Exterior Colours at Rural Dwellings in Southern Sweden during the 19th Century - To increase knowledge regarding local differentiations

Kjellström, Richard

2009

Exterior Colour Schemes at Rural Dwellings in Southern Sweden during the 19th Century

- To increase knowledge regarding local differentiations

Richard Kjellström

Exterior Colour Schemes at Rural Dwellings in Southern Sweden during the 19th Century

Photographs by author unless otherwise stated.
Layout: Richard Kjellström
English Revision: Roger Tanner
Printed by: Media-tryck, Lund, 2009

Financial support has been gratefully received from:
Formas
Ebbe Kocks stiftelse
Fond för Blekingsk hembygdsforskning

Architectural Conservation and Restoration
Department of Architecture and Built Environment
Faculty of Engineering
Lund University
P.O Box 118
SE-221 00 LUND

ISBN 978-91-628-7987-7

”SÄLLA Folk, som himlen gifvit,
Boningsplats, som Eden skön!
Må, då jag Ert Land beskrifvit,
Bifall blifva mödans lön.”

Blekings inbyggare,
N.H. Sjöborg (1767-1838)

Acknowledgement

When I try to explain why I study colour schemes at exteriors and especially those we cannot see, I often mention the time I was working in a paint shop modifying traditional paint in the old-fashioned way by the eye. I then had to answer many questions concerning colour schemes and historical such as well. It all came to a breaking point when one day a building antiquarian asked me if I knew about local differences concerning the colour schemes in the northern part of Scania. I couldn't really answer him and that made me unsatisfied and actually was the starting point of my interest in these matters. Was it possible to find out of if local differences of colour schemes had existed and how did they in that case develop?

To put forward an idea of a PhD-project is quite easy even though it is more complicated to find anyone willing to spend time on the application for financial supporting. At this time I was by former fellow-students recommended to try the division of Architectural Conservation and Restoration at Lund University. It was at this division I met my future supervisor, Professor Kerstin Barup. I must say from the first moment I mentioned my idea concerning colours and paint and local differentiations, Kerstin did show her total support for the project and after some struggle we also succeeded in finding willing financial supporting. In this way I would like to start with my most thanks to her for her belief in the project and her support from the very first stumbling steps till this final cut.

When I continued the second part of this PhD-project I had clarified that it was possible to find local differentiations concerning the colour schemes. To continue the project was probably most successful if I concentrated at one out of four geographical areas from the Licentiate thesis. I then knew that one thing was very clear, the main source in this study was the estate owners and their homes. Without their generosity and welcoming attitude towards me as an uninvited and unknown researcher this study and book would not have succeeded. In all different situations have I plagued them with my curiosity and need to know more about their homes and home district and they have always been willing to help. Blekinge is as other before me having noticed and described a particular part of Sweden. I will not as Öller, Sjöborg or Cronholm in their 18th centuries description try to describe the temperament of the inhabitants there in other words than, thank you for your helpfulness over the years with this work.

I made a phone call last week in a last try to find the location of a painting with a certain interest for my study, I called Åke Werdenfels, building antiquarian with an extra-ordinary knowledge about Jämshög parish the core area of my study. A few hours later Åke called me back and could deliver the phone number to a man, the owner of the painting. Thank you Åke, for your valuable help in giving me information and opening doors for me in the area of Jämshög.

At the School of Architecture it was no problem to feel at home since it was the place I studied and got my degree as an architect. Everyone from fellow PhD-students, librarians and the help in the workshops to those of you at the division of Architectural Conservation & Restoration as well as Gunilla Kellgren and Hans Follin; I would like to thank for giving helpful support in all different kind of matters about architecture and polishing samples as well as administration.

One person with a certain responsibility for me taking part in this research from the start is architect Bente Lange whose work in this research field made a deep impression on me and Bente was as well my assistant supervisor at the start. With eagerness you took part of the building objects in situ and made it clear to me at the place that the project was researchable. Furthermore am I grateful for the useful input and constructive criticism at my final seminar delivered by conservator Line Bregnhøi and by Thorbjörn Laike. I would also like to thank Mattias Kärrholm for his reading and thoughtful advices on the parts in the study, concerning actor-network theory.

When the colour samples were taken at the facades a further treatment had to be done. The samples were treated for microscopic examinations, this was performed by Senior Lecturer Anders Lindahl and furthermore the SEM analyses were made by, Professor Anders Lindh both at GeoBiosphere Science Centre, Lund University, whom I both would like to thank.

Finally as always but not last I would like to say thank you to all long-suffering friends and family, listening to my endless troubles and doubts concerning this study and my blind enthusiasm when something useful and thrilling was revealed.

Svarte November 2009

Abstract

The project's main objective is to verify the existence of local colours and colour schemes in the exteriors of buildings. The research focused on 19th century dwellings in the rural areas of southern Sweden. The results and furthermore the conclusions are presumed to reveal locally differentiated colours used and to indicate rules governing the way in which the colours were combined during different periods within the delimited time and in various geographical local areas. One point of specific interest concerns the possibility of presenting the original layer of paint, since this could be considered as the choice indicating the expressions of the architectural grammar of the façades at the time when the building was erected.

To find out of the colours during the 19th century, certain geographical areas containing adequate building objects had to be chosen. Short interviews with building archaeologists took place to find out of the right geographical areas. The criterion was façades with building materials covered with paint that could be assumed to date from the delimited time. Ten geographical areas were established and, on the strength of findings from the ocular investigations, four geographical areas were selected for further investigation. This final part of the thesis is based on an investigation conducted in local areas in Lister hundred, Blekinge County.

The investigations mainly involved studies of archival materials, iconographic materials, short interviews, Scanning Electronic Microscopic analyses, colour steps and microscopic analyses of cross-sections. When co-ordinated, the different sources indicated the presence of local colours and colour schemes. To corroborate the thesis, further research was undertaken. The investigations were therefore intensified within one of the geographical areas identified. In this area more microscopic analyses were performed of cross-sections, partly on new buildings in the areas but also on new structural details of buildings investigated previously. Through this deepened investigation it was possible to make the results more distinct and reliable. To reach a deeper understanding of the context at the time when the buildings were erected, actor network theory was tried out. This made it possible to achieve a wider interpretation of the materials from the other sources and so to

draw conclusions with a clearer relation to the situation underlying the decision to paint the dwellings.

The results will be used to discern rules for local differentiations, presented as reconstructions of the colour schemes from the local areas within the project's delimitations. Though the colour schemes will be indicated at the building objects within the project's delimitations, the results will be applicable to new colour schemes for different settlements, both new and historical, and the method of investigating groups of buildings is an approach amenable to generalisation in other areas as well.

Keywords: local colour schemes, 19th century, rural, Johan Jöran Öller, SEM analysis, cross-section, dwellings, farmhouses, exterior colour

Table of Contents

1. Introduction

Every built environment consists of colours in some respect. It is often heard said that mankind has been colouring objects for a very long time. It is also argued that the desire to paint and decorate is a part of human behaviour. The cave paintings of Lascaux in France are a convincing example from the past of mankind's longing for and use of colour, 15,000 years ago. Ideas of how to use colours can be very strong and conservative. The proposition of classical sculptures and monuments in ancient Greece and Rome having once been painted was fiercely debated by archaeologists and architects from the second part of the 18th century onwards (Stubbe Østergaard, 2004). Was it possible to accept the ideal architecture and art of the ancient Greece and Rome as painted? It was a delicate question and still I think it is difficult for many of us to get the right image of building work from that time. The idea of the appearance of colours in different situations and at different times is very difficult to change once it has taken root.

Not just the buildings but all other materials and objects are in all cases put into a colour concept. In other words, colour is in daily life considered an inalienable part of the built environment and of objects placed in it. However colour, both in new contemporary architecture and in restorations of the built-up heritage today, is not really considered as important as other aspects of the impression made by architecture. For example, restorations do not have to be preceded by any scientific colour investigation. The colour schemes are derived from generalisations relying on brief investigations done at random building objects and with no scientific method. My impression of contemporary architecture is that the consciousness about the potential in the colour and colour schemes is not taken seriously. During all time numerous sorts of cultures all over the world have made efforts to put colour at buildings. Façades as well as interiors and the objects put in the rooms. The knowledge of how to use

different colours, pigments and of course paint materials goes back a long way in time.

During the last thirty years, researchers, practioneers and property owners have in many cases struggled to find the original paint materials. This endeavour has been prompted by the mistakes made when contemporary or ordinary modern paint materials have been added to building objects built using traditional systems and materials. Hard work, many times at the last minute, has made it possible to reconstruct the traditional building materials and, among them, the paint materials. To continue and find out of colour schemes for buildings' façades is a task to be continued by researchers and practioneers.

Every façade has a history to be told, just as whole building complexes and urban areas have. The history and the impression of the built environment are complex. The possibility to deliver an accessible interpretation has to do with the situation, the context. In this situation the colour and the colour schemes are necessary keys. Façades act together in their context in urban areas as well as in rural ones. In building complexes such as an estate in an urban block or a farm in the countryside, each building is a certain colour in relation to the others. The façade facing the street has in many cases a different colour scheme from the façade facing the back yard. The same situation can be seen on a farm or in a group of buildings in a fishing village.

The wooden architecture of Scandinavia and Sweden has great qualities concerning both building technique and architectural aspects. In most of the rural areas of Sweden the wooden architecture predominates. The architectural detailing and grammar of the wooden façades from the 19th century are of high quality and must be considered as an interpretation in themselves of the architectural tendencies of the time (Rentzhog, 1967). The ideas of the colour schemes of 19th century architecture are often simplistically described: either the buildings are coated with red distemper on rough boarding and the detailing picked out in white, or else the buildings have plain boarding and are coated with linseed oil paint and given white detailing (Fridell Anter and Wannfors, 1997; Stockholms läns museum). The colour schemes of these buildings are in urgent need of investigation, since the buildings are constantly being altered, repainted and scraped. A contemporary idea about the colour schemes of these façades is widespread: bright yellow with white

detailing. The first category of buildings, coated with red distemper, is particularly interesting as regards the different hues of red distemper and the fact that other distemper colours have existed, such as yellow (Lindgren, 1989). But there are certain problems involved in investigating distemper, since it gradually fades away from the façade. The second category of façades, painted with linseed oil with white detailing, is of some interest since they can reveal underlying layers of paint in colours that could be considered forgotten. If more detailed knowledge about the colour schemes is desirable, colour investigations have to be carried out at the earliest possible stage.

