineering studies. In Sweden, it was until the early 1900s when women get the opportunity to study to engineers. The engineering profession is considered as a socio-technical one. In addition to technology, it was important that women were able to take hard decisions, creating alliances, managing relationships between actors. Women were considered -by nature- to be less decisive than men and thus unable to handle complex relationships that require control and determination. Furthermore, knowledge was considered to be a way to positions of power and economy in society. This was considered as sensitive areas that require rational thinking without regard to feelings, which is something that was primarily associated with women (Cettner, 2008)

There is a strong connection between technology and masculinity in the western culture, which can be traced back to childhood when boys usually play with Lego and electronics. This interest usually follows with the boys when they grow up into adulthood, which later becomes an obvious choice to study in order to become tomorrow's engineer (Mellström, 1999).

Technical occupations are gender-coded differently depending on where in the world the phenomenon is being studied. All the technology and all the machines are not masculine or feminine and the conditions can change. For example, the sewing machine that is a "typical feminine" machine was originally created for men, then with time and changed circumstances in manufactory it changed from being a male symbol to be a feminine on (Mellström, 1999)

Society's boundaries in terms of dichotomies regarding technology leads that men continue dominate the engineering field and other technical professions. A clear gender marked dichotomy is the division between being focused on machines or people. This division is rooted in the perception of women’s emotionality and men’s instrumentality. The downside of such divisions, an interest in technology versus a human-interest, is that they usually are assumed to exclude each other. This does not reflect
reality, because it is more complicated than that, and most people interact with both people and technology in their daily lives (Cettner, 2008)

The situation of women in the industry

Today the construction industry is dominated by men (Olsson-Lindh, 2013). The table below shows the proportion of men and women in the construction industry in Sweden during 2013:

<table>
<thead>
<tr>
<th>Position</th>
<th>Percent Men</th>
<th>Percent Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>All employees within the industry</td>
<td>89,7</td>
<td>10,3</td>
</tr>
<tr>
<td>Executive officers and directors within the</td>
<td>81,6</td>
<td>18,4</td>
</tr>
<tr>
<td>industry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Percentage of men and women in the construction industry (centralbyrån, 2013)

Why women avoid the industry

There are several reasons why women are not as highly represented in the construction industry. Women are afraid to step into a male dominated industry, and feel that they can easily be discriminated by men. Women also avoid educating themselves in the construction industry because they feel that it is "unfeminine" to work and be in such environment, they are afraid to be seen as a male. A further reason is that women are not welcomed properly, and are not appreciated at work – which leads that they would rather apply for another job (Redplanet, 2014).

Another problem that many women in the industry are experiencing is that they have to prove more to their colleagues and customers than men. They must prove that they are competent in their field in order to gain trust and respect. Furthermore, women feel that there is a lack of female role models in the industry, as they can be inspired by. (Cettner, 2008).

The view of "engineer" plays a big role for how women and men perceived the working conditions and is part of organizational culture. Many women feel that the view of the engineer in the construction industry is to being able to work "more than full time." This means that if an employee takes a mission, then it shall be completed regardless of the circumstances, which often involves heavy workload. If the employee deviates from the working norm, then the engineer will be considered to be less engaged in the work and there is a risk to be seen as a less serious engineer. Women believe that the tough work norm makes it difficult to combine work with family life, and this makes it difficult for women to take more important tasks and to develop within the company (Cettner, 2008).

Many involved in the industry feel that there is a macho culture, there is for instance pretty hard altercation and laddish jokes that occur, this in turn leads that people avoid this industry, especially women (Boati, 2013). Another part of the problem is the difficulty to get into networks and create alliances. The socializing culture is created by men, for men. This means that women find it difficult to feel involved, for example, where deals are made during hunting trips or sauna visits (centralbyrån, 2013).
The consequences

Nine out of ten women in the construction industry feel that it is inequitable and many are looking to change jobs. The industry association "Byggcheferna" has made a web survey in which 800 women answered. It appears from the survey that 88 percent believe that women and men are treated differently in the industry, and seven out of ten believe that the wages is unequal. Also a majority, 63 percent, think that it is harder for women to be promoted. The result shows also that nearly half the women who responded have themselves experienced or know other women who are victim of sexual harassment (Boati, 2013).

The weak representation of women leads that the industry misses important skills. In addition, irregularities and injustices lead that both men and women quit from work and that is not acceptable, especially when we are in an alternation of generations and the industry needs all the skills you can bring in (Boati, 2013).

According to Lars Bergqvist, chairman at “Byggcheferna”, there is a great shortage of staff today in the construction industry. The industry needs to recruit 100,000 people over the next ten years, it is therefore wrong to close the door to half of the population. Women should get into the construction industry because there is a strong need for them (Redplanet, 2014).

How to attract women to the industry

According to Bergqvist, attitudes towards women are improving in the construction industry. There are also more women who are applying to the university's construction lines. Although there are positive changes it occurs very slowly. It is thus important to push hard to make remarkable changes. The attitudes and values of people have to be different (Boati, 2013).

The construction industry has a strong desire to buck the trend and involve more women and retain those who are already in the industry. The representative of the construction industry wants to increase equality measures and thereby increase the number of women, but does not alter the working conditions. Attitude surveys made by "Byggcheferna" show that men in middle age have the greatest resistance to female employees (Cettner, 2007).

To increase the proportion of women in the construction industry, it is vital to create changes in the industry to get away the “macho culture”, people must be better informed about the construction industry at colleges and universities where women informs about the construction industry instead of men. Also a more active recruitment of women is needed and to implement measures in order to remove discrimination against women in the industry (titania, 2013).
5.2 Cases

Case I

Malin Berglind worked as a surveyor and supervisor in the construction industry for six years. She thought the job was fun and enjoyed being out on sites. But she was subjected for a lot of harassment which finally led her to quit. She felt that she was regarded as useless just because she is a girl and was considered to be incompetent. It was mainly craftsman who harassed her.

“I resigned from job because I could no longer endure the attitudes from some craftsmen. They did not listen to what I said and did not trust my knowledge”, she says.

There was a clear macho culture within the company, where women are devalued and seen as less competent than men. Malin thinks it was like child bullying, but on an adult level. She felt completely empty and decrepit. On the nights she could not sleep because she thought about the events of the day, and had to struggle to wake up the day after.

Malin is also convinced that there are also men who are affected by such harassments. "It is not just the women who are abused. It may be younger male craftsman who find it hard that such behaviors occur against women. So absolutely, it will lead that men leave the industry which in turn lead to a lack of competence”

Today she has a new job where she works as a consultant, she does not want to come back and work in the construction industry (Boati, 2013).

Case II

Johanna has always been interested in technology. She went a three-year engineering education at university. After working many years as a mechanical designer, she got a new job in a male-dominated industry in which the company is focused on technology. Her boss thought it was positive to employ a woman in a male-dominated industry as it contributes to increase diversity.

- "From the beginning there were some who clearly showed that I was not desired. It was clearly shown by their body language and that they sometimes avoided greeting," says Johanna

When her boss resigned from job, the harassment against Johanna increased. Johanna was subjected to ostracism and false reputations, she became also a victim of harassment and ridicule. She argues that this also affects other women in this industry.

- "This is not just about me but about all women in this situation, I have been told by another woman in the technology sector that I was special that I could work as long that I did. Other women leave the sector much faster."

To solve the problems Johanna talked with her new boss. The company then made an investigation and the manager talked to the people who were involved in the harassment without her presence, but
this led to no results according to Johanna. She was recommended to contact the company doctor.

Johanna talked with the engineering union and they recommended her to make a police report, but she did not want to do it unless the company is behind such notification. The company did not want to be involved and said that she should report to the police by herself. She felt that she was lonely since no one took the responsibility and helped her.

Johanna thinks that when a conflict occurs everyone should sit at the same table and talk. And the victim and the employer should make a police report together (Nordberg, 2013).
5.3 Questions

1. You work as a diversity manager at leading construction company in Sweden. The company works with large projects and is successful. The disadvantage is that the company only includes a few female employees and the management wants to change this situation.

What aspects do you think is important to work with in order to attract more women to the company? How should the company do?

2. You are newly graduated from KTH and works at a company where the gender distribution is almost equal between men and women. But in recent times, harassments and discrimination against women have occurred and more and more women are dissatisfied with their work situation. You are involved in a reference group and should think of strategies to increase awareness of diversity and gender issues. What do you think needs to be done to raise awareness among employees and eliminate such problems?

3. You are a project manager and responsible for a large building project where many employees of the company are involved. Most of those employees are men. After a while you notice that a project member, Lena who works out on the construction site have become depressed and more silence than before. You observe the group for a while and notice that Lena avoids confrontations with men. You suspect that she has been discriminated by some men. What will you do?
5.4 Interviews

Introduction

The following part is based on interviews with I4 (diversity manager at Skanska) and I5 (Director of Human Resources at JM). The reason of doing these interviews is to get a deeper understanding of what the industry itself believe as problems and challenges regarding the gender issue and what aspects that are important to work with in order to increase the diversity at the industry. The researcher perspective was included in a large scale at the background and thus, making interviews with company representatives give a clearer picture of the industry’s perspective. Choosing two different companies give a more general picture about this field.

The texts from the interviews are no quotes but largely reflect what the interviewees have said.

Interview 1

With: I4
Diversity manager at Skanska

The situation of women within the company

The woman distribution is as follows: 12 percent women and 88 percent men, there are great differences between professional workers and officials. There are few women among skilled workers, but more among officials (about ¼ women). The proportion of women in leading positions is 15%, with leading positions is meant project manager s and above. Compared with 2012, the proportion of women in such positions has increased by 40%.

According to the company, the challenges is that there are work places in the industry where women are put into specific roles or positions where they do not have the same career opportunities, this is a problem that makes them unable to obtain the same opportunities as men.
Discrimination has occurred in the company. When such things happen the company has a plan of action against harassment and discrimination on the intranet where there are guidelines that declare how one should act. In the first instance, the victim is recommended to contact the manager and / or the HR - manager, but if the person does not feel comfortable with it, the company has a hotline number which the victim can call. There is also an ethics committee where the sufferer can go to for help, if desired, the person can be anonymous.

The fact that more women are in the company is something that is considered to be positive, the company wants to have as large talent pool as possible. They want to reflect the diversity of society, thus be equipped to build successful long term customer relationships in an increasingly diverse society. The company's goal is that the proportion of newly recruited women from engineering courses must be at least 40 percent by 2015.

In order to increase the number of woman within the company, the strategy is to work with attraction, recruitment and leadership succession.

The company wants to ensure that those who work should be able to contribute fully, they are aware that women find it more difficult to develop and be promoted. Therefore, they work on the problem by raising awareness and knowledge of diversity among employees. For example they have implemented coaching for managers about diversity and workshops where the management team is included, this is done to strengthen the situation of the women and change attitudes towards them.

The company has developed an internal interactive training program called "E-learning" which is about discrimination legislation and the company’s code of conduct. The program is aimed for managers, union representatives and officials. In addition, five films have been made that take up real cases related to various incidents of discrimination; these will be used in different contexts in workplaces. The company strives to have after work / team building activities that are suited to both sexes and that does not exclude either women or men. This is a way for employees to feel connected and stay connected regardless of gender.

Schools can help to attract and recruit women with education that the company requires. Gender activities in universities and colleges have a positive effect. The media can help by paying attention to the interesting work and career opportunities available in the construction industry. The women who are in the construction industry, as well as the change process which is underway and also the positive results that the media can highlight.
Interview 2

*With: I5*

*Director of Human Resources at JM*

The situation of women within the company

Among craftsmen, the amount of women is less than 1 percent, but it is about 30 percent among officials. Of these, it is 30 percent that are in leadership positions, such as site managers and project managers. There are few women who are working in production; most of them are active in the project development phase. Among the older generation there are not so many women in the company.

There are more women who are looking for a job at JM which the company considers is positive since it contributes to diversity and equality. The company does not assign women specific tasks, but it tends to be that women are looking mainly to work with project design and not production.

Discrimination within the company

During the last three years in which I5 has been working at the company, no harassment that is connected to gender has occurred according to I5. When harassment occurs, then the victim has to contact the immediate supervisor who is responsible to handle the problem. Then the manager identifies the problem by talking to both parties and tries to solve it. If the problem cannot be solved then it will be lifted to the Ethics Committee where managers investigate and treat the issue.

JM has an ethics committee where members can get advice and information about their rights as an employee. There is also an incident team where members can report irregularities.

Strategies to attract more woman

The company has strategies to increase the proportion of women by offering generous paid to parents for time off from work so that more men can stay at home with their children. Another strategy is to make a better organization so that more women are in the same work place instead of spreading out them to different departments in the company. This contributes to a better and calmer atmosphere, for instance people will talk about other subjects than just “male-dominated” things.
Also, a greater awareness is essential in order to attract women, especially when it comes to culture and patterns within the company. By having knowledge about these issues and questioning old patterns will make it easier to handle and solve the problems. The challenges lie in getting a change of behavior and to transform words into action. The company emphasizes the importance about gender issues and will implement a “diversity plan” to increase equality. They are also working with training programs where members talk about such questions and have introductory courses.

The greatest responsibility lies on construction companies to attract more women by being good at highlighting role models, being visible in the schools and various work exhibitions.
5.5 Analyze

Based on literature sources, the fact that the construction industry is male-dominated is due to historical and cultural aspects that have been established in society. It also appears that there are many women who avoid the construction industry because of different factors. For instance, they are afraid to be seen as men, they believe that there is a macho culture and are afraid to be discriminated by men.

According to representatives from the industry, women are needed in the industry since that contributes to diversity and enrich the company’s competences and skills.

What can be concluded from literature sources and the two cases is that harassment against women is a problem that occurs in Swedish construction companies and other technology companies that are male-dominated. In both JM and Skanska, women are a minority, especially when it comes to craftsmen and managers in high positions. According to I4 women have been discriminated earlier in the company. On the other hand, I5 mentioned that no case of harassment or discrimination has occurred during her three years period of working in the company. This seems to be strange since I5 works for a big company with many employees and discrimination against women in the construction industry is -according to the literature- not an unusual phenomenon. It can be that discrimination has not been reported, or that she do not know or want to admit such incident.

Both the interviewees from Skanska and JM believe that it is important to increase the proportion of women within the company and they have several strategies to attract more women and create better working conditions. They work on the problem by raising awareness and knowledge of diversity among employees. I5 emphasized the importance of having knowledge about gender issues and questioning old patterns. She thinks that the challenges are to work to get a change in behavior and attitudes.

According to I4, it is important to create a culture that is characterized by diversity, the company has implemented coaching programs for managers about diversity and workshops where the management team is included. They have also a training program "E-learning" which is about discrimination legislation and the company’s code of conduct. I5 also mentioned that JM will implement a “diversity plan” to increase equality and diversity. They are also working with management training programs and have courses about gender issues.

I5 also pointed out that the way of organizing the members in the company is important to create an including culture with diversity, having more women at the same work place instead of spreading out them to different departments in the company is a measure that has been proved to be effective.

According to I5, a critical factor is that the industry must have own responsibility, for example by being better at highlighting role models, being visible in the schools and various work exhibitions. I4 things that gender activities in universities and colleges have a positive effect and lead to increased awareness about this issue. Also that media can help by paying attention to improvements and highlighting positive aspects about women in the construction industry.
5.6 Conclusion

Treated ethical problem in this field:

- Discrimination against women in the construction industry, highlighted by two cases where women have been subjected to harassments.

The following points are the identified factors that the industry should work with in order to improve ethical conduct regarding gender. The points are based on the analyze part which in turn is based on the results from the interviews.

- Creating a culture within companies that is characterized by diversity is important
- Working with behaviors and attitudes in the industry is critical to achieve a higher ethical awareness regarding gender
- The way of organizing the members within the company can contribute to diversity
- The industry must take own responsibility regarding gender issues
- Increasing the knowledge between the members by programs and courses is considered to be an effective measure
Security and accidents

“Every accident is one accident too much”

Björn Samuelson, expert in working environment.

Source: (Byggindustrier, 2013)
6. Security and Accidents

6.1 Background

Introduction

The following part consists of facts and opinions from journals belonging to the Swedish construction federation (BI) written by Gallagher and the Swedish Building Workers' Union written by the journalists Fransson and Connheim.

Articles from different Swedish newspapers have also been used such as “Göteborgs-Posten”, written by Brendinger who are region manager at BI – Gothenburg. The state perspective is also included through reports from the work environmental authority (Arbetsmiljöverket).

Fatal accidents

The construction industry has changed markedly in recent decades. On a big construction place, between 150-200 subcontractors can be involved. This requires greater demands on the coordination of the working environment than previously. Although safety in the construction industry has been improved, the accidents have not decreased (Brendinger, 2011).

The number of fatal accidents in the construction industry in 2013 was 7 people, which means that the fatal accidents in the industry no longer decreases, during 2012 as many people were killed. The table below shows the number of people who died in construction accidents from 2009 to 2013 (Fransson M., 2014).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of fatal accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>8</td>
</tr>
<tr>
<td>2010</td>
<td>12</td>
</tr>
<tr>
<td>2011</td>
<td>9</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 2. The number of fatal accident (Fransson M., 2014)

Notifications of accidents

From the year 2006 to the 2009 the number of notifications of occupational accidents in the construction industry has fallen by 11 percent, from 3165 to 2804. But the number of accidents have increased during 2010 which is a significant increase of five percent from previous years. This is due to the boom that prevailed during this time; which has resulted in shorter and narrower construction times. Also the number of fatal accident increased during this year (Connheim, 2011). Björn Samuelson, expert in working environment at the Swedish Construction Federation believes that every
accident is one accident too much. The accident statistics are dominated by workers who have been injured by the tools and utensils, this represents 20 percent of accidents. Falling from height and collapse accident corresponded to 12 percent, what is alarming is that the number of fall and machinery accidents have increased (Byggindustrier, 2013).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of accident notification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2 804</td>
</tr>
<tr>
<td>2010</td>
<td>2 940</td>
</tr>
<tr>
<td>2011</td>
<td>1 981</td>
</tr>
<tr>
<td>2012</td>
<td>1 923</td>
</tr>
</tbody>
</table>

Table 3. The number of accident notification (Connheim, 2011)

**Difficult circumstances**

It is unknown how many unrecorded accidents there are in general. Many accidents will never enter the statistics which is a shortcoming that should be addressed. Construction is one of the most risky industries and the same deficiencies return year after year. The big companies have made great progress regarding safety, but this becomes less valuable as more and more jobs are performed by subcontractors which are not so skilled with the safety precautions (Gallagher, 2011).

Why some companies do not highlight security is due to the circumstances, when it is recession the companies usually do not have enough economical capacity, and when it is upturn in economy they do not have time to take security into consideration, because they want to build fast and make profits. Also when it is strong competitive in the market between the construction companies, the security aspect become less important (Gallagher, 2011).

**The various stakeholders' responsibilities**

According to the work environment authority, it is important that all involved parties take their responsibility in order to create a good working environment on the construction site. Furthermore it is of great importance that the various actors interact and the construction workers join and participate in the work environment (Arbetsmiljöverket, 2013).

The client has the primary responsibility for the working environment during the construction work, even during the preparation of the construction project (planning and designing). He is also responsible for prior notification, safety and health plan and documentation. The client must also appoint a construction safety coordinator for project planning. He is also responsible that the execution of building and construction work is coordinated with regard to work environmental considerations. In some cases, the client gives its safety responsibilities to a contractor through a written agreement. This can be performed either by general or turnkey contract. The responsibility cannot be transferable in shared construction contract (Arbetsmiljöverket, 2013).
The different actors’ responsibility:

- The Construction Work Coordinator for planning and design has to coordinate the design with respect to the working environment and ensure that safety and health plan and documentation are established.

- The designers such as architects, consultants etc. have also the responsibility that the working environment are taken into consideration in the preparation of the construction project.

- The Construction Work Coordinator for the performance of construction has to coordinate the work environment for employees, and check that the work is performed with consideration to the environmental work plan.

- The other companies which are active in the common workplace must follow the safety rules and regulations such as the safety coordinator issues. Each company must submit information to the Work Environment Coordinator about the specific risks that may arise from its operations.

- The construction workers must participate in the work environment, follow the regulations and use the needed safety equipment.

- Safety officers represent workers regarding protection issues. If the work involves risks to life or health, and the employer fails to take immediate measurement, the safety officer has the right to interrupt the work while awaiting a decision from Swedish Work Environment Authority (Arbetsmiljöverket, 2013).

**Preventing accidents**

Many accidents in the construction industry could have been avoided if health and safety coordination worked better. But there are gaps in knowledge and responsibility among developers and contractors (Brendinger, 2011). The attitude to the working environment, health and safety must be improved throughout the whole construction industry. Here, the work must begin early in building programs in high school (Zeidler, 2014).

To prevent accidents at construction sites is a priority area for the Swedish Construction Federation. The goal is to reduce accidents to zero. The working environment is an essential part of the industry's vision of a sustainable built environment in the world. The Swedish Construction Federation has initiated several important steps in the industry in order to reduce the rates of accidents and to strive for the goal. For example they work together with construction unions to increase knowledge about the work environment and develop technology and methods. The Swedish Construction Federation has also started several intensive training programs where about 15 000 employees from the construction sector have been trained in issues regarding health and safety. One of the problems in this industry is that there are many rogue operators and illegal workers, and the Construction Federation is trying to eliminate this from the market. One way to highlight the problems that exist in the workplace is to have a reporting system for health data and security deviations (Brendinger, 2011).
Measurements toward the zero vision

In order to achieve the zero vision in the case of accidents, an effective measure is to increase the industry's knowledge and skills in occupational health and even attitudes about security must be improved among both management and workers. The safety awareness must be on focus, and all actors involved must take their safety responsibilities seriously so that accidents are prevented and avoided. Right attitudes to the safety issues are created by involving the workers and letting them to have influence opportunities. This in turn requires that the work environment is prioritized by the management at all levels of the business. A good and safe working environment is created by the managers, and the employees and safety representative must choose to be good role models. (Smålandsfolkblad, 2013)

The Swedish Trade Union Confederation investigated the working conditions at three large construction sites, where the most of the employees were foreign guest workers. It was found that the number of accidents were two to three times higher than the average for a similar project where most of the employees were from Sweden. This may be due to lack of education, lack of safety equipment and personal protective equipment, as well as margin pressure and stress (Smålandsfolkblad, 2013).