19th century buildings dominate many built-up environments in Sweden today, and this affects the context to a large extent. Therefore it is of great significance to understand these buildings and their history. Not just particular objects but rather whole situations such as a street, a square, a village or a group of buildings in the open rural landscape mould our daily relation to and impression of architecture. Both understanding the relation between buildings in a complex, e.g. on a farm, and local differences in areas of the urban or rural built-up environment can be seen as an issue. Legislation to protect colour schemes in geographical areas is non-existent in Sweden and even where listed buildings are concerned, colour schemes are not the first priority. This situation strikes hard against buildings and contexts from the 19th century. While the dominant group of buildings in rural areas dates from the 19th century, the rural landscape we all move about in could actually be changed easily due to colour schemes. In a not distant future these contexts and buildings might be considered an important part of our history and part of a heritage. Therefore I considered it necessary and urgent to examine these building objects and to create an understanding of the colour scheme and the context it is part of.

The 19th century has a reputation as the time when architecture and vernacular architecture in particular went from hand-made beauty to prefabricated overdone kitsch. This attitude towards 19th century architecture as something less important and brash is of course not to be found in any records or research results, though it is an attitude to be heard from architects. On the other hand this is a good reason for starting a project with the core aim of studying 19th century architecture. The field has not really been studied scientifically, and certainly not in Sweden. Interest on the part of the general public was another reason for

finding out more about the façade colour schemes of 19th century architecture. As already mentioned, many areas in Sweden are dominated by buildings from the 19th century. This is even more apparent with regard to dwellings. The public are often in favour of these buildings, though, as has already been stated, they are considered as being of minor importance. Professionals, the interested public and property owners lack knowledge concerning the period and these buildings in particular. A period of working with paint and colour in a practical perspective, namely in a paint shop, brought home to me the interest aroused by colour schemes from the past and especially from the 19th century, since these were the kind of houses many people restored by them. The paint shop I was responsible for made colours to the customers' requirements simply by inspecting samples and without any machines. All the paint materials were of the traditional kind as were many of the pigments.

With this background and understanding of the situation I think it is important to focus on the colours and the colour schemes from the past and to uncover as much knowledge as possible. Many of the sources, objects and informants carrying the knowledge are vanishing and fading away rapidly. The façades of the past, just like all the other parts of a building object, are a link to the past and a link to an understanding of societies and situations far from the ones we know today. Therefore the colour schemes are important and useable knowledge not just for the closest groups such as architects and building archaeologists but also for economic historians, art historians, sociologists and last but not least the interested public.

There are methods for investigating colour schemes and therefore the time has come to include colour and colour schemes as a specific factor in the design process of buildings to be restored as well as those to be new-built.

Disposition of the thesis

The first part of the project is presented in the licentiate thesis (Kjellström, 2004). That presentation of the project can be seen as a wider search for possible geographic areas answering the main question concerning local differentiations of façade colour schemes. The present work and sequel begins with an introductory chapter discussing how to

go about a project in this specific field and with this certain alignment and relates the project to previous research as well as describing the background. In the second chapter the theoretical implications are described and discussed with a description of vernacular architecture and arguments for colour and paint research aimed especially at building objects of this particular type. In chapter three the methodology and sources are explained, followed by chapter four describing the applied study through the geographical areas together with the results. This is followed, in the fifth chapter, by the conclusions and reading of the results, presenting the most important findings and a reconstruction of appropriate façades. Finally the applicability of the results is discussed together with a consideration of future research in the field of colour and paint research.

The appendices consists of a presentation of the building objects in the three local areas investigated, consisting of photos of the building objects' façades as well as details such as; doors and building ornaments. Furthermore tables and photos of samples from cross sections are presented.

Background

Researchers as well as practioneers working with historic buildings are becoming increasingly aware of the need for research into the field of original colour schemes of building objects. Local or regional differentiations concerning exterior colour schemes are observable in many parts of the world today. Until recently, it has been assumed that these local differentiations seen today in exteriors have also existed in the original colour schemes, in some cases quite unthinkingly. Not infrequently, simplified interpretations of what we see today are dished up as facts about the history and original colour schemes of buildings. These assumptions, however, are based on a limited number of studies that do not make use of scientifically verifiable methods. Nevertheless, the discipline of architectural colour and paint research has created scientifically based and reliable methods for research concerning colour schemes (Hughes, 2002).

This was the cue for the research project: established research methods and an urgent research subject today mainly consisting of generalised

recommendations uncorroborated by scientific methods. So the thing was, not to find out of the colour scheme of single objects or small groups of building objects but rather to find out the possible locally differentiated colour scheme in locally delimited geographical areas. This approach had not really be employed before in Sweden, and indeed few similar projects were anywhere to be found, concentrating on groups of building objects to find out of the geographical differentiations of colour schemes. It was also judged important to concentrate the project on groups of building objects seen in one sense as ordinary objects found in rural areas and with few if any preservation measures taken. Of course the building objects had to be specific concerning the necessity of their including relevant façades with remains of original paint. Nevertheless this typology of building objects was not the one mentioned in research projects but an important part of the context of architecture in rural areas and dominating the same area totally in number.

Another aspect was to find a research subject which would make the colour and paint research findings readily available to the public, hence the idea of investigating ordinary building objects belonging to private property owners in the rural areas. The results would be possible for the property owners to interpret and use on the same buildings if they so desired.

Previous research

Important research have been presented on the necessity of using traditional paint materials, such as linseed oil paint and lime wash, on traditional building objects, especially since the material has proved over a long period to be superior as regards both maintenance and aesthetic aspects (Malinowski, 1992). Other aspects concerning the paint material are differences between contemporary-made so-called traditional linseed oil paint and earlier productions from the 19th century and the beginning of the 20th (Karlsdotter Lyckman, 2005).These studies are part of the re-establishing of the production of traditional paint materials, both starting and following the process. The use of traditional paint materials has thus increased among practitioners both and the general public. What is not clear, however, is whether the colours schemes have changed and in that case under which variables. Previous results in specific areas such as the city of Rome and Copenhagen have shown that the original colour

schemes are now partly lost (Lange, 1993, 1996). The benefits of the results for future research cannot be overrated. And contemporary restorations in earlier mentioned cities show the extraordinary knowledge in the use of colour on façades from when the buildings are erected. However, these studies are only a beginning. Knowledge of colour schemes and paint materials in many geographic areas worldwide and locally in Sweden is still extremely limited or non-existent.
Contemporary research presents established methods that make it increasingly possible to gain precise knowledge concerning the history of colour schemes of interiors as well as exteriors. The principles of architectural paint research were presented at an initial conference in England in 2001 (Hughes, 2002). The principal aim of that conference was to introduce guidelines for architectural paint research. Good suggestions were made concerning research (Hughes, 2002):

- to inform the conservation, alteration, demolition, repair or management of an architectural element, interior, building or structure,
- to establish a better understanding of an architectural element, interior, building or structure,
- to produce a record of research findings.

The very next conference in the same research field, held in Copenhagen in 2005, pointed out the great width of work done in the field (Bregnhøi, Hughes & Lindbom, et al, 2006). It was argued that the discipline has potentials for architectural and socioeconomic interpretations (Hughes, 2006). Possibilities of gaining a greater understanding of craftsmanship as well as architectural decorations during certain periods are important side-effects. In other words, the interdisciplinary advantages are evident.
Through a process starting with detailed ocular investigations, the colour schemes can be revealed as well as any other aspects of the building (Hædersdal, 1999). The method is also described from the reconstructions of the colour schemes of certain building objects such as the Royal Palace in Stockholm (Althoff, 2007).

The contemporary field of colour and paint research is mainly concentrating on very rare single building objects and in most cases on the interiors (Kierkegaard, 2006). This could be termed an international approach. The Norwegian organisation NIKU, however, has carried out

investigations of groups of building objects, i.e. in the mining town of Røros and the old settlement of Skjærvær, Norway, focusing on examinations of groups of buildings. The results give among other things new knowledge to the social differences made visible in the buildings through paint and colours (Brænne, 2006). They also point to a model for collecting materials and results from the investigations. Earlier work focusing on the aspect of revealing original colour schemes is presented in Bente Lange's thesis concerning the colours of Rome and her work with the same focal point about Copenhagen (Lange, 1993, 1996). Furthermore an interesting project was carried out in New Orleans on groups of buildings in the French Quarters (Matero & Snodgrass, 1992). The authors introduce the article with a comment that: *"... few if any attempts have been made in North America to approach the problem through a systematic study of historic architectural painting traditions in a specific geographic area over time*"**.** So the main effort in an international perspective, concentrating as it does on the objects protected by legislation, is far removed from both common buildings and groups of building objects. Other works to be mentioned in the field of colour and paint research are a study about the colours of post-war modernism architecture in Sweden (Ferring, 2006) and the thesis concerning value production in the conservation of windows at the Royal Palace in Stockholm, Sweden (Roos, 2006). Finally there is a study examining a collection of unique artist paint materials from the 18th and 19th centuries. The report proves among other things, even with various new techniques, the difficulties surrounding old materials and their definition (Tronner et al., 2006).

Various aspects of 18th and 19th century architecture have been examined in research projects and especially PhD projects from faculties of art history. Projects of this kind include those about the architect Carl Christoffer Gjörwell (Sjöberg, 1994) and the study of the architecture of the nobility at manor houses in rural southern Sweden during the 19th century (Bjurklint, 2005). Both projects afford useful information about the two centuries addressed in the present project. Research has recently been presented concerning the regional and local handicrafts and architectural qualities of Karlshamn compared with Stockholm (Söderström, 2009). Its examination of *Skottsbergska Gården* in Karlshamn and argumentation concerning the quality aspects of the handicrafts make this work somewhat pertinent to the present study.

Furthermore the development of research methods and equipment in the research field of architectural conservation and restoration has resulted in new expanding opportunities. The aim of conducting investigations without disturbing or destroying the building object is one necessary branch of this research field (Hällström, 2008).

There are other research fields with investigations underway for the purpose of developing understanding about architecture and its changes during different periods in history. Why and how were farms changed during the 19th century? This is a matter examined by economic history researchers. In the study of farms in Uppland, Sweden, the researcher Göran Ulväng presents interesting facts about the life, development and the situation in groups of farms (Ulväng, 2004). The knowledge yielded by that research project is interesting to consider in relation to this project concerning colour.

Work done with a more popular science approach has also greatly benefited the structure of the research field and the development of knowledge in a wider context; especially since knowledge concerning paints, colours and colour schemes is insignificant (Fridell Anter and Svedmyr, 1992, Fridell Anter and Wannfors, 1997). Other works to mention as important and supportive along the way include *Hantverkets bok, Måleri*, a basic source for many projects in the field.

Theoretical considerations

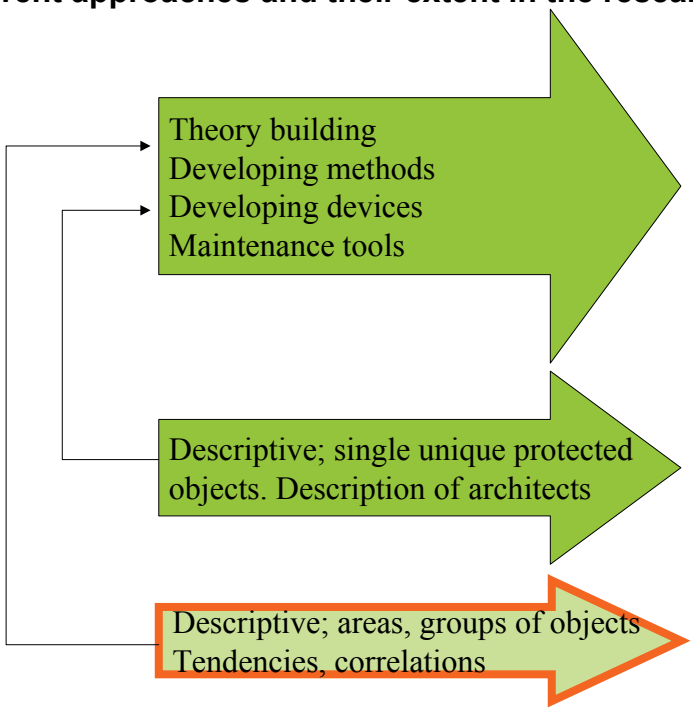
Most of the research done today in the field of Architectural Paint & Colour Research is done on certain building objects. These building objects have in most cases specific unique qualities and statutory safeguards have been enacted to save this kind of objects and their qualities for the future. These investigations are research with merely presentations of empirical materials and few if any generalised conclusions, and are of interest as a comparison with the results for groups of buildings presented in this thesis. It can be argued that the results of this project are a follow-up of the facts emerging from previous research concerning specific unique building projects together with the research done about specific paint materials.

In the contemporary field of Conservation and Restoration the main focus is on theory-based and methodological research projects and a contemporary case is the decreasing concentration on research projects focusing on empirical or descriptive values. In a way there is a risk involved with this approach. Though theory-based research is necessary, the empirical materials have to be collected and described simultaneously. The characteristics of the empirical material develop since the building objects forming part of the research change. Building materials new to the research field such as concrete and plastics command research resources. This includes both theoretical and empirical studies. Another important part of empirical research is to show how research presentations in this field could be made more accessible to the public. This is an important objective since Conservation and Restoration of the built-up environment is part of our common history and heritage. Not for the benefit of economical values for certain areas or groups but as an important interest for our understanding of the past. Thus it is necessary to support research projects with both a theoretical and an empirical focus on the objects investigated.

One explanation of the contemporary focus at the theory building and developing of devices is the advancement of the research field. The focus today on theory building is part of a process since the 18th century in the research approach and the development of Architectural Conservation and Restoration as a new research field. The start in the 18th century put up the subject for the field and its delimitations and framework (Arrhenius, 2003). This was done through important and initial works which were not all the time scientific but which decisively influenced the topic and its further existence. The development from the first descriptive part towards a more theorising effort today is similar to that seen in the research field of landscape architecture (Bucht, 2008).

This brief description of the history of the research field would suggest that concentration on the theoretical part is necessary in order to strengthen the identity and aims of the field. On the other hand it is still important to maintain contact with and input from the descriptive and empirical works to feed the more theoretical and methodological areas emerging. This is, as mentioned before, is of great value for the research field as a whole.

Current approaches and their extent in the research field



The project in this paper is situated in the arrow at the bottom of the image. The slim arrows at the back show the need for feedback from the two descriptive fields to the more theoretical big block at the top.

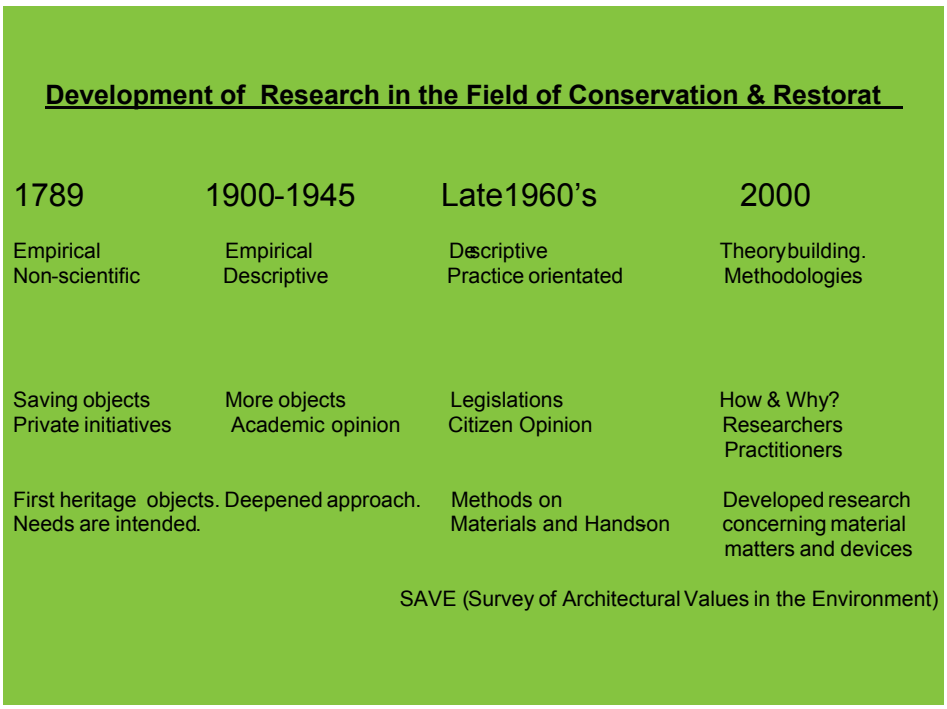
Since the research field in this project is situated in between projecting architects and architectural history, both architectural theory and the theory of architecture are approaches possible to use (Kärrholm, 2008). Architectural theory is then defined as the field where architects active as projecting architects describe their experiences from being a projecting architect while the theory of architecture is defined as pure research concerning matters in the built environment and its spaces.

It can be argued by projecting architects that the need for Architectural Conservation and Restoration is a secondary problem in architecture today, a luxury or unnecessary issue (Wilhelmsson, 2008). It is questioned what is supposed to be restored and for whom (Nylund, 2008). Sometimes it is even said that it is an excluding effort. These arguments and questionings are most common in the field of architectural

theory though they can also be heard from the sociologists working in the field urban theory part of the theory of architecture.

These questionings and arguments concerning the research field of Architectural Conservation and Restoration point out the importance of the development of the research field and the strategies and positioning of it. They also point out the need to declare and define the research field within the field of theory of architecture and afterwards to make the research results applicable among practitioners.

The research projects of a descriptive sort have been concentrated on the reconstruction of knowledge about materials lost in the period after the Second World War. In Sweden this signified research into matters of materials and methods. Investigation of paint materials such as linseed oil and lime wash is still ongoing (Balksten, 2007, Karlsdotter Lyckman, 2005). Finding out the strict contents and specific technical behaviour of



Brief introduction to the development of the research field of Architectural Conservation & Restoration.

a material used in the past is a challenging task. These studies are central to creating an understanding of how the material made in traditional ways today behaves and why, and sometimes why it reacts in a differently from the way we want it to or thought it would.

Epistemological and ontological assumptions

Interpreting the results concerning the colour schemes of the 19th century rural historical dwellings investigated is a matter of some interest. Considering the use of paint as a conscious act of change in the built environment became more obvious as the project continued. The final part of the investigation included considerations of the historical context. The results were therefore important and necessary to interpret as a phenomenon or activity in its context at the time, to create an understanding as to why and how the paint and colour were spread. The results of the investigations of the objects, i.e. in the literature, indicated that the colour and paint had been spread together with the new building typology gaining ground in the area. The new spaces at the farms were composed of new building typologies combined with a re-organisation of spaces. Increasing our knowledge concerning the role of colour and paint in establishing new farms and the impressions of them was considered important. A theory was needed which could interpret the situation. Therefore Actor-network theory (ANT) was tried in order to build up or re-create the situation and the understanding of the context at the time. ANT was chosen as a method since it can be used as a conceivable way to create understanding concerning the new spaces built in rural areas and on farms in the 19th century (Hacking, 2002). ANT can be described as a theoretical attempt at describing how actors in a society act and affect one another (Latour, 2005). ANT does not make any distinction between human and non-human agents. The *actor* is a term for any player in ANT, any agent, collective or individual. The agent can associate or disassociate himself with or from other agents. Actors are involved in a *network*, a kind of association with certain definitions, names and substance. It is from the network the actors derive their nature.

> "Analytically, ANT is interested in the ways in which networks overcome resistance and strengthen internally, gaining coherence and consistence (stabilize); how they organize (juxtapose elements)

> and convert (translate) network elements; how they prevent actors from following their own proclivity (become durable); how they enlist others to invest in or follow the program (enrol); how they bestow qualities and motivations to actors (establish roles as scripts); how they become increasingly transportable and "useful" (simplify); and how they become functionally indispensable (as obligatory points of passage)." A-Ritzer-Encyclopedia

It is mainly this further interpretation of the results in this project with ANT that is useful to the research community and immediate fields such as economic history and ethnology. Projecting architects and other professions active in the area of restoration can of course still benefit from the wider results and increasing opportunities of understanding the complex context of the colour and paint history.

Vernacular architecture and the purpose of architectural colour research

Enhancing the awareness of local colours and their importance for the interpretation of local vernacular architecture through the analysis of historical colour schemes is a vital task.

Property owners, especially in rural areas, often paint their houses themselves and in all kinds of magazines there is information and practical advice available on how to do "a home make-over". The paint industry globally publishes trendy colour schemes every spring, influencing the paint customer. The modern, rationalised structure of the paint industry with markets in many countries, or even in many continents, makes the situation very different from that of 30 years ago. Even more different is the situation compared with the mid-19th century, when paint was produced locally by the painter himself or by the house owner. To find information for property owners of dwellings concerning how to restore the façade of their early 19th century building is hard if the purpose is to find the traditional paint materials. If the requirement is to find information about how to find the original colour schemes, this is harder still.
In many geographical areas throughout the world, the conception of colour schemes seldom treats groups of ordinary buildings – for instance,

dwellings which people live in. Many regions and local areas have a contemporary colour scheme evaluated as original without any investigations being undertaken (Kjellström, 2007). As mentioned before, the main type of buildings treated in architectural paint research is preserved objects such as cultural heritage buildings. When the results are found and presented, the building object investigated may recover its original colour schemes. These building objects are well-known, but do they benefit the public's need of information about traditional colour schemes? The need of access to information about traditional colour schemes could be an interesting opportunity for architectural paint research, to make its results and methods more accessible, especially since information about paint, colours and colour schemes from the paint industry and in colourful magazines is quite aggressive. The traditional colour schemes are already partly forgotten and this is an ongoing

In south Brazil along the coast the vernacular architecture is claimed to have a traditional colour scheme with white lime wash and blue corners, cornice and windows. From a brief ocular investigation it was easy to see indications of other colours such as yellow, green and light red. Riberão de Ilha, St. Chaterina, Brazil

process, and so architectural paint research is one part that is responsible for showing how to save the traditional paint and finding out the original colour schemes.