By having a good work environment, it will be more enjoyable to work, there will be fewer health complaints, more efficient production as well as better economy. A good work environment is also profitable for the entire business, employers, employees, building owners and society at large (Arbetsmiljöverket, 2013).
6.2 Case

On November in 2011, a tragic accident occurred in Luleå. Totally eight laborers from three different contractors worked there for the company Nordkalk, six of them got extensive burns on the body and one of them died because of the burns. One of those injured was 19-year-old Gustaf Seppelin, he was injured for life and got 55 percent burns on his body (Nyteknik, 2012).

The accident occurred when the laborers tried to release 40-ton lime lumps in the oven, the cause of the accident was that the hot and corrosive vapor streamed suddenly out of the lime kiln and caused devastating burns. This happened because of the limekiln that was supposed to be cleaned was too hot when the water was sprayed in it. (Nyteknik, 2012). Seppelin tried to whisk away the heat with his hands, and he felt how his skin came off because of the heat. Eventually he sat down and felt that he would die, but then he was dragged out by his friends. (Spetth, 2012).

Seppelin survived the accident even though he has been damaged for life with extensive burns, he also lost eight fingers. His 23-year-old colleague Johan Löfroth died in hospital from his injuries (Spetth, 2012). Seppelin mourn his colleague whose life could not be saved, and his anger towards Nordkalk has not decreased after the accident, it has rather increased. Seppelin is convinced that the company was trying to make money at others' expense by using a non-previously used method by cooling the oven in 48 hours instead of two weeks. (Spetth, 2012).

Before the accident with Seppelin and his colleagues, there was another accident that happened at 17:30. What happened was that an employee named Mehmet got hot caustic lime in his eyes, due to this he went to the hospital by ambulance. Despite that, Nordkalk continue the operations in the limekiln. The next accident with Seppelin and his colleagues took place at 23:30. These young guys that were involved in the accidents in November 2011 were people who had no previous experience in the job, they had been called by contractors to work (Torp, 2013).
6.3 Questions

1. You are a production manager and when you are out on the construction site, you notice that many carpenters are careless with safety equipment and some choose risky shortcuts to perform the job faster. This is a serious problem that can lead to accidents. What will you do?

2. Your company hires a subcontractor from France to perform complex geotechnical investigations at the bedrock. Many members from the hired company do not speak English so well and none of them can Swedish. The work can be dangerous and includes many risks. The members of your company will work together with the members from the subcontractor.

   How should your company do in order to make an effective collaboration and eliminate risks?

3. You are a project manager for a bridge construction project where many carpenters and workers are involved. During the process, there is a collapse accident which leads to a death of an employee. This gets a lot of media attention and affects the members very much. The management decides to stop the project for some time.

   How will you face media and your group? What is important to think about and do?
6.4 Interviews

Introduction

The following part consists of two interviews with safety managers at Skanska and NCC. The reason of these interviews is to investigate how the industry works with safety issues and what aspects and strategies that is important to work with in order to prevent accidents.

Choosing these two companies, Skanska and NCC is because these companies are among the biggest ones in Sweden and deals with large projects where many workers are involved, thus the security aspect is certainly more sensitive for these companies and they also have long experience because of all projects that they have done. To get insight of the perspective of the industry is prioritized since the purpose of the thesis is to investigate what aspects that the industry should work with to achieve higher ethical actions. Then, it is more appropriate to turn to the industry itself to answer this question.

The texts from the interviews are not quotes but largely reflect what the interviewees have said.

Interview 1

With: I6
Work environment manager at Skanska

The company works with four aspects in order to prevent accidents, these are: Behavior, leadership, routines and procedures, and also physical safeguards. Why working with these issues is because the accidents happens due to a lack of security regarding one or several of these aspects.

Regarding behavior, the strategy is that everyone in the company and also the hired workers should have knowledge and skills on how to work safety; no one should take risks or do something that has potential to lead to negative effects.

With leadership, it means that the managers follow up security and are constantly observant. They should regularly examine the security and have dialogue with the workers, also to organize the group in a way so that right members with right skills and competences are always present.

Procedures and routines mean effective reporting of risks, monitoring and on-site observation. The company has something called “safety week” when all production stops and managers go around the construction site and check the security. This is done annually.

Physical security includes for example requirements to wear a helmet, gloves and goggles when someone is on the construction site.
Skanska only works with suppliers who are linked to ID06, which is an identity requirements and attendance reporting system in order to prevent illegal working and financial crime. Before the company hires a subcontractor they make sure that they go through the safety regulations that must be applied and followed.

The goal is to reduce the workplace accidents with 75% to the year 2015.

Accidents within a company

The accidents within the company have decreased during the last 8 years. The company work with a system called “lost time accident rate” which is the number of accident per million hours worked. In 2006 there were 10 accidents per million hours worked, and in 2014 the number was decreased to four accidents.

Several accidents have happened over the years, one of these occurred in 2009, when a bridge collapsed and three workers died. There was also another incident in 2009 when a trench collapsed and an employee died. The company also lost an employee in 2012 when an excavator ran over him.

The most common accidents were fall from height, but this has been reduced over the years because actions have been taken. Most of the accidents that occur today are related to the use of various tools used within construction, even the traffic on the site causes accidents. The accident often happens when the site is deficient manned, then the workers may take shortcuts and do not follow the instructions carefully, which can cause accidents. During economic growth, it is easier to ensure safety, since the company have enough competent staff and has resources and can buy the necessary equipment to promote safety.

Strengths and challengers

The strengths of the company are that they have engaged managers. Furthermore, regulations concerning traffic has been improved and made more stringent. Stricter procedures have also been adopted in dangerous areas where the risk of accidents is considered to be higher, for example when working at height. Unique to the company is that all workers on the construction site must always wear both safety glasses and protective gloves, otherwise the hired company has to pay 1,000 SEK in fines for each day and person. The company has also a system where bonus is given to those who have performed the procedures in a good way.

The challengers are that the members of the company at all levels need more expertise and skills in the field, both theoretical and practical. Another challenge is the communication with foreign workers because they neither speak English or Swedish. According to the company, the workers are very
experienced and organized but it is hard to have a direct dialogue on security with them without involving any other party.

When an accident happens it delays the whole project and the company suffers financially. Loss of staff is also a negative consequence. The whole management is involved, which is a time consuming process. Also the health service of the company is involved and takes care of the people who are affected. Media is often present and report about the situation. The company performs an internal investigation where things are documented. Then the management regulates and discusses the future of the project.

**Interview 2**

*With: I7*

*Vice President Health and Safety at NCC*

NCC has earlier been decentralized and therefore there are not so many statistics about accidents that have happened long time back. But during the last three years, the amount of working accidents in Sweden has decreased from 432 to 282. This has happened because of the focus from the management where they have collaborated with all parts. Today, all accidents are included in the company’s statistics, even if there are only subcontractors that are involved and not the company’s own employees.

Regarding fatal accidents, the measurement is based on the frequency, and the statistics shows a decrease of such accidents. When an accident occurs, there is a direct-number that the members can use to inform the managers about the accident. The company also hires a lawyer to the site manager. The involved staff and the site manager get support, both informative and psychological help. Even relatives of the victims get a support person from the company who becomes as a link between the company, insurance firm and the family.
Regarding safety strategies, the company works with three aspects which are safety culture, behaviors and attitudes. The culture aspect is most critical in the production phase because some workers might take shortcuts as for instance not using necessary protective equipment, the reason is that the work goes faster when not using such equipment, but the risk is higher. It is about 80 percent of the accidents that has occurred in the company because of wrong behaviors. The attitude aspect is based on the ability of seeing the seriousness in the work and take own responsibility to reduce risks of accidents. NCC emphasizes that the members and workers have an important role in observing risks and reporting them to the managers, taking own responsibility is thus vital. Ethical correct behaviors create incentives for an integrated work environment where different stakeholders have consensus about security.

NCC does not want to implement a punishment system for those who commit bad behaviours, but there are strict regulations and if those are not followed, it can result in sanctions. The company who committed such irregularities can be convicted to pay fees and be expelled from the working place if the same inaccuracies are repeated.

Everyone have responsibility for their own behavior on the construction site but the managers must be sure that the regulations and rules are followed by the members. Further into the production phase, the project will be more complex since more actors are involved and here it is critical to have effective systems and routines to examine the safety measures and detect any problems. The site manager have a great responsibility and must always monitor the project and ensure that the right skills and resources are available in the right place and time, there is a high risk situation and thus the manager must be watchful and carefully follow up the work.

Everyone working in the company should work for a safety working conditions. When a subcontractor works for the company they get a comprehensive introduction about security issues with a discussion that follows. The focus is to be careful about everyone in the construction site. When foreign companies are involved in projects, it is important with the communication aspect; the parties that are collaborating should understand each other and be able to use the same language, no matter what kind of language that they speak. NCC believes that these foreign companies contribute to diversity and cultural richness which is an important aspect in the industry.
6.5 Analyze

The construction industry suffers from many accidents since the projects are complex with many actors involved and because of dangerous machinery and work places. Preventing accidents is an important work because such accidents often delayed projects and lead to economic losses. The emotional part is essential since colleagues is highly affected when someone die or get seriously injured.

What is alarming is that the number of accidents is still high, this refers to both fatal and injury accidents as can be shown from the background part. Small companies have more difficulties with safety measures since they have not enough economic capacity to invest in security resources. It can be also that they are in stronger need for economic benefits to grow and thus do not highlight the safety aspects as it needed.

Based on literature and the interviews, it appears that it is extremely important that the staff get right information about what really applies on the worksite. In a construction site, there are several actors involved. It is therefore important that the staff receive the right information on what applies on Swedish building sites and the risks that may occur. Furthermore, having right skills and competences are important, this refers to all members in a project, from the management to the workers. This is clearly shown in lime accident in Luleå, where the hired staffs who were working when the accident occurred did not have the skills and competence that was required for the job. Getting competence and skills can be by undergoing education in security and doing practical exercises.

Also the communication is a central part, many foreign companies have employees that neither can English or Swedish, here it is a challenge to communicate with them and having a third part as an interpreter can be a solution. It is also vital that they get enough information in their language about security routines before they begin working on site. It appears from both Skanska and NCC that working with foreign companies is something positive sine it contribute to diversity and also because they usually have good skills and competence.

There are strict health and safety laws and agreements between government, employers and unions where both the employee and employer are protected by law. It appears also from the interviews that each company has strict rules and regulations about wearing safety equipment. Thus the industry believes that there are no lacks of laws or regulations on state level or within companies.

The employees in both companies use protective equipment such as protective gloves and glasses, there are no need for more or better equipment. The problem here is about attitudes and to actually using them and not taking shortcuts.

Since many actors are involved at the construction site, the way of organizing the group is important and both safety managers I6 and I7 emphasizes the role of organizing the group so that right competences are available at right place and time. Especially – as I7 – mentioned further into the production when the project gets more complex and many actors are present. The risk is then higher for accidents. The organization aspect is a factor that contributed to the accident in Luleå, the management did not organize the workers so that right people with right competences was on the work place. The organization was done quickly and without having an expert on place.
Self-responsibility, right attitudes and behaviors are the basis to reduce accidents, certain accidents are caused as a result of the employee has not been sufficient attentive and careless with the use of protective equipment. It is about creating the right attitude and approach to the safety of the employees, this is also the supervisor's task to implement in the workplace. Further into the production phase, the responsible manager must be extra vigilant and clarify the basic requirements and how bad attitudes and behaviors will affect the project, every member must take own responsibility and think about their way of behaving.

The culture aspect is central when it comes to preventing accidents, having a safety culture is something that companies strive to fulfill. A safety culture means that the workers highlight risks and pay attention to faults that can lead to bad consequences. Since the construction industry is a male-dominated industry and because of a macho-culture that exist, paying attention to risks and being careful might be seen as something "feminine” and weak. So changing the culture where everyone has the same view and understand the importance of being careful is vital.

In order to prevent workplace accidents, operations should be planned so that they can be performed safely. Work preparation is an important element in the ongoing planning and is a very detailed form of planning which takes into account the risk of injury during hazardous operations. Both Skanska and NCC work with incident reports which are an important tool for improving safety in the workplace. These reports are used to improve the working environment. I6 and I7 believe that it is important to identify accidents. This is done by reporting incidents, accidents and observation reports which are fundamental in the work of ethics proper action in the prevention of accidents in the workplace.

Both companies Skanska and NCC have an emergency number where including safety managers will be informed if a serious accident occurs. Both companies have a form of "punishment" for those who do not have good behavior and not following the safety risks that have been imposed on the employees. The companies believe that ethical correct behaviors create incentives for an integrated work environment.
6.6 Conclusion

Treated ethical problem in this field:

- Lack of security in the industry, highlighted by a tragic accident that happened in Luleå during 2011.

The following points are the identified factors that the industry should work with in order to improve ethical conduct regarding the security field. The following points are based on the analyze part which in turn is based on the results from the interviews.

- The staff should get right information about rules and risks on the construction site
- Having people with right skills and competence on the construction site is important
- A clear communication between the actors is a central part and reduces the risks for accidents
- The culture aspect is central when it comes to preventing accidents
- Working with attitudes is vital to make changes in behavior
- The way of organizing the group is a critical aspect
- Self-responsibility from all actors is beneficial in combating accidents
- Operations should be planned carefully so that they can be performed safely
“The construction industry is one such industry where all actors in all hierarchies have something to gain”

- Interviewee 8, CSO- PEAB.

Source: Interview, 2014-04-20
7. Corruption

7.1 Background

Introduction

The following part includes facts and opinions from different sources such as from the Swedish department of the organization Transparency International, written by Wersäll. It also consists of articles written by Visanji from “upphandling24”, which is a website that belongs to companies in the construction industry. Other journal sources are “betong.se” and “byggvärlden.se” where articles written by the journalists Kalleny and Bengtsson has been used.

Reports from different authorities have also been used, for instance the city office (Stadskontoret) and the competition authority (konkurrensverket) and also the Swedish National Council for Crime Prevention (Brå).

Using different sources gives a more reliable picture of the subject where both the perspective of the industry itself and the state is included.

The prevalence of corruption

The sector that is most affected by corruption in Sweden is the construction industry, 84 percent of the construction companies believe that there is corruption in the industry (Stadskontoret, 2012). An international survey was made by the consultant firm PricewaterhouseCoopers where 226 construction companies from 43 countries were involved. The survey shows that 24 percent of the companies in the construction industry have been subjected to economic crime (Visanji, 2010). Since the construction industry is the largest industry in Sweden, the work to counteract corruption is important (Kalleny, 2012).

The amount of reports against corruption have increased markedly, which may be a sign that corruption has increased, but can also be a sign that the acceptance to corruption has decreased, which in turn leads to increased notifications. The Swedish department of the organization Transparency International believes that even if corruption is not increasing, it is still in the same level and there is no indication of any decrease (Wersäll, 2012).

Different types of corruption

There are different types of corruption, the industry believes that the major risks are nepotism, cartels and bribes (Bengtsson, 2014).

With nepotism it means favoring relatives and friends, especially in recruitment to public services (NE, Nepotism, 2014). A cartel refers to the activity when several companies which are selling the
same things are collaborating with each other by coordinating their prices and their production together. The aim is to undermine the competition in the market, this is forbidden by the Swedish law (Konkurrenverket, 2012). Bribery is a gift or a favor handed to someone in a position of power so that this person, in return, gives the donor a kind of benefit (Cornell, 2014).

The most common type of bribes is various types of entertainment like technical gadgets or conference travel. The second most common is various renovation or construction work carried out in the employee's residence. The suspect receiver is often a man in a managerial position and are not previously convicted (Kalleny, 2012). Furthermore, arranged contracts and information leakage which is linked to the procurement process are also considered as factors with high risks (Bengtsson, 2014).

Unreported employment is a problem that the industry suffers from, research studies shows that the state loses about 66 billion SEK every year because of unpaid taxes from unreported employment in Sweden. In the long term, professional construction companies that pay real wages and taxes can be driven out, thus it will lead to unhealthy competition (Renbyggbransch, 2010).

Reason for corruption

The primary reason for increased corruption is pressure on performance and results, for example in order to win a contract, which often leads to immoral behaviors (Visanji, 2010). The industry culture itself is an important factor behind corruption. The culture is characterized by ideals of loyalty and silence, where friendships are central and it is considered as a wrong behavior to "squeal". Trusting each other is important to the industry, especially because some of the work can be dangerous if not enough protective measures is taken (Wersäll, 2012).

Other factors that contribute to the prevalence of corruption are that informal networks often arise and that the industry is also sensitive to the economic situation. The structure of a project is another factor, the complex structure leads to difficulties for the management in a company to have an overview of what is happening at every stage. This is because there are many actors that are involved and some are only involved for a limited time of the project. Moreover, complex and difficult cost calculations, gives the ability to hide bribes by driving up prices which can then be blamed on other factors (Wersäll, 2012).

The reasons for giving bribes are to benefit financially or to create good relationships. In many cases the giver hopes that the bribe taker will influence the outcome of a specific situation (Wersäll, 2012).

The difficulties to detect and report irregularities

Most of the corruption was discovered through internal control processes (Visanji, 2010). Corruption crimes are difficult to investigate, because there are usually no demands for bribes that are uttered. The requirement is rather subtle, or in the form of friendship corruption where services implicitly lead to back services (Söderberg, 2007).

It is not easy to report irregularities. The person who has such information is usually a friend, or somehow intimate with the corrupt. According to researches, whistlers become often poorly treated. A
way to handle the problem is to implement internal "Whistleblowing" systems, such systems have increased in recent years. By creating instruments where tips can be made anonymously, the organization or company can access and get information about wrongdoings that occur. In addition to this effect the organization will have control over what information is made public. Within the construction sector, for example, Skanska has introduced what they call "Skanska Code of Conduct Hotline," which is a telephone and online service where employees can anonymously report if they suspect any irregularities (Wersäll, 2012).

It is about a fifth of the reported crimes that leads to convictions, which is considered a high percentage according to the National Crime Prevention Council (Brå) (Telegrambyrå, 2013). But the proportions of unreported cases are probably high. There are a few reports in this area but the risks are great and many irregularities are certainly not reported (Wersäll, 2012).

**The work against corruption**

It is important to work against corruption before the system becomes infected. It is vital to make people in the industry aware of the problem (Söderberg, 2007). The industry emphasizes the importance of supplementing the law in order to prevent financial crime and to strengthen the healthy competition. According to several studies, it turns out that commitment from the management level is essential for the consolidation of ethical issues within the organization. It is important that norms and values are made clear from the top and then spread down in the organization (Wersäll, 2012). The State Treasury has made several proposals on how to reduce corruption in the future. For example, they suggest that greater protection should be introduced for individuals who want to reveal bribery (Kalleny, 2012). Swedish Association of Local Authorities and Regions (SKL) has made a comprehensive prevention work to raise awareness about irregularities. In 2011, for example, they have developed the scripture "Freedom of expression and loyalty." The scripture declares the boundary between freedom and loyalty for someone who is employed in municipalities, counties and regions. It also declares how managers should act when the company is criticized publicly by employees (landsting, 2010)

To reduce unreported employment, a system has been implemented by the industry and joined by many companies. The system is called ID06 and it requires registration, compulsory identity requirements and attendance reporting for those working in the construction site (ID06, 2014).

Chief Financial Officers in Swedish construction companies with more than 100 employees were interviewed by telephone, the study was made by PwC and shows that 2 out of 3 chiefs declare that they do not implement risk analyzes on corruption or other irregularities, and just under half have clear ethical rules and policies developed around such issues within the company (Wersäll, 2012). A critical measure is thus to conduct risk and vulnerability analyzes that include corruption and then examine the current control system in relation to what is discovered. Concrete steps can be sampling, invoice data and more information and guidelines for staff. It is also important to think from a long-term perspective and improve the internal culture within the organization and create an environment where people are aware and pay attention to irregularities (Brå, 2013).
7.2 Case

Peab is an established construction company in Sweden, they have been accused of bribery since they have offered dinners, a music event, and a hockey match to municipal officials. This has occurred in Falun in order to get a better position and condition to secure a contract for the operation and maintenance of roads in the municipality. It was in December 2010 that the traffic and recreation administration extended a contract with Peab. But since the order was not subjected to competition, it was against the law of public procurement (LOU). The total value of the contract would have been about 161 million SEK (byggnadsarbetaren, 2014).

The contract was demolished within a year, because it appeared that the law of public procurement had not been followed and one of the municipal officials had exceeded its jurisdiction. There have been a lot of irregularities, for example three officials from the municipality of Falun with their wives and four people from Peab have been seen together at the musical contest “The Melody Festival”, the evening was paid by Peab. There are also six events where representatives from the company invited officials from the municipality for dinners and hockey matches. The receipts from the events were used at trial in order to prove the case of bribery. They had spent totally 70 000 SEK according to the receipts, about half of these had been spent on alcohol to the municipal officials and the employees of Peab (byggnadsarbetaren, 2014).

All the defendants in this case denied the charges, they claimed that they did not participate in the events in order to make benefits for Peab, and that there has not been any kind of bribes. The district court of Falun had a different view; the municipal officials and also two employees from Peab were considered to be guilty and convicted to pay fines between 3 600 - 40 600 kronor SEK. The court emphasize that this kind of bribery should not occur in the public sector because everything is funded by taxes, the risk is that citizens lose confidence to the authorities and this affects the city negatively. The municipality is now working hard to create new routines, there is a new management and new procurement procedures (Bengtsson, 2014).
7.3 Questions

1. You work at a company where there has been corruption in a large extent, especially bribes. You work as security officer and you have been assigned to process a plan where you develop strategies and methods of how to combat corruption within the company. What strategies and methods would you use in order to eliminate this problem?

2. You work at the Swedish Transport Administration which plans to build a major highway through the city. This is a “million project”, and many companies are interested to win the contract. A specific company wants to go further in the bidding process and invite your company on a luxury cruise. Most of your colleagues decide to participate on the trip to strengthen the relationship with the company, although this can lead to consequences to them as it can be seen as a way to get bribe. What will you do? Accompanied on the trip or not?

3. You are working at a construction company that is building a large shopping mall. There are many suppliers that are interested to get a contract, they want to be the supplier of materials and products for the construction site. You know that your boss favors a supplier because this supplier has bribed your boss. What is "right" to do?
7.4 Interviews

Introduction

These two interviews are made in order to get a greater insight into the industry's perspective on corruption. The interviews were done with companies from the industry because the interest of this thesis is to know how the industry itself deals with corruption problems and what is need to be done to combat corruption in a better way. Choosing PEAB and ÅF is because these companies work with a lot of actors in the construction industry and deals with many projects, therefore corruption is certainly an important aspect that both companies work with.

The following text is not literally what the interviewees have said but reflects their statements and opinions.