This situation can be seen in different countries and in different cultural contexts. The history of each country is different but the complexity of the issues and the confused situation as to original colour schemes, are much the same in many countries e.g. in Sweden, Italy and Brazil (Kjellström, 2007). Increasing our knowledge of vernacular architecture is a global issue, and the colour schemes are one passable way of making research findings accessible. The results are also of importance for creating awareness concerning local history and increasing awareness of the qualities of vernacular architecture. Geographical areas could extend their local identification through an expanded architectural knowledge, a matter of significance for vernacular architecture surrounded by the global society. Therefore it is of great importance to minimise generalised results in favour of results presenting local characteristics in each unique situation (Kjellström, 2007).

In contemporary Swedish vernacular architecture it is clear that colour schemes have a local approach. The results will of course be of great interest for the local area where the investigation has been done, and professionals, general public and property owners alike will have access to the interpretation of the colour schemes in their local area. But it is no less important to present the project as a possible method for other countries, regions and local areas to investigate and reveal their colour history in both a generalised and a detailed presentation. Colours and colour schemes, if verified as local, could be an accessible way of awakening property owners' interest in a matter of establishing knowledge concerning local identity and at the same time creating a cultural approach towards vernacular architecture for the future.

Aims

The cardinal aim is to investigate whether the geographical differences visible today were also a fact when the buildings were erected. To make this possible the investigation has to be done at a macro level. One feasible way is to investigate groups of buildings instead of occasional objects. In fact this has not been done in Sweden before, at least not in

the field of colour and paint research and not with scientific methods. To observe the group of buildings as one researchable object can prove or disprove a result thought of as unreliable if established as a fact for one single building object. The macro level approach is indispensable if the result is to be considered scientific and the aim is to make any generalisations. As a consequence it is essential to identify the building objects to be investigated. In the Licentiate thesis it was made clear that the geographical differentiation can also be found in the original colour schemes of façades, in this case on building objects from the 19th century.

In other words, the main aim is to verify local differentiations in façades of well-defined groups of building objects from the 19th century, and furthermore to understand how and why these differentiations were established and developed.

Most investigations hitherto in Sweden of groups of buildings, though not scientific, have been made in urban areas. Therefore the rural building objects are the focal point. Focusing on the rural areas as a research project instead of focusing on the urban areas and the objects protected by legislation in the rural areas is considered significant for the project's approach. The rural areas of Sweden have various traditions concerning colour materials, colour schemes and building technique.

Colour is not in all cases considered to be investigated in practice. In restorations, I would suggest, colour schemes are many times seen as generalised knowledge without any thought of local differentiation. In this project colour is posited as an important element for the total impression in the conservation and restoration field, if not the main element. Another aim is for the results to encourage the consideration of paint, colour and colour scheme as no less vital a part than any other material or part of a building object in the restoration process as well as in the process of erecting new building objects.

Summing up, the aim is to identify clarifying results concerning local differentiations of colour schemes surrounding us daily, in this case in the rural areas. In fact, not only to focus on the need to interpret colour schemes in architectural objects of recognised cultural interest or preserved buildings but also to create knowledge concerning common

architecture. This approach can possibly lead to an active interest on the part of property owners and the general public.

Delimitations

Finding the researchable groups of buildings was a requirement and a delimitation. Consequently it seemed important to define in what sense groups of buildings could carry relevant facts this time and not a single unique object. The building object couldn't just be from the limited period but had to be unspoiled as regards to being part of the group to be examined. Thus groups of building with façades intact and similarities concerning time of construction defined the scope.

The delimitation in time is based on the fact that the rural areas of Sweden were not painted until the late 18th century or early 19th century, areas with wooden structures grey from the wood or treated with tar and the areas of plastered façades lime washed without any added pigment and thus white. Wooden parts such as windows are painted. This is also the case with the main entrance. But windows at this time were not that common in dwellings and still less so in outbuildings. The exception from this pattern is manor houses. During the mid-19th century the rural landscape changes, due to the land distribution reforms in the villages. Farms were moved and re-established in new locations. This was a time when many dwelling houses were erected and with new elements such as bigger windows, new room organisation and painted façades. Therefore the beginning of the 19th century is of great importance, since it is the time when rural dwellings acquired painted façades. An architectural language not seen in farmers' dwelling houses before was established in the rural landscape.

Another reason for the delimitation in time to the 19th century is the predominance, already mentioned, of buildings from this time and finally the lack of focus from research projects at this period in architectural history, especially in the rural areas.
The delimitation concerning geography was already set up for the first part of the project. In the beginning of the project the geographical aspect is important. Finding areas with relevant objects for the project is a core issue. Relevant, that is, in the sense of building objects with building details such as doors, panel and ornaments in a condition revealing the

colour schemes of the façade. In other words, façades must not have changed too much. To establish whether boarding or plaster is original, i.e. making sure that the parts of the building object date from the time when the building was erected, is a difficult task. An analysis of the details of the façades, such as handmade nails, the shape of wooden details like cornices and the type of mountings and hinges of windows seemed to be the best method to deduce the age of the conceivable building objects. It is noticeable, however, that investigations both of single building objects as well as of geographical areas can present exceptions to the established ideas of how to date details of façades.

Another aspect is not to carry out the investigation in the areas of Sweden dominated by soft red distemper paint. In these areas red is of course totally paramount, even if there are interesting aspects of the colour red as well. One question to study could be different sources for the red pigment and thus different shades of red on the façade as well. This complex of problems is not part of the present project.

The rural areas of southern Sweden are, like the rest of Sweden, dominated by buildings from the 19th century. Today a differentiation is visible in buildings from the estimated period. Therefore southern Sweden is first studied briefly to locate smaller well-defined geographical areas with relevant building objects. Four areas are defined (Kjellström, 2004). The licentiate thesis presents the project's first principal aim, which is to identify the existence of local colour schemes. In the next phase it was necessary to both extend and narrow the project. Above all, it was time-consuming to continue with four areas and furthermore unnecessary for the result. The extension was required to get more information in the final geographical area. This was made through investigations of more building objects and additional samples at the same building objects to increase the reliability.

Another sort of delimitation to resolve is the groups of building objects, groups with a significant architectural grammar in common. This is important since then the architectural differences would not be the feature prompting differences in the colour schemes. Consider performing an examination in a village and examining all different types of buildings such as a school building, dwellings, a railway station and industrial buildings. This could identify aspects of the local colour scheme but would not be clear enough, since the variety of types of

buildings would create a disturbance of the results. The different orders of colours and colour schemes in each type of building would be difficult to point out as a matter of local differentiation or an order due to the type of building and architecture. Thus a more neutral relation has to be established between the definition of groups and the buildings' architecture.

Defining groups of buildings with similarity of architectural approach is significant for the first part of the project. Facts pointed out that some of the building objects even had the same constructor. The most relevant group of buildings appeared to be dwellings in the rural area. Thus these groups of buildings are appropriate due to the possibility of finding remnants of the original colour schemes. It could also be possible to perform the examination on another group of buildings as far as the building objects in relevant condition are sufficiently numerous.

Finally dwellings are differentiated socio-economically. It appears to be the building objects in the coastal areas, fishing villages, and the bigger farms inland that are in adequate condition. Other types of dwelling in relevant condition were too few in number to warrant examination. The area consists of both buildings of wooden structure with boarding and of plastered brick buildings. The fishermen's dwellings are mainly of wood and the farmers' buildings of both brick and wooden structure. The delimitation geographically follows the borders of the old province of Blekinge as well as the borders of the hundreds and the parish. This will be presented further in chapter 3.

Research questions

The main research question is as follows: is it possible to find out the history of the colour schemes of chosen groups of building objects from the 19th century in southern Sweden and make generalisations concerning the colour schemes in a local area? Since this question is mainly answered in the affirmative in the licentiate thesis, the ensuing concern was to try to find out how local these presumed colour schemes were and finally how and why they were established.

Is it possible to establish scientifically relevant knowledge about the local differentiations of colour schemes of façades from the past? Today there

is silent knowledge concerning the geographical differentiations in regions in Sweden but not about the more local ones. The differentiation in certain areas can be described as local since the delimitation can be defined from parts of towns or from villages with a particular history. This can be, for instance, a village developed during the 19th century while the railway was built. In that case an investigation might present, in southern Sweden, a village with buildings built in red brick, often from local brickworks and with brown or white wooden details such as windows and doors. Other examples are local areas with a distinct articulation of wooden decorations such as cornices or back bands on buildings from the early 19th century. Today these different groups of building objects have often façades with articulated and differentiated colour schemes.

However, all these examples, even if considered fairly reliable, are not based on scientifically made observations. But is it then at all possible to find out of the original colour schemes and make generalisations about groups of buildings? The question is relevant in relation to the possibility of increasing our knowledge about a certain time and place. The licentiate thesis answered this question in the affirmative. Colours and colour schemes are possible to reveal with the methods established in architectural paint & colour research and of great importance for achieving a more profound knowledge and precise expression of façades. Attainment of more profound knowledge about the colour schemes in groups of building from the past is a condition for understanding the history of built environments and how to interpret the grammar of architecture from the past.

Through the process of the project new questions have been raised: how were the colour schemes developed? Is it possible to identify the existence of a local production of earth pigments during the 19th century? The background in Sweden is that no existence of a production of soil pigments is known or has even been researched. However, red iron oxide pigments as a by-product from different industrial production existed and increased during the 19th century. There has also been production of black carbon pigment in Sweden. It is without any doubt clear that the production of pigments was with few exceptions not a big industry in Sweden during the 19th century. Therefore an unknown local production could be possible and of interest to identify.

Since most of the building objects in rural parts of Sweden until the late 18th century were not painted, with the exception of official buildings such as vicarages and country manors, the average dwelling was grey in the areas of wooden constructions. A question that has been raised during the project is: was the aim of painting part of a differentiation between different inhabitants in the rural area and in that case was the process of differentiation made consciously? The extension of questioning described above is relevant and important to create a platform for understanding the area delimited in the research project. These new questions are to be seen as a complement to gain a better understanding of the main question and the need to find answers thus made the results more reliable.

Finally, reconstructing the colours and colour schemes of ordinary dwelling in rural areas, from the 19th century, where no legislation has protected the buildings, is not easy. Are the results reliable enough for generalised local reconstructions of the colour schemes? The final concern of the project, at least, was to be able to present reconstructions of what the colour schemes looked like when the buildings confronted the rural area with their first brand-new coating of paint. Summing up, the research questions are as follows:

Main questions:

- Is it possible to find out the history of the colour schemes of chosen groups of building objects from the 19th century in southern Sweden and make generalisations concerning the colour schemes in local areas?
- Is it possible to establish scientifically relevant knowledge about these local differentiations of colour schemes at façades from the past?

Attendant questions:

- How and why were the colour schemes developed?
- Was the aim of painting part of a differentiation between different inhabitants in the rural area and in that case was the process of differentiation brought about consciously?
- Is it to possible to present generalised reconstructions of the colour schemes of groups of buildings from different periods?

Definitions and terminologies

Actor network theory (ANT). This theory, used by sociologists, tries to explain and interpret the conditions of and relations between different players, called actors, in networks established and dispersed over time. In this study ANT was tried out to get a better understanding of the context at the delimited time of the project.

Architectural colour & paint research is a rather new branch of learning occupied with questions concerning paint and colour in a historical aspect at buildings as well interiors as exteriors.

Colour is defined as the perceived experience of an object, in this case mainly building objects.

Colour scheme is the combination of two or more colours in a façade to create an intensified experience of a building's architectural grammar.

Colour step is a method to find out of the underlying layer of paint whilst revealing layer by layer on the object in situ. The procedure is done with different solvents, depending on the paint materials.

Cross section is a method of revealing the underlying layers of paint whilst casting samples from the façade into an epoxy compound. After grinding and polishing a microscopic analysis can be performed.

Dwelling is used as a generic term for the different types of building objects inhabited by humans.

Local area denotes the geographical areas defined in the project as being areas where the local colour schemes have been identified.

Paint material is the material, e.g. linseed oil, used to affix to the coated material with an addition of pigment giving the perception of colour.

Rural; from Latin *ruralis "of the countryside"* from *rus (*gen*. ruris)* opened land, via 14th century French , *rural.* The areas sparsely populated and in an historical context, outside the delimitations and borders of the

city walls. In this work more densely populated areas such as fishing villages are part of the expression, due to the definition here given.

Scanning electron microscopy (SEM) analysis is a method whereby an electron microscope images the surface of a sample. The surface is scanned with a high-energy beam of electrons in a raster scan pattern. This method proves elements such as sulphate, iron or lead in a sample. The result is presented in this study as graphs for different dots in paint samples.

Vernacular architecture: The Encyclopaedia of Vernacular Architecture of the World defines vernacular architecture as:
...comprising the dwellings and all other buildings of the people. Related to their environmental contexts and available resources they are customarily owner- or community-built, utilizing traditional technologies. All forms of vernacular architecture are built to meet specific needs, accommodating the values, economies and ways of life of the cultures that produce them.

2. Methods

This project adopted a method for identifying groups of building objects relevant for the investigation of local colour schemes from the time the buildings were erected till the contemporary colour schemes. To render the examination possible, the building objects in this study were first to be detected. Then the investigation of the changes in colour schemes over time could be studied. Thus first the areas with relevant building objects had to be identified. For the building identification phase, the real property owners and interested public were part of the sources as well as building archaeologists in the regions. The interviews with these groups created an interactive part in the study, not really established in earlier architectural paint and colour research projects. The interaction was most obvious towards the real property owners. Thus we could better facilitate reaching the public and real property owners with the results. This is of particular interest since in a sense they produce the future's cultural heritage and the maintenance of the same lay in their hands.

In the next phase, the colour changes over time had to be revealed. In the geographical areas sources such as wall-paintings and cross-sections were more important. Summing up, the project consists of two parts: first the identification of the geographical areas containing relevant groups of building objects, and then the investigation of the groups of building objects.

Research design

The project till licentiate thesis

First of all it was necessary to find out of areas with reliable building objects. The interviews together with the first ocular investigations gave as a result a selection of geographical areas. The groups with the best building objects with reliable façade materials had to be found. For this

reason it was necessary to carry out more detailed ocular investigations of the façade materials. The building typology to be applicable for the research was dwellings. This was not totally clear when the geographical delimitations was made. As mentioned in the chapter concerning delimitations, the possibility was considered of performing the investigation on different types of buildings, but this seemed more uncertain and was soon abandoned as an applicable method. It seemed like a group of buildings with the necessary amount of objects to make generalisations. In this way the delimitations for the project was made in really close relation to the method. It was the researchable building objects that determined the delimitations. In this way four geographical areas were selected.

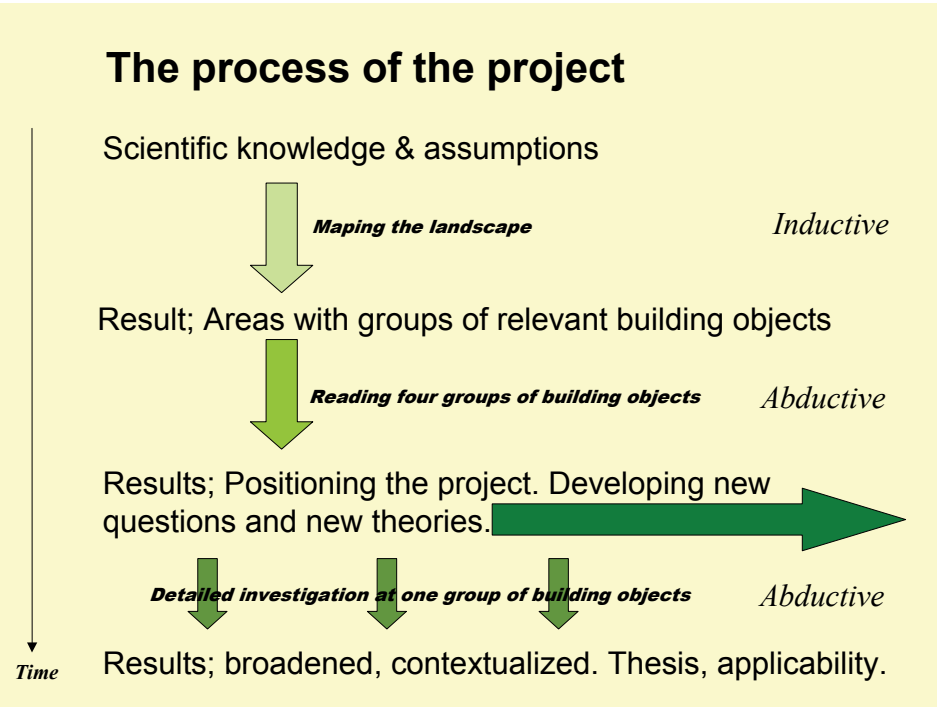
This first part of the research focused on the effort to find relevant building objects and to start investigating these objects to find the first signs of the existence of local colour schemes during the 19th century. The further research at the different building objects, with different sources involved, led to a narrative description in the licentiate thesis balanced with scientific materials of a more quantitative character.

The project after licentiate thesis

After the licentiate thesis the project's focus has been on the task of making the results more reliable. This was mainly done through more archive studies and more analyses of cross sections from both new building objects and at those building objects already investigated.

Another task was to find out of how the differences in colour schemes arose and developed. One possible variable was the changes in economic conditions during the 19th century and economic conditions among the different property owners such as fishermen and farmers in the four geographical areas. To create better comprehension concerning the surrounding society during the delimited time, one of the four areas of the project was studied in depth.

An interesting aspect of the colour research done in this project was to estimate the results from the four geographical areas in the project. This gave the results a more complex structure and enabled interpretation of the geographical circumstances and the significance of access to local raw materials for paint and colour. Furthermore this provided an



The ongoing process of the project shows the development of different scientific approaches as a part of the PhD project process itself. This was not declared at the start.

opportunity of relating the two differentiated building types in each of the four areas, the farm mansion and the fishermen's dwellings, to each other and also between the geographical areas. This was integrated with the research for the licentiate thesis and was deepened and focused on in the work for the doctoral thesis. This part of the method was necessary to investigate. To observe if there were any differences, this could classify the colour schemes as local and not just the colour schemes of a delimited period in a geographical area.

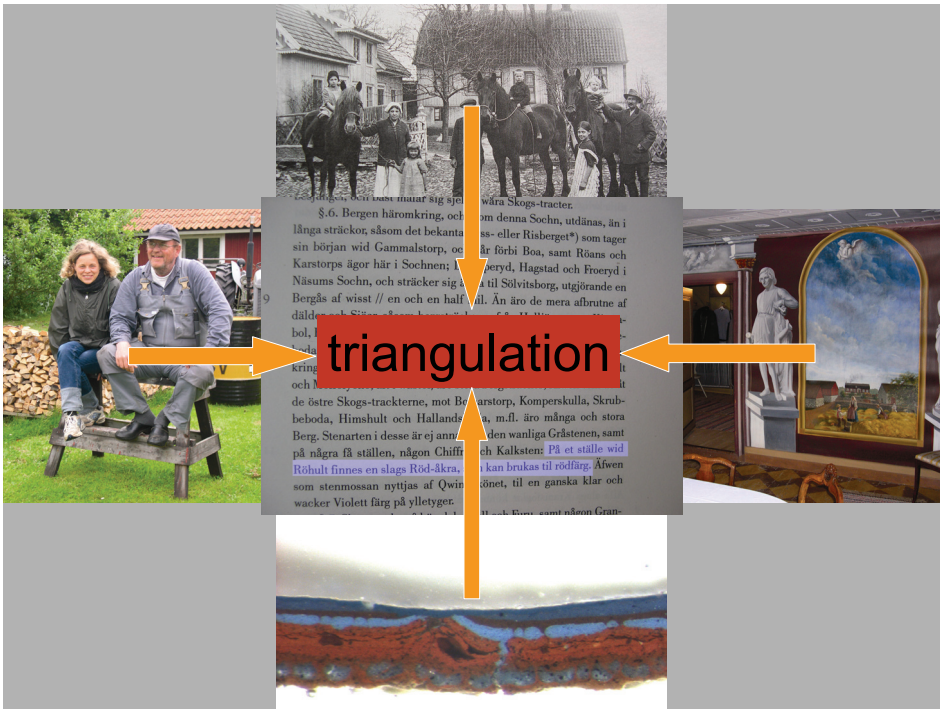
Sources

The methods in this project rely on a group of sources. This is indispensible in this sort of historical research. Every source has its possibility of pointing out adequate information, but the results will not be reliable until the information can be found in different sources. Each

source has deficiencies on account of the historical approach of the project; it is impossible to get all information and to see all the buildings from the project's delimitations. The sources are applied together to form a pattern, triangulation, where the different kinds of information work together though the differences in between the sources. The triangulation is necessary to be able to get any reliability at all in this project. Some sources are used both before and after the licentiate thesis. Others only appear after the licentiate thesis with more focus on sources establishing an interpretation of how the local colour schemes have arisen.