Interview 1

*With: I8*

*CSO at PEAB.*

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**Corruption within the company**

The most common type of corruption in the company is services and favors, so-called cronyism. This can for example be that an employee rent a carpenter at the company's expense to a friend. Favors can be traveling, hockey matches and restaurant visits and usually occurs between members in the company and members from another company. That happens because it is rooted in a culture that exists within the construction industry, and is used in order to create and strengthen relationships between the various parties within and outside the company. It is mainly the older generation who have grown up with this, they priority their job and therefore it is important for them to socialize and have good relationships since these things are seen to be a part of the work.

Bribes have occurred within the company, and it is usually about wage increases that are not correct and other benefits towards specific persons such as different kitchenware. Nepotism has barely occurred within the company, but there is favoritism of certain subcontractors that the company has collaborated with before.

The corruption in the company has decreased in the last decade, especially cronyism corruption. This is because there is increased attention to irregularities and a more comprehensive system that identifies and combats it.

The company believes that the industry is affected by corruption because it is a “fixes industry”. It is thus possible to offer services at the company's expense, such as renting out a carpenter to an
employee’s relative. All hierarchies and positions are in such a position that they have something attractive to gain, for example, a craftsman might believe that he have right to take any tools or a manager might believe he have right to hire a carpenter from the company to renovate his house for free. The managers of the industry usually have a lot of freedom, and deal with large financial costs which makes it easier to perform irregularities. Additionally the managers are not considered with suspicion because of their high status and thus have respect among employees.

In order to combat corruption, the company works with various safety areas, the first is workplace safety which is most about to handle thefts as this is a great problem. It is mostly hand tools, electrical tools and packing machinery that have been stolen. Locks and alarm system is used to prevent such phenomena, also own reporting system and intranet is used for notifications. If a notification is considered to be serious, it will be reported to the police.

Other measures that the company has are cameras at the main building and an access control system in in the workplace. ID06 is used to ensure that unreported employment does not occur. The company also works with crisis management, where all workers have access to a phone number that they can call if necessary, this can be used to report irregularities. Another area is information security, where information can be classified as the following categories; open information, internal, information that is for some specific projects and that some people have access to, high privacy where only a few who have access to it.

Personnel security is a strategy where the company takes help from the police to investigate the economic and social background of a person, it occurs for example in recruitment or when upgrading someone to a higher position that is considered as sensitive from the company’s perspective. For example, a chief financial officer should not have been previously convicted of fraud or other economic crimes.

Another area is something called business security where they have a group of six people, two of those are policemen, two take responsibility for IT and the last two are engineer. Their task is to investigate thefts, financial fraud and faithlessness. A common form of faithlessness is that employers conduct private services at the company's expense.

When someone is responsible for irregularities, the action that is taken is warning, wage deduction and dismissal occurs at the grosser crimes.

It is difficult to detect irregularities, since there are very many parties involved and corruption occurs in several stages during the construction process. The company has a “whistle-blower” system where the employees can email or call to report immoral irregularities and be anonymous. The employees have been informed about how it works and how it should be used. In order to create a feeling of security among the employees, the company strives to create trust among them by personal meetings between them and the management so that they feel comfortable to use the system.

The company has something called the” grandfather principle”, this means that an employee can go to the immediate boss if anything has been identified that is not correct. If the irregularity concerns an
employee’s boss or has to do with sensitive things, then the employee is encouraged to talk to the boss’s chief. Sometimes, there is nepotism in this situation which means that a chief upgrade a friend to the boss situation and thus it is still sensitive to go to the boss's chief.

The challenges is to have a better collaboration between different actors, this applies to construction companies, the construction industry, the police, tax authorities and also the migration board. For example ID06 is used and is an effective tool against unreported employment, but it does not ensure that the workers have received work permits in Sweden, this requires collaboration with other authorities to detect. It must become more flexible and easier to share knowledge and information between these actors to combat corruption in a better way. The legislation is also a challenge because it needs to be improved so that it is easier to control work places and to do inspections. Another challenge for the construction industry is that small construction companies are easy targets for criminal activity and can easily be blackmailed or forced to sell their contract that they have with the supplier to the criminal activities which in turn requires more money from the supplier than the original agreement with the small construction company.

A cultural thing that the company wants to remove is the “washing time”, this tradition means that the workers goes 15 minutes earlier than planned in order to wash themselves before going home. This is something that management dislikes and considers to be as cheating, because the employees get paid and should not end their work before the planned time. But there is a strong support on this from all the workers and has become an established tradition which is difficult to remove. Many would go against the company and strike if they try to eliminate this, which is the reason why the company has chosen to accept it.

The positive effects of a corruption-free company are that the company gets a better economic situation and that the project activities are proceeding in a more flexible way without interruption. Also new incentives and development processes can be implemented, it has also an ethical value in the company. By working against corruption may reinforce the company's brand on the market, but on the other hand, paying attention to corruption in a high scale has led to a big media attention, which has weakened the company's brand.
Interview 2

With: I9
-Regional Manager at ÅF

Corruption within the company

The company ÅF is a consultant firm and according to I9, they have not been subjected to corruption crimes during the last 10 years. This is mainly because of their role and position since they are not the holders of money. Thus, there are no interests of other companies to bribe ÅF or to make other economic crimes in order to get benefits. The company has been in negotiations with other foreign companies, such as in China where an indication of corruption has occurred. There can be a tendency among foreign companies to bribe ÅF to get services. This has not been accepted by ÅF because it is against the company’s policy. I9 considers that most of the corruption in the construction industry has been eliminated because of the law of public procurement which has strict rules against corruption such as cartels and forbidden influences of the tender process.

According to I9, nepotism is likely higher in smaller towns, because it is easier to give bribes and services since it is more common that a person meets friends and relatives.

Strategies to combat corruption

The strategy to prevent the prevalence of corruption is expressed by a set of rules that are called “code of conduct”. Every new employee in a company must also undergo an introduction course called “welcome to ÅF”, here the employee learn about the company’s ethical aspects, vision and rules. This is mainly to create ethical awareness among the members and declare the value of the company. To prevent corruption in the industry, own responsibility from all actors are important, it is up to the industry to work against irregularities. An important aspect is to have clear expressed rules when working with other companies, for instance during a tender process. It is vital that both parties have a common view of the values and how to act righteously.

I9 experienced that during the 90s it was more common to be invited to dinners and to get Christmas gifts from suppliers. When the law of public procurement was implemented it has led to a change of the culture in many companies. That is because many leading companies have set up clear rules to follow the law and to prevent eventual risks of corruption, this includes even ÅF. The companies who buy services require that the company they work with has a clear code of conduct. This is important since it contribute to better moral behaviors and reduce the room for irregularities.

The future perspective regarding the company is that the corruption will reduce, and the work in companies will be more focused on the performance of each individual.
7.5 Analyze

Based on the background part, corruption in the construction industry is a major problem, there are also many types of corruption such as nepotism, bribes and cartels. It appears from literature and interviews, that this depends on the complex project structure in this industry, where there is a traditional culture. The industry is such industry where all parties have something to gain from, it is difficult for the project manager to have overview of the project, the projects are complex and many stakeholders are involved. There is a traditional culture to invite each other for services and favors, and keeping quiet about this when friends and colleagues are involved.

Peab has suffered from corruption several times unlike ÅF, because they are not the holder of the money, they have different roles in the market. In order to reduce corruption in the construction industry, Peab has different systems such as ID06 to counteract unreported work in the construction site. In addition, Peab has a system where they cooperate with the police. They also have a whistle-blower system so that employees can report irregularities anonymously.

According to I8, CSO at Peab and I9, Regional Manager at ÅF, they try to create a culture based on trust and fairness towards all parties. Peab have meetings between staff and management where they discuss ethical problems so that they have knowledge about the company's ethical aspects, laws and regulations. The company has also something called the grandfather principle which means if there is something sensitive that an employee wants to talk about, they can contact the boss's manager. ÅF has an introductory course where they highlight the company's ethical principles and they also have a so-called "code of conduct" which is a collection of rules of conduct, and all of this is created in order to promote a culture of transparency.

I8 emphasizes that, an important aspect to reduce corruption is by having better collaboration between different actors, such as tax authorities, the police and the immigration office. It is also needed stringent legislation to make it easier to make site visits and make it easier to check the construction site.

I9 mention that all responsibility from all parties is important because this will lead to that the parties works against corruption. He also mentioned that it is important to be clear in the expression of the company's rules and approach within and outside the company.

ÅF and Peab are strictly regulated by what they can receive from their clients in order to prevent bribery. According to I9 the construction industry became cleaner of corruption when the law of public procurement became stricter and more regulated. Many companies have changed their attitude on what they can offer to other companies, and what they may receive and not. This is a sign that there has been a positive cultural change in the attitude and approach to this problem.
7.6 Conclusion

Treated ethical problem in this field:

- Corruption in the construction industry, highlighted by a case where bribes have occurred.

The following part is the identified factors that the industry should work with in order to improve ethical conduct regarding the corruption field. The points are based on the analyze part which in turn is based on the results from the interviews.

- Creating a *culture* based on trust and fairness towards all parties is important
- Increasing the *knowledge* about ethical principles by introductory courses and meetings
- Changing *attitudes and behaviors* leads to a reduction of corruption
- Having better *collaboration* between different actors, such as tax authorities and the police will help to reduce corruption
- Own *responsibility* from all parties is important to combat corruption
- Different *systems* such as ID06 and whistle-blower systems is an effective tool against corruption
Procurement and tender

“The lowest price does not necessarily mean the lowest total cost”

- Erik Hellqvist, CEO of the Swedish Building service.

Source: (Hellqvist, 2013)
8. Procurement and tender

8.1 Background

Introduction

The following text is based on reports from the Swedish Competition Authority and written by Pedersen and Grönberg. Information from “Byggledarna” has also been used which is a network consisting of consultants in the construction industry.

Furthermore, an article written by Eriksson from “uphandling24” is used, which is a website that belongs to companies in the construction industry. The text also includes an article written by Bergqvist which is the chairman of the industry association “Byggcheferna”. The case is mainly based on facts and information from Hellqvist who is CEO of “Svensk Byggtjänst” which is an information company for the construction and property sector.

Using such kind of sources where the perspective of a state authority and the industry is included brings a general and reliable picture of the subject.

The concept of procurement and tendering

Procurement means that a contracting entity awards a contract or a framework agreement for goods, services or works. With a framework agreement means an agreement between one or more contracting authorities and one or more suppliers to establish the conditions for the award of the contract during a given period (Konkurrensverket, 2014).

A tender is an offer to enter into a contract. The contracting procedure begins with an offering from one party. The offer is addressed to the other party and contains enough detailed information about what is included in the proposed contract (Lagen, 2014).

Requirements

The Swedish competition authority considers that contracting authorities have a responsibility to ensure that agreements are not implemented with suppliers who commit delinquency. With delinquency is meant primarily violations which lead that the vendor awarded the contract. Contracting authorities should discourage unhealthy competition where laws and agreements have exceeded, that in turn provides competitive advantages in public procurement. An important aspect is that the authorities write clear agreement that includes sanctions against those who breach of contract (Pedersen, 2011).

A well-formulated specification provides a prerequisite for well-written, thoughtful and accurate tender. The client should spend a lot of care and time on it. The specifications shall describe in detail what the client expects, what requirements are important from the purchaser's point of view and how
purchaser wishes that the contractor shall comply with requirements. There are widespread problems in the construction industry. Many contractors are unserious and enter low bids in order to win contracts (Byggledarna, 2007).