I will briefly describe the sources adopted in the project. The first sources used included the short open-ended interviews or, more precisely perhaps, the oral sources, because of the open-ended approach employed. Using a questionnaire was difficult the purpose being to obtain information concerning local characteristic building objects. Since this came first in the research process, there were difficulties involved in finding the relevant informants. However, this first part's oral sources did help to point out possible areas for further research. The oral sources, now with the property owners and others with certain knowledge of local colour schemes, took part and in the following parts of the project will continue to do so. In this situation the information was part of the making of local knowledge about the actual colours and colour schemes. Therefore the oral sources on these occasions were of more precise interest and led the research towards previously unknown information such as documents and iconographic materials.

There are two methods of finding out about the underlying colours at the façades in situ: colour steps and microscopic analyses of cross-sections (Hædersdal, 1999). Both are established and adequate methods in architectural paint research. Colour steps made at the actual façades of interest have the advantage of being pedagogical and not so time-consuming, but there is a risk of their not revealing all the existent layers of paint. Microscopic analyses of cross-sections are more reliable in this sense but not so convincing in the field. The most reliable way to work is to use both methods together, to see the colours in reality, and not least in daylight, and to be sure of having all the colour layers (Hædersdal, 1999). In this study, when private buildings were not coved by legislation or any protection, making colour steps on the façades was considered a rather dubious expedient. In some cases the paint had flaked off and the façade



The necessity of groups of sources made the triangulation model most suitable for the project. The sources support each other at each building object and, even more importantly, in the group of objects in each geographical area. It should be noted that some of the sources are initial while others, e.g. cross-sections, have to be preceded by ocular investigations etc.

itself by coincidentally offered a chance of obtaining photographic evidence of the existing layers behind the contemporary façade colour.

Archive studies are important complements to the field studies. One archive resource is the inventories done in earlier years. The problem is the amount of materials, especially as the project focused on the local divergences in colours and colour schemes. The inventory materials are of a general character. Some inventories have been compiled in the area but they are not concerned with the colours but seem more like accidental photographs and descriptions of the painters' work, though in some cases they have been of importance as a complement underpinning other sources. Other archives sources used are materials and description concerning the land reform, old maps and manuscripts.

One important source I have been using is iconographic materials. By this material I mean iconographic material not found in archives or museums. Actually it is materials found in many cases in combination with the oral sessions. It is wall paintings, artistic paintings and private photographs in the homes of the informants. This source has been very useful and has given conclusive information about the building objects. The source is used in other scientific works such as The Colours of Rome (Lange, 1993). In most cases the owner can date the material.

Printed works have in a number of ways been hard to use. One rarely finds anything written concerning the use of local colours. Accessible literature from the delimited period describes the way paint materials and pigment were used (paint manuals), and these publications do not mention or include such matters as local colours (Bethun, 1993, (1727), Andes, 1887). One important exception the description of the parish of Jämshög, published in 1800 (Öller, 1996, (1800)).

Finally scanning electronic microscopy (SEM) analyses were used to elucidate what sort of pigment that was used in the local area of Jämshög. Furthermore these analyses also confirmed the reliability of the samples, since the pigment in the different white layers corresponded to our knowledge of when certain pigments were used.

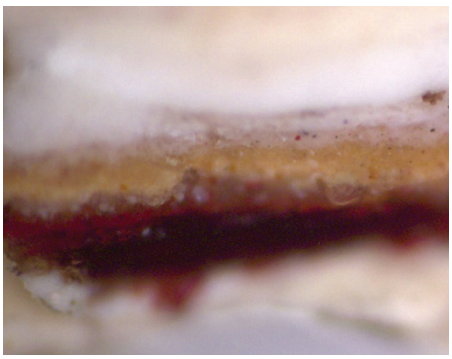
Sources:

Till Licentiate thesis.

- Open-ended Interviews
- Ocular investigations in two steps
- Literature studies
- Archive studies
- Iconographic materials
- Microscopic analyses of cross-sections

After Licentiate thesis.

- Microscopic analyses of cross-sections
- Archive studies
- Literature studies
- SEM analyses



The painting at the top depicts in the 1870s the farm house at Baggeboda in a strong yellow hue. Another painting shows the situation in 1922 than with a soft light red colour (Appendix A:I). At the bottom left cross section both these colours are seen light red at the top than yellow and innermost red. Both mentioned paintings did describe the factual situation at the time. The painting bottom right depicts the farmhouse at Olsgården pulled down in the 1970s thus not possible to examine. Nevertheless the painting gives us most likely the answer to the situation from the time of the painting in the 19th century.

Research methodology - triangulation

The aim was to find a methodology where the sources mentioned could be applicable. To find out of the colour schemes during the 19th century, all these various sources have to be drawn on, and therefore a methodology was needed which contained a multi-method.

The project employs an interpretive-historical approach (Groat and Wang, 2002). The triangulation together with the focus on the history, 19th century, might seem to offer an easy choice of strategy for the project. But the building objects chosen for the project were not given when the project started. This I think is of some interest. The most common interpretive-historical research, I presume, is for instance done on a chosen object or group of objects because of their certain interest and their need to be described for a certain matter. The building object is selected and described in detail due to its qualities and potential for answering a specific question or bringing a phenomenon to light or simply describing the specific object.

The main point of this research project is to find out the original local colours and define the existence of local differentiations due to colour schemes and, secondly, to trace its development towards today's local colours and colour schemes. Therefore one part of the project involved finding relevant building objects with paint remains within the delimitations. The buildings are included in the investigation because they bear traces of paint from the delimited time. The remains of colour were actually the source, not the building object. So the historical approach did not mean that the building objects in the project would be described and examined in detail. The investigations made of the building objects' façades are one of several sources about the colours and not really about the buildings. Instead the colour residues on the exteriors of the building objects were part of a method concentrating on the possibility of investigating the origin of the local colour schemes.

So the interpretive-historical strategy was not that obvious a methodology to use because of the somewhat quantitative use of the building objects. The results from this project were supposed to be applicable in building conservation and restoration and other situations where the local identity stemming from colours and colour schemes was

of interest. In that way the project inclined towards positivism, even if the possibility of making the results applicable could be seen as a task to be considered after the research had been concluded.

The most suitable research methodology for this project was a mixed-methodology (Yin, 1994). This is best construed as a mixed interpretive-historical strategy incorporating both quantitative and qualitative elements. The inventories done to find the building objects were a quantitative part of the research while the archive studies, document studies and open-ended interviews were the qualitative and interpretive-historical part. The interpretive-historical strategy might get stronger when the surrounding aspect of why the colour schemes were locally differentiated came to be studied more intensively. It was also possible to choose either a more quantitative or an interpretive-historical strategy in the further work and presentation of the doctoral thesis.

I have also tested the possibility of the project being a case-study, but due to Yin it does not seem to be, since it is not contemporary (Yin, 1994). Even with the wider interpretation of a case-study including the historic phenomena, from Groat and Wang, I am still uncertain (Groat and Wang, 2002). I do not think the four geographical areas the research was focused on in the first part could be seen as a case. The same has to be said about the work in the second part.

The most relevant strategy was to do the research up to the doctoral thesis as a mixed-methodology. As mentioned before, the method in this case was a mixture of interpretive-historical strategy and qualitative strategy. The second part used more quantitative methods to make the results more reliable. The quantitative part of the research was increased as regards the amount of material, more building objects being examined and more samples taken, but not in importance to the project. This made the thesis and results applicable to the design of new and traditional colours and colour schemes, which was earlier mentioned as another aim of the project, since the results were more reliable.

Summing up, each building object and local area composed of groups of sources, using triangulation, is the most significant characteristic of the method in the project.

Application of research methodology

As can be seen from the model of the methodology the project did not have much of a deductive approach, nor would this be possible with a work on history. Materials could not in fact be collected on all building objects. Some of them are identifiable, others are not. Some buildings might not even be amenable to investigation, due to the condition or desuetude of the façades precluding the presence of relevant facts. This risk was as far as possible eliminated through the first part of the project; the search for geographical areas with groups of relevant building objects.

Unlike some previous works in the field, the choice of researchable objects was not predetermined. I would say the project had a inductive approach, since it started with some facts about contemporary conditions concerning the local differentiations of colour schemes, querying whether the differentiation seen today in any way existed when the buildings were erected. The inference that the colour schemes had local differentiations when the buildings were erected during the 19th century made it necessary to find relevant building objects for investigating this point. The search for areas with groups of building objects was the more abductive part, as well as the collection of evidence. During the interpretation of the sources and the samples, new questions were raised. To understand many different conditions in society at the time, paint and colour schemes presented in the rural areas of southern Sweden became the core of the problem.

The project described the past. This of course imposed certain constraints on the reliability of the results. The method and the scientific approach were interpretive-historical and the results were made reliable through a triangulated process. Experimentation was out of the question and, viewed through the eyes of Karl Popper, this project would not fit in with the scientific society (Popper, 1972).

I think the scientific theory of the project followed much work done in the field of architectural history but with a more questioning and less descriptive approach. Moreover, the business of finding the objects and the development of new questions during the work was different from a more purely architectural history approach. Understanding why and how

colour came to be a part of the rural landscape of Sweden was of great importance. Therefore it was necessary to understand society at the time, to try to penetrate the situation when the buildings were painted. This was done by using the Actor-network theory (ANT), in the second part of the work, to illustrate the impact of colours on the new constructions in Jämshög parish in about 1800.

Briefly, ANT could be described as an attempt to connect a course of action, an activity, to all factors – humans as well as objects and animals – forming part of the activity. The factors, called actors, are moreover linked to each other: this is the network. The purpose is to study all the factors, actors, taking part in the activity. As stated earlier, both animate and inanimate factors are actors. Through this, according to Bruno Latour, it is possible to arrive at deeper explanations due to the details of how an action is achieved.

The theory and approach to try to understand how and why colour and colour schemes were developed was not considered in the first part of the work. This was not necessary, since knowledge of how to understand the colour schemes was not the focus at the beginning of the PhD work, the main concern at that stage being instead to find reliable building objects and examine them.

Finally the use of SEM analysis was applied to gather information concerning the chemical similarities between the samples of cross sections and samples from the soil. The analyses could tell us if there was a similarity between samples from different façades revealing layers of the same colour. Furthermore, it could be indicated whether for instance zinc oxide or lead oxide was the material giving a layer in a sample its colour. If the same material was considered in both soil sample and paint sample it could be the source of the pigment found in the soil samples, but not necessarily. So the SEM could exclude similarities totally but on the other hand could not totally confirm them. To do this more sophisticated analysis has to be performed. This was not considered necessary, since the similarities between the façades could be demonstrated.

3. Applied studies

Structure of applied studies

The field studies are the core of the project. Uncovering results at the building objects and making cross sections to examine in microscopic analyses are both the most important sources and a pedagogic way to show results. The other sources in the work supply the main sources, the field studies, though in the first part of the study open interviews were the most important source for finding the relevant areas and building objects for the subsequent field studies.

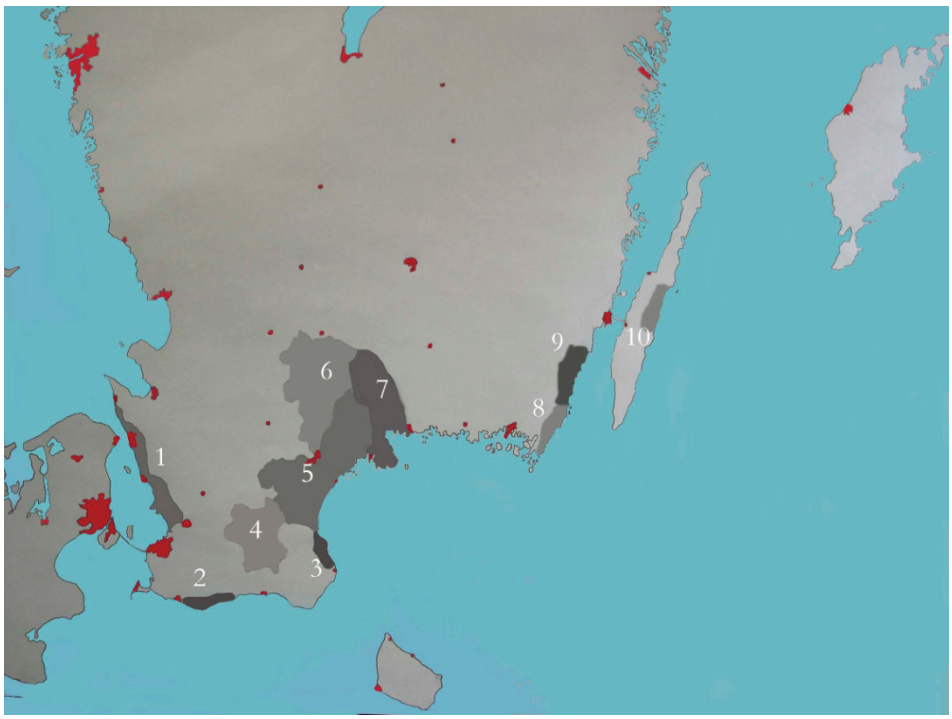
The presentation in this chapter starts with an introduction to the geographic areas and how they were established, together with a brief description of the historical background. This is followed by a presentation of the results from the field studies.

As has already been described, the objects were as a main source examined both through ocular investigations and cross-sections, and further studies were made to understand the circumstances and situation behind the idea of painting. This knowledge was revealed through ANT to achieve better comprehension concerning the situation at the time when the building objects were first painted.

SEM analyses were performed for the purpose of investigating the concordance between soil materials and the different colour samples from the façades. Consequently these two steps are presented last in this chapter as they were used last in the project to establish increased understanding concerning two completely different matters, namely the social context and the raw material used during the time delimited in the project.

Choosing the geographical area for the field studies

In the first part of the project, four areas with researchable groups of building objects are defined. Now in the elaborated process it is necessary to decide how to extend the results and hence to develop the work in the field. The background from the licentiate thesis with its four geographical areas sets the limits of possible geographical areas to work with. The areas had relevant building objects defined in the initial part of the project. Choosing a totally new geographical area and try to define new groups of building object is inefficient. Thus the area with the most interesting feasible results was chosen out of the four already mentioned. Lister hundred has an interesting question concerning a pigment being mentioned in literature and findings of red soil in the area



Map of southern Sweden. The first ten areas were found through short interviews and briefly investigated. Four areas were selected for further research up to the Licentiate thesis, number 2, 3, 7, 10. Number seven on the map is the one where the intensified investigation was carried out after the Licentiate thesis.

of Jämshög parish also mentioned in the literature. These sources together with the evidence obtained from samples and the wall-paintings were significant reasons for choosing Lister hundred. Furthermore the Listerlandet plain and the coastal areas together have groups of building objects which are interesting, both for comparison with the local area, Jämshög, and in their own right for the investigation of local differences in colour schemes.

Geographical and architectural delimitations

Lister hundred has an independent history and distinct geographical delimitations, with the sea on two sides in the southern part and the forest as a border to the west and north. Summing up, the area is well-defined and tangible due both to the building objects and to the geographical limitations. Another restriction was to have a primary focus on the original colour schemes revealed in the façades and to describe the changes leading to contemporary colour schemes more briefly.

The investigation is concentrated on dwellings as typology, in other words the main building for human habitation. And furthermore the most relevant objects among the dwellings are at farms a cut above the average in size and architectural performance, in the rural areas, and on fishermen's dwellings. These groups were stated as the most relevant during the first part of the investigation since the building objects were in a condition good enough to be investigated. The period for construction of the building objects ranges from the early 19th century till the 1870s. During this period many of the farms in the area were pulled down or re-built due to new situations. The land reform forced farmers to move their settlements and accordingly many new farms were erected (Erixon, 1939).

Lister hundred has another advantage over the other three areas: its division into clearly defined local areas from Jämshög parish in the north to Gammalstorp, Ysane and Mjällby parishes on the plain and along the coast in the southeast. The main investigations and results refer to Jämshög. The farms in Gammalstorp, Ysane and Mjällby are partly

investigated as a comparison with the farms in Jämshög, but the building objects in Ysane and Mjällby have also proved to be of some interest.

The geographical area

Lister hundred is situated in the south of Sweden. The landscape is varied. In the north, close to the border with Småland County, the forest predominates together with an abundance of rocks and lakes. In the mid-part you find forests and lakes but also valleys with arable and cattle farming. In the southern part the plain predominates and agriculture is extensive and paramount. In the coastal area, forested stony ridges surround farming areas. The coast has several small fishing villages in the small bays along the coast, separated by ridges and woods. As will be shown, the landscape and its prerequisites are important factors for understanding the building technique and furthermore the paint materials used, especially during the 19th century.

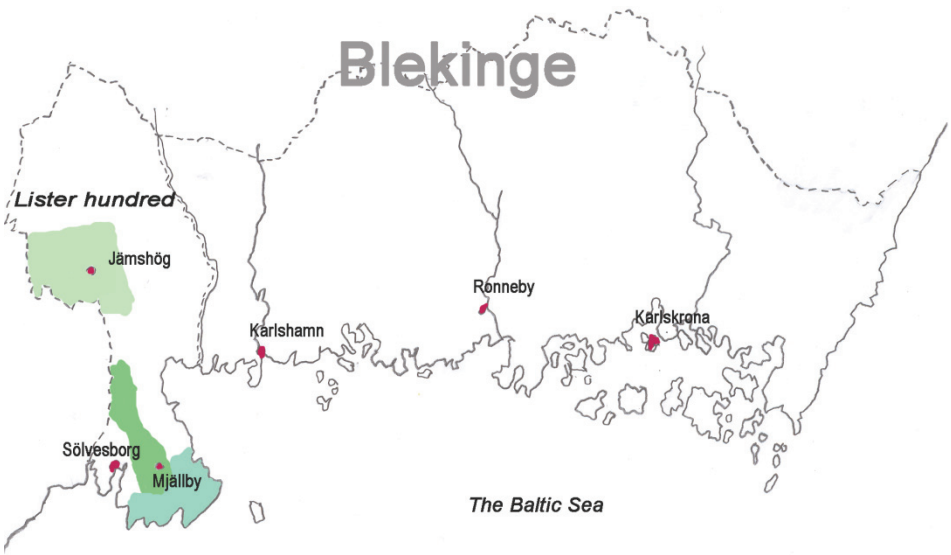
The geography was given when the rural landscape was shaped and produced the spatial effects in which the building objects were moulded. It affected the organisation of the farms in the villages and the structure of the group of buildings at the farm. Lister hundred's mid-part during the early 19th century was an expanding area with prospering industries and the population increased (Karlshamn Tidning 1834). At the same time in this area, in Jämshög parish, the villages sometimes contained one single farm, in contrast to the more densely populated area of the plain, with villages containing lots of farms. This was also the case in the fishing villages: small buildings standing close together in dense structures. This was a situation built up during the 19th century and is still a conspicuous element in the relation between the different groups of buildings and the landscape. The differences between these areas are of some interest in the investigation.

The local areas

To make the investigation more distinct and significant, more than one area was considered for study. Thus the geographical area consists of three differentiated local areas, each with their own conditions concerning landscape, building traditions and building materials. In Lister hundred this study investigates three local well-defined areas:

- Jämshög parish – the wooden farmhouses.
- Gammalstorp, Ysane and Mjällby parishes – the brick farmhouses on the Listerlandet plain.
- Mjällby parish – wooden dwellings in the coastal area.

Since the northern parts of the hundred are dominated by buildings painted in soft red distemper, which dominates most of the rural areas of Sweden, this area is not part of the investigation during the first part and not in the second part either. The availability of good-quality, locally grown timber naturally influences the building technique in the parts dominated by forest and wood. This is the situation in the mid-part, Jämshög parish, where consequently the building technique is timber-jointed. This is the technique dominating buildings constructed both during the 19th century and earlier, whereas on the plain the abundance of clay and limestone in the soil made possible the production of bricks



The map showing Lister hundred in Blekinge County. In the northern part of Lister hundred, the central parts of in Jämshög parish are marked light green. The coastal areas in Mjällby village are marked bluish green, and due north of it the area with farmhouses in Gammalstorp, Ysane and Mjällby parish are marked green. Karlshamn, the nearest town, is situated to the east of the local areas and the smaller town of Sölvesborg to the west of them.

and lime-wash. Finally, in the coastal area the wood again is the material for construction, using much the same technique as in the mid-part.