5 principles

In 1 chapter 9 § in the public procurement law (LOU) it is determined that purchasing authorities should treat suppliers in an equal and non-discriminatory way. These requirements are expressed in the following five basic EU principles (Pedersen, 2011):

- It is forbidden to discriminate suppliers because of their nationality (citizenship, establishment or country of operation)
- Suppliers must be treated equally. A contracting authority shall not treat cases which is similar differently or different situations equally, unless there are objective reasons for that
- The procurement should be predictable and transparent, for instance it is not allowed to change the conditions during ongoing procurement
- Measurements that are taken by a contracting authority should not be more than what is necessary for the current procurement. In addition, the requirements must be effective, which means that they are possible to control and have that intention to lead to the achievement of the purpose
- Countries that are members of the EU are obliged to accept documents such as grades and certificates by competent authorities in other member states (Pedersen, 2011)

Types of unsound tendering

According to the competition authority, there are three cases of unsound strategic tendering. The first is when the tenderers do not hold what they have promised. For example, by specifying low-priced services and then refer to more expensive alternatives. The second one is corporate strategic tendering which means that two or more companies, typically within the same group adapt their bids so that they rank after each other. They offer only on normally priced products, and sends low priced products on to a group colleague. The third one is manipulation of relative evaluation models. This means that the company makes a "dummy" bids for the convenience of another company (Pedersen, 2011).

Examples of where low bids have occurred are in Gothenburg, Gothenburg's Procurement Company requires that tender prices under 300 SEK per hour shall be explained already at the tender submission. The tenders that are judged to be too low will be evaluated or rejected depending on whether the explanations behind the offer are sufficient or not. Until the end of 2013, the company has disallowed five offers because of thin justifications. This is done to get companies who submit a low
bid to prove that the tender is seriously meant. The contracting authority that rejects a tender must prove that the applicant has been given an opportunity to explain the low offer price before the offer is rejected (Eriksson, 2013).

Problems

Today's problems regarding the tender is that, many companies are leaving too low prices, then enter additional hours, otherwise it is not possible for them to make the project going through economically. Many construction managers feel that this trend degrades the quality of jobs that are performed to keep delivery times and achieve greater profitability. The competition is very hard on the construction industry, and the profitability of the projects has become increasingly important. According to a survey, conducted in 2011, approximately 47 percent of the construction managers believe that profitability is the most important factor in a project. Approximately 64 percent of these construction managers who were asked also stated that it happens that subcontractors, consultants or contractors provide services in order to gain a competitive advantage in procurement. According to a survey conducted in June 2013 in which 2,515 construction managers provided feedback on the ethical and moral standards in the construction industry. Almost one of ten construction managers replied that they were afraid to pay attention to abuses in works because they were afraid of getting fired. An important challenge is to guide the market in the direction so that the supplier who wins the project must be best suited for the job, not the one that offers the lowest price. It is not the right way to run a business by offering price per hour which is well below cost price (Bergqvist, 2012)

There are two circumstances that often make it difficult to counter the dishonest competition; these are foreign labor force and subcontractors. Especially in certain industries such as construction, it is a problem when some companies can circumvent the rules for taxation and payment of social security fees by using foreign labor. It is primarily not the differences in wage levels between Swedish and foreign workers that are perceived as problematic from a competition perspective. The problem is rather the ability of these suppliers eluding to pay taxes and social security contributions in Sweden. There have been several times that it is the subcontractor that makes use of undeclared workers, and it is not the actual bidder. It is therefore important that contracting authorities which are carrying out checks not only check the provider, but also the subcontractor to access the unreported workers. An increased control of the subcontractor will obviously mean an increased cost to the tenderer and the contracting authority. Therefore it is important that they are carried out with care so that providers are not discouraged to participate in the procurement procedure due to additional costs that may apply (Grönberg, 2013).
8.2 Case

The Hallandsås tunnel is one of the most discussed construction cases in Sweden, it has become a very expensive project with many years of delays. The Hallandsås tunnel is railway tunnel which will go between the north and the south side of Hallandsås which is a horst in south Sweden (Lagerwall, 2013).

The construction started in 1992 and the plan was that the tunnel would be finished after five years. Furthermore, the total cost for the project is until now 10.5 billion SEK, which is much more expensive than what initially was estimated. This project has had major problems with the geotechnical investigations and it is mainly this which has led to major delays and that the budget has been exceeded (Allego, 2013).

It was 30 years ago when the governmental organization “The railway of the state” contacted a number of consulting firms to come up with tenders to develop a geotechnical investigation of parts of the tunnel under Hallandsås. This project was prestigious and many consulting firms got involved and the competition was fierce. The companies collected their best geologists, geotechnical engineers and designers, and from this they established the best basis and tender as possible. Most companies had estimated that the cost of the geotechnical investigation to be about five million SEK. But when the client which in this case was SJ had gone through all the submitted bids, it was found that there were cheaper tenders. They chose a tender for one million SEK. SJ was acutely aware of that it is always important to have a good foundation to build on, especially when it comes to projects with complex geotechnical engineering but they chose to ignore this and went for the minimum bid, which also meant that the geotechnical investigation was not sufficient. This tender did not lead to the lowest total cost of the project, the project is way over budget and it is about 20 years delayed (Hellqvist, 2013).

The project is approaching completion, it can be said that a more comprehensive geotechnical investigation would certainly have led to a different design, different planning and preparation. The problems due to insufficient geotechnical investigations could have been avoided. The lowest price does not necessarily mean the lowest total cost, and it is not the best criterion for selection when the purchaser is in need of specialized services (Hellqvist, 2013).
8.3 Questions

1. You are a newly graduated student from KTH, you work as a purchasing assistant at a company. Your task is to perform a tender request regarding a tunnel project. What aspects are important to take into consideration when doing such request? What are the challenges?

2. A company gives an unusually low bid for the project, you are suspicious and think that it might be something wrong. What will you do to get clarity? Which aspects are important to think about – besides economy- when accepting a tender?

3. You are working at the Swedish Competition Authority and get a task to investigate how the laws and regulations can be improved regarding procurement and tendering. What do you think is the most important issues in this field to improve?
8.4 Interviews

Introduction

The interviews are done with representatives of two state companies which deal with procurement and tendering issues. The reason of the interviews is to get a closer insight of the industry and find out how the companies work with purchasing and tendering, what the critical factors are in this process and what factors that is important to work with in order to make the process to be more transparent.

Choosing Akademiska Hus and The Transport Administration is because these companies’ deals with procurements in a large scale and work with large economical investments which can be a factor that can lead to abusive behaviors from companies that strive to win contracts.

The text is not quotes from the interviewees, but it reflects what they have said.

Interview 1

With: I10

Project coordinator at Akademiska Hus

Akademiska Hus is not covered by the Public Procurement Law (LOU) because it is engaged in trading activities and operates in a competitive market, it is in the taxpayers' interest that the company is competitive.

The company has ethical rules and internal regulations that clearly explain how to act righteously; there are Anti-Corruption policy for gifts, customer events, services & favors. For example one ethical rule that the company has is that the employees do not have right to take gifts that have a value of over 100 SEK, this is because the job relations should not be affected since it can lead to unethical job behaviors. Transparency and traceable documentation of the procurement process is applied and also equal treatment principles in the process of competitive tendering where different parties are involved.
The lowest price is not always the best when it comes to tender, it is important to know in detail what is included in the contract and to understand what it is that is the cheapest, if the tender covers the entire production steps or if it will lead to other increased costs. It is important to consider the big picture, price, time and planning. All three aspects must be in mind. The company's strategy is to become clearer with its requirement specification, which means describing the expectations clearly and in detail. It is important to think about all stages of the construction process and the risks that may arise. The tender process should not be done quickly, it should be analyzed well and consistently. It is also advantageous to involve different skills in the bidding process to minimize errors and create consensus.

To optimize the process, it is also important to have good profession and skills. The project manager must have good knowledge about their group to place the right skills at the right place and time. The project manager must have the calculation-thinking in an early phase in the procurement process and plan carefully and strategically to anticipate obstacles. The company believes that the current documentation system works well. The work with foreign companies can be a challenge, it is necessary to adapt the language so that both parties understand each other, understanding the way of working and cultural aspects about each other are also vital.

The organization works more towards the general contract form in order to get more control over the project. It is unique environments and buildings that they work and thus the company wants to be more involved by choosing this form of procurement. Regarding the entrepreneurs, the company think that it is important that they recognize the value of past projects and utilize the lessons in future projects. Furthermore, the entrepreneurs should think about the whole picture of the building process, from start to the final product. They should not only leave a price without thinking about the content of their tender. Something else is that contractors should be better in knowing the production order, because it will gave a clearer picture of the building process and thus they will give more reliable prices.
Interview 2

With: III
Purchasing Manager at the Swedish Transport Administration

There are two ways to make an evaluation about a tender, the lowest cost and the most economic profitable tender (in long-term perspective). This occurs in discussion with project managers which is considered as an important part of the process. There are specific recruitments on the tender but in the end it is the economic aspects that decide which kind of tender that will be chosen.

The law of procurements must be followed during the whole process, from seeking a tender until acceptance. Now the role of the company is more like a “client role” where private actors and producers execute the work that is ordered. The lowest price is often the most attractive issue.

The missions that the company is taken comes from the society which in turn is affected by the political leadership and decisions. When a project is ordered, a project manager is appointed and then the design process starts and land acquisition etc. The Swedish Transport Administration uses a system called Complete Tender Management (CTM) to publish and announce procurements where every suppliers that are members of EU can use it. When a tender has been examined and accepted, the parts that have complaints have 10 days to appeal to the court. During these days, the agreement is blocked until a decision has been taken.

When a company gives a low priced tender, this can be questioned by the Transport Administration, if the supplier has a good explanation to the low price, then the tender has to be accepted.

A problem regarding procurement is that a low competition in the market, therefore the company has a responsibility to develop the market and get more competiveness. For example when a tender is formalized, it should be done in a clear and neutral ways that not exclude some companies. It should not be adapted to a particular company's favor. Many tasks that the company performs have such complexity that it requires special competence and skills. Some of these competencies are not available in Sweden, and therefore there is a need of foreign companies. It is thus wrong to exclude these companies and they are also protected from exclusion by the EU directive. To make the tender process to be more equitable, total security is applied and no company knows about the request before it is announced. The reason is that companies should not be able to affect the request from the Transport Administration to its own favor. Other problems are that corruption is a high risk because they deal with high costs, they get 55 billion SEK from the state and 48 billion of them are used in
procurements. Therefore, there is a great interest from the suppliers to try to gain projects and in order to do it, economic crimes and irregularities can occur. It can also be unserious companies that want a gain a contract. Because the company deals with the taxes, they have strict rules to not be subjected to bribery or other irregularities. For example it is not allowed for the members to accept invitations of dinners, gifts or other things. The company thinks it is good with strict laws in order to prevent influences from other parties; the members have to take responsibility and in a written way decline invitations.
8.5 Analyze

As shown from the case, unsound tendering is a problem that can lead to negative consequences in terms of delays and economic losses. The contracting companies will thus benefit if they combat such types of unsound tendering.

Both interviewed companies have ethical rules to avoid that irregularities occur. The Transport Administration is very careful to strictly dismiss invitations of all kinds from different companies while Akademiska Hus may not receive invitations to a value more than 100 SEK. Having a culture of loyalty and transparency without bribes and irregularities is something that both companies strive for. They are working on the government's behalf and funded by the taxes, because the companies have a reputation to live up to, and must be extremely careful about how they appear.

Both I10 (Project coordinator) at Akademiska Hus and I11 (Purchasing manager) at the Transport Administration mentioned the importance of clarity in the tender proposal, in order to avoid misunderstandings and false tender giving, when making such proposal it must be clear about what the company is wanted and what is required. Clear communication is thus a central part here. The lowest bid is not always the most financially profitable, but when a company submits a low bid, they may be required to explain the offer. If the explanation is durable and they show signs that they have understood the assignment and what is expected, the tender must be accepted, otherwise is contrary to the Public Procurement Law (LOU).

Akademiska Hus uses more and more the general contact form, they are working with unique projects and therefore the company wants to be more influence in a greater extent in the various stages of the project. The Transport Administration today is an amalgamation of various departments and has a client role, and therefore the general contract form is very common. The two companies have two different starting points but works on the same principle that clarity, reliability and honesty are the basis for their business.

The manager has a key role and taking several key decisions in these two companies. I10 mentioned that in order to optimize a project, the project manager must make sure that the right people are in the right place. The way of organizing the members affect the outcome of the tender process; therefore, the manager must collect people with right competences and skills. Ghoray emphasized that the project manager must be able to make a good plan by anticipating obstacles in the project and having the economical thinking already in the procurement process. The project manager has the same role in the Transport Administration, but they are working more closely with tender process. This because of the transport administration has received a client role by going over to the turnkey contract and therefore they receive a smaller role out on the construction site.

What was found from interviews is that a culture based on honesty and sincerity is critical aspects that contribute to a sound procurement process that gives all participants equal opportunities. A good project is when probity is applied with common sense and this should be included and integrated in all kind of procurement planning process. A good ethical behavior allows the procurement is conducted in a manner that allows all participating providers are competing as equal as possible. The procurement process must be clear, comprehensible and open and also applied in an equally way to all parties that are involved in the process.
8.6 Conclusion

Treated ethical problem in this field:

- Unsound tendering, highlighted by a case about the tunnel project Hallandsåsen.

The following points are the identified factors that the industry should work with in order to improve ethical conduct regarding procurement and tender. The points are based on the analyze part which in turn is based on the results from the interviews.

- **Clarity** in the tender proposal is vital

- Clear *communication* is a central part between the actors during the entire procurement and tender process

- *Organizing* the members that are involved in the tender process affect the outcome of the process

- The project manager must *plan* carefully where obstacles and economical aspects are included before accepting a tender

- A *culture* within companies that is based on honesty and sincerity is critical to make the procurement process to be more sound
9. Final discussion and analyze

The five chosen subjects show ethical problems in the construction industry. It is found that these different ethical problems have big consequences for the industry and affect it in many ways; economically, socially, emotionally et c. For instance, a death accident affects the company economically since the project is often delayed and it requires resources to investigate the accident, also the group is affected emotionally and socially. Therefore it is important to work in order to combat these problems.

The study shows also that the construction industry is complex and it is not clear how ethical problems should be treated. When investigating different applications of ethics, it is found that the industry needs to work with several factors to improve the ethical field. One of the factors is the cultural aspect. Furthermore, attitudes and behaviors are important aspects that are a challenge for the industry to deal with. These are common factors between all chosen fields except the environmental one. Regarding the environmental field, it seems that the industry has come a long way and most of the participants are aware of the importance of green buildings and renovations. According to the theory part, the behavior is linked to the prevailing environment. In order to create a good behavior, it certainly requires a working environment with clear guidelines on prevailing laws and regulations, also to raise awareness and knowledge about the consequences is factors that contribute to a better behaviors. What also can be referred to the theory part is that behaviors are linked with learning processes; such process that seems to be relevant in this case is habituation which means that regularly occurring or repeated stimulation is eventually no longer noticed. So everyone in the industry, especially managers since they are in more powerful position, has to highlight and mark off irregularities. Because if that is not done, then irregularities will no longer be noticed and everyone will think that this kind of wrong behavior is normal. Another relevant behavioristic concept is operant conditioning which means that behaviors can be strengthened or weakened depending on the consequences of the behavior. So if companies encourage and rewards good behaviors and attitudes and punish misconduct, it will encourage people to act morally and avoid irregularities. The theory part shows also that people learn from social contexts and have tendency to imitate other. So people in the industry should be good role models and act morally because that affect other people positively.

Why there is a common culture regarding the environmental field is certainly because this aspect has been highlighted a lot in media, both on national level and internationally. These issues have been treated for a long time by the media and researchers, and therefore the importance of them have been etched at those working in the construction industry. In addition, companies in the industry are market-driven and usually have economic profits as the basis for projects. Therefore, building green gives good economic benefits and therefore many actors in the industry are willing to invest in environmentally friendly projects. The factors that are important to work with regarding the environmental field, especially the renovation of the million program houses is rather social ones, to include the residents when making renovations and to think about the surroundings between the houses. Also to develop technical models is considered to be an effective measure which will lead to better actions when making renovations. According to the industry, it is beneficial to get economic support from the state to finance the renovations, but the state have a different view and thinks that it will not be effective since property owners and construction companies can exploit that for own benefits.

What the industry emphasize is the importance of taking own responsibility, this is found in all the chosen subjects. Taking own responsibility refers to all actors in the construction industry and is
certainly not an easy task. According to the theory part, being able to take responsibility is based on having knowledge about the certain issues. It appears that companies strive to increase the knowledge among their members. For instance, regarding the corruption subject, Peab had meetings between the staff and the management where they discuss ethical problems and ÅF had an introductory course called “Welcome to ÅF” where the members are informed about ethical rules and principles. Also regarding gender both Skanska and JM hade internal training programs where the purpose is to increase knowledge and awareness about diversity and gender. So taking responsibility is an important aspect which is also connected with having knowledge and information about issues.

Another important aspect that is found from the different subjects is organization. For example, regarding the environment subject, it is found that organizing available competences within the company is necessary, that people with the required competence works with issues that are appropriate for them. When it comes to gender it was important to organize the groups so that more women are at the same work place instead of spreading out them to different departments. This contributes to diversity and to a change in the work environment as it appeared from JM, for instance the members get a tendency to talk about other subjects than just “male-dominated” things. Regarding procurement and tendering, Akademiska Hus emphasized the importance of organizing available competences so that right competences are available at right time and place during the tender process.

Furthermore, collaboration between different actors in the industry is another critical factor which has been found in several of the fields. For example, 18 CSO at PEAB mentioned the importance of having collaboration between different actors, such as tax authorities and the police will help to reduce corruption. Also regarding the million program project, it was clear from the industry that collaboration is needed between municipalities, state, property owners and the housings companies in order to make successful renovations of the million program houses. Better collaboration can be achieved by having more frequent meetings between the actors, and by having consensus about the problematic issues and common goals. Also an effective documentation and a follow-up system will certainly be a helpful tool and contribute to better collaboration.

It has also been found that clear communication is an aspect that is vital to work with in order to achieve higher ethical conduct. Regarding the field security and accidents, the industry emphasized that clear communication is necessary between the actors that are working on the construction site. That will minimize risks and accidents. Also clear communication is a central part between the actors who work with the procurement and tender process. Talking the same language and expressing rules and instructions in a clear way (for instance with pictures regarding security measurements) will help to achieve a better communication.

The people who were interviewed were clearly aware and conscious about the problems in their companies and what is needed to be done to make improvements. Why the problems is still persist is certainly because in many cases such as in gender, the problems are a result of historical and cultural aspects that reach far back in time, thus it is difficult to make quick changes. Such changes usually take time, especially those that are related to culture, behavior and attitudes. Because -according to the theory part- when people are in a specific culture with particular patterns, then they often learn from social contexts by observing and imitating other people. It is certainly easier and more comfortable for people to embrace the prevailing principles and standards and be a part of the majority, instead of going against everyone and question things. Moreover - according to literature -, the industry is complex with many actors involved. Changes must therefore usually undergo several processes, and many people should be involved. All that takes time which leads that changes occur slowly.
Making about two to three interviews for each ethical field affects certainly the results for the study, for example if more people were interviewed then more factors might have been highlighted. It would also be easier to determine which factors that the industry prioritizes and considers as most important to achieve better ethical actions. Most of the interviews were made with big construction companies since it was easier to contact them and get interviews; the results might have been different if representatives from smaller companies were interviewed. That because smaller companies usually have less economic resources and simpler organization structure, such companies might think that other factors are more important in the work of combating ethical problems.
10. Proposal for further research

This part is intended to give suggestions about further research regarding different applications of ethics and responsibility in the construction industry. The following proposal is based on what the authors think would be interesting subjects to work with.

10.1 Ethics and responsibility

- The study was based on different applications of ethics in the construction industry by choosing five different fields. A similar study can be done by choosing other interesting subjects with ethical connections, such as:
  - International workers (the way that they are treated in Swedish companies, problems and challenges).
  - Dismissal (How project managers should act when telling an employee about a dismissal, rights and obligations that the employee has in such situation).
  - Newly graduated students working in construction (Problems and challenges, do other experienced people in the industry believe in their competences?).
  - Transparency and responsibility (Can an employee admits mistakes or telling the management about irregularities without significant risks? Can project managers openly criticize bad behavior without fear of losing their job?).

10.2 Environmental threats

- The study was based on the renovation of the houses from the “million program”, another application of ethics regarding the environmental field can be to investigate eco-system services, social aspects when building and certification systems. This is because these aspects are constantly evolving and considered by the industry to be the “trends” in environmental friendly building.

- The report shows that according to the industry, economic support was considered as a helpful measurement to finance the renovation of the million program houses. On the other hand, the state and authorities do not think that this measure is effective. A study can be made to highlight this question where a deep analyze can be made about advantages and disadvantageous regarding subsidies.
The study shows different factors that are important to work with to make effective renovations of the million program houses. Such factors are better collaboration between various actors that are involved in renovation projects. Also, that companies should focus on making better organization regarding available competences. A study can be based on investigating how better collaboration or organization can be achieved.

10.3 Gender

- The study shows that it is difficult for the industry to attract more women. A further research can be to focus more on how construction companies should work and which strategies that are important to have in order to attract more women.

- It appears from the study, that behaviors and attitudes are important to improve in order to create better working conditions for women. A further research can focus on how behaviors and attitudes can be improved within construction companies.

- Increasing knowledge about equality and gender issues between the members in a company is shown to be an important factor. A further research can focus on how to increase knowledge in an organization.

10.4 Security and accidents

- The study shows that behaviors and attitudes are important factors in the work of combating accidents. A study can be based on how behaviors and attitudes can be improved within companies.

- When interviews managers from the industry, it appears that some projects include cooperation with foreign companies. Thus, a research can be to investigate the way of communication between Swedish members and foreign workers on the construction site. What are the challenges and how can problems be overcome?
10.5 Corruption

- The study shows that there are different types of corruption such as nepotism, cartels and bribes. A further research can be based on investigating more deeply one of these factors, where problems and strategies regarding the chosen type of corruption are investigated.

- It is found from one of the interviews, that a better collaboration is needed between companies, tax authorities and the police in order to combat corruption. A further investigation can focus on how such collaboration can be achieved.

- The study shows that companies have systems such as ID06 and whistle-blower systems to combat corruption. A further research can be based on highlighting different systems that are used in the work against corruption. What are the advantageous and disadvantageous, is there any new kind of systems that are needed?

10.6 Procurement and tendering

- The study showed a case (the tunnel of Hallandsåsen) where the accepted tender which should be the cheapest ones appears to be very costly. A further research can focus more on other factors such as quality when it comes to accepting tender. How should companies work to ensure that the accepted tender will give the expected quality?

- How can contracting companies be clearer in their tender request? What are the problems and challenges?
11. References

11.1 Literature sources


### 11.2 Interviews

I1, Environmental Manager at NCC. Interview 2014-03-26, Stockholm.

I2, Business Development Manager at NCC. Interview 2014-04-24, Stockholm

I3, Research leader at KTH. Interview 2014-04-28, Stockholm

I4, Diversity manager at Skanska. Interview 2014-03-19, Stockholm

I5, HR Director at JM. Interview 2014-04-23, Stockholm

I6, Responsible for security and safety at Skanska. Interview 2014-03-20, Stockholm.

I7, Vice President Health and Safety at NCC. Interview 2014-04-22, Stockholm.

I8, Chief Security Officer (CSO) at Peab. Interview 2014-04-20, Stockholm

I9, Regional Manager at ÅF-Infrastructure. Interview 2014-04-29, Stockholm.

I10, Project Coordinator at Akademiska Hus. Interview 2014-04-10, Stockholm

I11, Purchasing manager at Trafikverket. Interview 2014-04-24, Stockholm
11.3 Picture sources

Sources to the pictures that cover the front page for each chapter:

Chapter 1: Bowalleyroad, http://bowalleyroad.blogspot.se/2012_06_01_archive.html, taken 2014-03-20


Chapter 5: blog.tendersdirect, http://blog.tendersdirect.co.uk/category/tender-tips/, taken 2014-03-14

11.4 Table resources


12. Attachments

The following is the questions that have been asked during the interviews, the questions are in Swedish since the interviews were made by using this language.

12.1 Environmental threats

1. Vilken miljösyn har företaget?

2. Har företagets miljösyn förändrats med åren, tänker man annorlunda nu?

3. Hur arbetar ni inom företaget för att öka medarbetarnas och ledningens miljösyn?

4. Vilka är fördelarna från projekt som har genomförts med miljöhållbarhet som fokus?

5. Är fördelarna oftast kortsiktiga eller långsiktiga i projekt som har genomförts miljövänligt?

6. Händer det ofta att den projektansvarige tvingas kompromissa mellan ekonomi och miljö?

7. Kan det vara så att företaget satsar på miljöaspekten även om det inte genererar kortsiktiga eller långsiktiga ekonomiska vinster, alltså att ni handlar etiskt utan att tjäna något alls?

8. Vilken är företagets viktigaste miljöfråga?


10. Vilka är de största utmaningarna och problemen som företaget möter gällande miljöaspekten?

11. Vill företaget öka satsningarna på miljön?

12. Använder ni er av miljöklassningssystem gällande byggmateriel?

13. Hur ser det ut gällande användning av förnybar energi? Ex solceller

14. Inom vilka områden har företaget varit framgångsrikt gällande miljön?

15. Vilka lärdomar har man fått av tidigare projekt?
16. Då det finns många argument för och emot vad som är lämpligt miljöhandlande, ex gällande kemikalier, klimatfrågan, vad som är lämpligt materialval et c. Hur kan ni fastställa och bestämma vad som är rätt att göra?

17. Hur ser övriga aktörer/partners som företaget har samarbetat på miljöfråga

18. Får ni statliga subventioner och bidrag för miljösatsningar?

19. Hur påverkar lagar ert arbete, t.ex. så har riksdagen beslutat att alla byggnader ska använda hälften så mycket energi år 2050 i jämförelse med dagens nivåer. Är lagarna svåra att efterfölja?

20. Hur kan man öka samhällets miljömedvetande?

21. Hur ser framtiden ut gällande miljövänligt byggande, vilka trendar eller utvecklingsriktningar är troliga?

The interview with the I2 and I3 was not based on these questions but they were asked more generally about their view regarding the challenges and the important factors to work with regarding the renovation of the million program houses. This is because they have more insight in this certain question. Follow-up questions to their answers were asked.
12.2 Gender

1. Hur ser könsfördelningen ut på företaget?

2. Finns det kvinnor i ledande befattningar inom organisationen? Hur ser fördelningen ut?

3. Hur har det sett ut tidigare? Är det nu fler kvinnor som söker sig till branschen?

4. Har företaget strategier för att öka andelen kvinnor inom företaget?

5. Skulle det vara gynnsamt med fler kvinnor i företaget? Varför i så fall?

6. Vilka är de största utmaningarna vad gäller kvinnornas arbetssituation generellt och inom företaget?

7. Enligt en undersökning gjord av branschorganisationen Byggcheferna så anser 63 procent av kvinnorna att det är svårare för dem att bli befordrade, varför är det på det sättet? Är det så på företaget också?

8. Finns det en viss åldersgrupp som är emot att kvinnor får högre positioner?

9. Finns det befattningar/roller som är mer lämpliga för kvinnor? Tilldelas kvinnor en viss typ av arbetsuppgifter?

10. I litteraturen framgår det att det är svårt för kvinnor att ta sig in i nätverk då umgångeskretsen är mansdominerad och många aktiviteter är mansdominerade ex. jakt, sporter, sauna. Är afterwork/utflykter anpassade för de både män och kvinnor?

11. Har det förekommit att kvinnor har trakasserats eller blivit utfrysta?

12. Vilken hjälp kan en kvinna som har blivit trakasserad få från företaget?

13. Då byggbranschen är mansdominerad, hur kan samhället (skola, massmedia, individer et c.) bidra till att öka andelen kvinnor i branschen?
12.3 Security and accidents

1. Vad är den främsta orsaken till att olyckor sker?

2. Hur arbetar ert företag för att förebygga olyckor? Vilka åtgärder vidtar ni om dessa inte följs?

3. Vilka strategier har arbetsledarna på arbetsplatsen, har de riktlinjer från företagets ledning som ska följas? Hur för ni vidare dessa kunskaper till nästa arbetsplats för att eliminera chansen att liknande olyckor händer igen?

4. Vad är det som skiljer ert företag från andra, finns det någonting som specificerar er verksamhet beträffande säkerhet från andra företag? Vilka är de största bedrifterna som ni har gjort inom området?

5. Vilka är de största utmaningarna beträffande säkerheten? Hur kan säkerheten förbättras för att ni ska uppnå er nollvision

6. Hos vem ligger ansvaret i att undvika olyckor? Vad har de olika aktörerna för ansvar?

7. Hur säkerställer ni att de underleverantörer som ni hyr in följer regelverken beträffande säkerhet?

8. Hyr ni in utländsk arbetskraft?

   Om ja, hur pass mycket går ni efter huruvida företaget följer de svenska regelverken gällande säkerhet i förhållande till priset de erbjuder för att utföra tjänsten de har medgivits?

   Om nej, varför görs inte detta? Kan det bero på att ni anser att de inte är det rätta för jobbet, gällande säkerhet och även andra aspekter? Hur mycket vägs säkerhetsaspekten i förhållande till det låga anbudet de vanligtvis anger i förhållande till svenska företag?

9. Hur många medarbetare har skadats under de senaste åren?

10. Har ni förlorat någon medarbetare pga. en arbetsolycka?

11. När/var sker de flesta olyckorna, finns det ett mönster?

12. Vid en eventuell olyckshändelse på arbetsplatsen, vad har ni för strategier för att handskas med detta under och efter olyckan? Exempel?
13. Hur bemöter ni de andra arbetarna som kommer att påverkas hårt av att en av deras medarbetare skadats/dött?

14. Många olyckor sker under högkonjunktur då byggen går på högvarv, man har oftast inte tid med säkerheten och vid en lågkonjunktur har man inte tillräckligt med resurser påstås det. Hur ser det ut i ert företag? Ser ni detta mönster som det påstås?


12.4 Corruption

1. Varför anser ni att byggbranschen är mer drabbad av korruption än andra branscher i Sverige?

2. Vilka typer av korruption har företaget drabbats mest av? Varför är just dessa vanligast?

3. Har korruptionen minskat eller ökat under de senaste 10 åren inom företaget?

4. Finns det någon specifik åldersgrupp/befattning som är mer involerad än andra?

5. Hur upptäcks korruptionen vanligtvis? Vilka åtgärder vidtar ni? Finns det ett dokumentationssystem?

6. Vilka strategier använder företaget för att bekämpa korruptionen?

7. Vilka är utmaningarna och svårigheterna i bekämpningsarbetet?

8. Hur påverkas företaget av korruption såsom mutor, svågerpolitik, uppgjorda kontrakt?

9. Hur ser situationen ut gällande mutor: Granskar företaget misstänkta mutor i högre grad än tidigare?

10. Har svartarbete förekommit då ni anlitat underentreprenörer, hur försäkrar ni er om att inte detta kommer att inträffa i framtiden?

11. Hur är det med svågerpolitik, informationsläckage i samband med upphandlingar, kartellbildning?

12. Då ett projekt är oftast komplext med många aktörer och processer: Kan en projektledare ha bra översikt i projektet och således uppmärksamma oegentligheter?

13. Finns det ett system för att skydda de som uppmärksammar och rapporterar om oegentligheter? Hur fungerar det?

14. Utbildar ni företagsmedlemmarna om korruption? Hur ser samarbetet ut mellan olika befattningar inom företaget?

15. Hur kan samhället bekämpa uppkomsten av korruption?
12.5 Procurement and tender

1) Vad är företagets strategier när ni accepterar anbud? Vilka perspektiv är det ni tar mest hänsyn till vid anbud, ekonomi, kvalité och tid?

2) Har strategin förändras mot hur det var förut?

3) Ska Akademiska Hus följa LOU? Före detta VD Anette Henriksson har sagt: ”Vi verkar på en konkurrensutsatt marknad och ska därför inte omfattas av LOU”

4) Hur går processen till, från att ni går ut med anbudsförfrågan till ni accepterar ett anbud.

5) Vilka är de etiska problemen gällande upphandling och anbud?

6) Har det förekommit att ni har accepterat ett anbud som senare visade sig vara till nackdel för projektet? Hur kunde detta ha undvikits nu i efterhand?

7) Har ni accepterat ett anbud fastän den inte har varit billigast? Hur resonerade ni då?

8) Enligt upphandlingsbolaget bör anbud som ligger under 300 SEK per timme motiveras redan vid anbudsläggning? Hur ser ni på detta? Är det ett bra sätt att få bort oseriösa bolag på marknaden? Vilka åtgärder bör man ta för att få bort dessa oseriösa bolag tycker du?

9) Går er verksamhet mot totalentreprenad hållet som andra företag verkar göra?

10) Har ni några specifika företag som ni har bra samverkan med, gällande anbud?

11) Har ni ett dokumentationssystem där ni dokumenterar hur det har gått vid tidigare anbud? Är systemet effektivt?

12) Ibland kan vissa utländska företag komma med väldigt låga anbud, och dessa kan i sig bero på att de kanske anlitar svartarbetskraft. Hur säger ni till att detta sker om ni tar deras anbud. Hur säkerställer ni att de inte använder sig av svartarbetskraft under projektet?

13) Vilka regler och lagar skulle kunna förbättra upphandlings- och anbudsprocessen?

14) Vilka trender ser ni gällande anbud? Hur ser framtidsperspektivet ut?