There is an economic differentiation between on the one hand the fishermen's dwellings and on the other hand the farms. This is of interest since the possibility of painting your façade could be seen as depending on your economic resources. Another distinction is between the plain area, with mainly plastered or bare-brick farmhouses, and the mid-part, with solely timbered structures. The differentiation in building materials is accompanied by a differentiation in paint material: linseed oil paint on the weatherboarded wooden structures and lime wash together with the plastered façades. This aspect is significant as it could be argued that lime-wash needs no additional pigment, since the lime itself is white whereas the linseed oil is transparent.

In Karlshamn the 18th century is a period of expansion. With a population in 1815 of 3,849 inhabitants it was the seventh biggest town in Sweden; Karlskrona was the third biggest town and naval centre (Carlshamn Tidning, 1819). One effect of the expansion of Karlshamn was the erection of many new mercantile homesteads in this period, especially after the big fire in 1763. Both Karlshamn and Karlskrona were of importance for Sweden during the 18th century and a lot of architects and skilled craftsmen were based in the area.

Jämshög parish in the inland had an expansive period during the 19th century with the development of Olofström ironworks and a growth of agricultural output which among other things included spirits and cattle (Söderberg, 1935). Along the coast the fisheries were an expanding branch of business during the last decades of the 19th century (Lindgren, n.d.). This had an influence on the dwellings in the fishing villages. The plainland farms were also transformed during the 19th century and new ideas disseminate on the subject of farm-building configuration (Persson, 1800).

To conclude, the project covers two local areas with wooden building technique: the coastal fishermen's dwellings and farms and the farms inland, together with the second visibly discerned building technique: the local area on the plain consisting of farms in plastered or bare-brick technique. This delimitation in typology concerning the buildings and at

the same time differentiations among the three groups of buildings leads to valuable assessments.

The historical background of the local areas

The geographical area of Lister hundred is in a borderland. Historically this area has for periods been an independent part in between the counties of Scania and Blekinge (Milton, 1994). Part of the investigation was carried out in the Scanian parish of Näsum, due to the fact of Jämshög parish having been an annex-parish to this parish during the time delimitated in the project. In spite of this fact the vicar lived in the vicarage in Jämshög and thus Jämshög was the centre of the parish. In 1868 the most northern part of Lister hundred was separated from Jämshög parish and made into an independent parish, Kyrkhult parish.

In 1658, through the Peace of Roskilde, Blekinge, together with Scania south of Blekinge and other Danish land areas was ceded to Sweden. Two new towns founded during the 17th century, Karlskrona and Karlshamn, were considered strategically important locations by the government and the king, and Karlskrona was also the naval centre of Sweden. As a part of the founding of Karlskrona, some of the best architects were commissioned to design public buildings such as churches and the town plan; they included one of the architects of the Royal Palace in Stockholm, Nicodemus Tessin the Younger and director-general of fortification Erik Dahlbergh. The described progress of Blekinge County during the time just before the investigated period is of a certain interest when interpreting the development of the new building typology in the early 19th century.

As already mentioned, the results in the first part presented in the licentiate thesis proved the possibility of finding local differentiated colour schemes and even local production of pigments. To reach a better understanding and interpretation of these results it is necessary to investigate the area's history. The relation between the local building characteristics and local history was considered important. In the three local areas the traditional building typology and partly building technique gave way to new building typologies during the investigated period. plainland area, Listerlandet, the plastered mansions together with the timber technique, again on the coast, were judged to be of interest. The

plainland farms were half-timbered, enclosed units with humans, animals and crops close together. This changed during the investigated period into an organisation more like the one introduced in the parish of Jämshög, with humans kept separate from animals and crops. On the coast once again, timber technique was overwhelmingly predominant both on farms and in fishermen's dwellings.

During the time from the late 18th century, as stated earlier, most of the wooden buildings in the rural areas of Sweden were grey, due to the lack of any tradition or necessity of painting them. Exceptions comprised the churches, vicarages and manor houses. The last mentioned especially could during the neoclassical period in Sweden be painted in light hues of linseed oil paint if the façades were of planed boarding. These buildings represented a more refined type of building, or at least greater and more manifest affluence. In Jämshög parish no real mansion house existed, the closest approximation to a manor house being Holje Manor at the ironworks. So the main sources of inspiration were found at the vicarage or in the nearest towns. One reason for not painting with linseed oil was the surface of the building structure, the timber. The surface was not even and it was not very suitable for linseed oil paint since it would absorb a lot of the material and painting would be found very expensive. The timber itself from this time is regarded as being of very high quality and therefore it was not considered necessary to paint or treat the wood at all. In many coastal areas of Sweden the façades were protected by tar or a mixture of tar and linseed oil. The plastered building objects on the plain were lime washed and, like all lime-washed buildings, had white as a starting point when the building façade came to be colour-schemed.

In the following section a brief description will be given of the history of the building typology in the differentiated local areas being investigated in Lister hundred.

Jämshög parish - the wooden farmhouses

During the 18th century the farms in Jämshög parish had a simple organisation, with just one room demanding heating during the winter. Briefly this was an open one-room log-timbered building in the middle with a fireplace in the centre of a stone floor (Gadd, 2000). The room was open up to the roof and thus had no ceiling. A two-storey building for storage was placed on either side. Even wealthy farmers lived in these

” Högloftsstuga” with minor changes to the original façade. The part in the middle could only be exited through the adjoining parts on each side. Sometimes, as in this case, a chimney could be built or windows put in. Blekingegården, originally in Nybygden village, Jämshög parish. Since transferred to the Kulturen open-air museum, Lund.

old-fashioned *“högloftsstuga”* dwellings. Of course, all the parts were made out of wood and with no use of nails. The building was originally without windows. The smoke from the fire place in the middle section of the building escaped through a hole in the roof thus no chimney. This centre room is called “*ryggåsstuga*” and has beds fixed at to the wall, a couple of chairs, a table, possible a long-case clock and a hanging cupboard containing the most important objects of value. The room has no ceiling and in consequence open up to roof truss. The whole interior was in most cases unpainted with the exception of the long-case clock or the hanging cupboard. In this room both young cattle, farmhands and the whole family lived during the winter while in summer the two adjoining parts of the building would also be occupied. The building was many times adjusted and developed during the years with small windows, chimney and eventually a wooden floor in the central room.

Mjällby, Ysane and Gammalstorp parishes - the farms on the Listerlandet Plain

On the Listerlandet plain, three kinds of building typology are present during the 18th and 19th centuries till the new typology appears. The first is the same as in the Jämshög "högloftsstugan", while another one is the half-timbered building typology as seen further south, in the county of Scania. The vicarage in Mjällby was in the late 18th century made in half-timbering technique (Sjöborg, 1793). Thirdly a building technique is a mixture of half-timbering and a structure called *skiftesverk*. This is a structure similar to half-timbering, but the pillars have a section shaped like the letter H, where the broad deals are piled onto each other in the cavity. The lack of timber and the availability of clay and lime affected the building materials and technique. The type of building dominating the rural area was the squared farm, low-slung, enclosed and sheltering in the open and flat landscape exactly like the farms in the areas southwest of Lister hundred in Scania (Erixon, 1939).

Farm from Listerlandet plain giving an impression of the building typology, low and enclosed, building technique (skiftesverk) and mixture of duties at the yard before the changes in the 19th century. Humans, goods and animal all together. Hörvik, Mjällby parish. Photo: Sigurd Erixon, © Nordiska museet,

The interiors of these farmhouses had many similarities to the typology found in the southern county of Scania, which was painted with white distemper on plastered walls. The interior had a ceiling, unlike the interiors in Jämshög parish. In descriptions from Scania, south of Blekinge, with the same building traditions, examples are mentioned of wooden chimneys open to the attic (Linné, 1977, (1749)). Common to the farms in all local areas investigated, due to their rather poor and simple living standards, is a certain manifestation of wealth through textiles and hand-painted wallpaper put up for feasts such as Christmas or weddings. Those colourful, painted or embroidered objects were desirable. Therefore the forthcoming option to paint the façades could be interpreted as a longing for materiality, for a kind of luxury.

When the land reform was implemented during the 1790s and into the mid-19th century, a new building typology appeared in the new settlements, but circumstances in this area engendered a dwelling built of brick and in most of the cases plastered and with stone buildings on each side, creating a yard. This new organisation of farms was common not only in Lister hundred but in most of Sweden, though with local differences in building materials, in typology of the different buildings at the farm and in organisation of the buildings and spaces.

Mjällby parish - the coastal dwellings

Most of the areas close to the sea were not settled at all. Before the land reform the settlements were concentrated in the villages and the farms were huddled close together. All the villages were situated within a distance of about 2 – 5 kilometres from the sea. Some of the fishing villages are mentioned already in the 17th century, e.g. Hörvik in Meyer's map from 1655-58, where the place is marked as boathouses. On the coast many new fishing villages was settled during the late 18th century and the first half of the 19th (Lindgren, n.d.). Many of the places had been used earlier during fishing seasons since but not as year-round settlements (Land Survey Board Archive, Description of Mjällby Parish 1857). The development of the coastal areas took place mostly during the second part of the 19th century, establishing densely built-up areas with the dwellings close together. The buildings were timber-built and had more similarities to the new wooden farmhouses than to the earlier traditional "högloftsstuga".

Building from Hällevik the most expansive of the fishing villages settled during the 19th century. The part to the left was erected during the 1770's was moved and extended. The dominant building material was wood, though granite rubble was used for outhouses, smoke-houses and ovens. Hällevik, Mjällby parish. Photo: Johan Adolf Nilson, 1910. Blekinge museum archive.

The new building typology

Up until the end of the 18th century, the traditional procedure when erecting a building was for the whole village to join forces (Werne, 1980). In the area with wooden structures the timber-jointed technique dominated and everything was made of wood, most often from the village. All the joints were made of wood. On the Listerlandet plain, sun-dried bricks and locally produced lime were used. Local materials and local handicrafts and knowledge were used of necessity. The effort needed to buy materials was negligible.

The definitions of different rooms and activities were the same in the smallest, meanest cottages and the more well-to-do farms, as well as the typology of the buildings. The difference was in the scale. The use of materials was also the same. The settlements are closely associated with what humans can produce and harvest from the landscape and natural resources within the village.

This should be compared with the living conditions in the mercantile homesteads of the cities, rural buildings such as vicarages and country manorial buildings. This group of buildings proves to have a much clearer distinction between animals and humans than the simpler farms. The rooms in a vicarage, for instance, were differentiated for human activities and certainly not for accommodating cattle. These activities were manifested by certain names, i.e. drawing-room, chamber or bedroom. The main type of building has a floor plan and exterior elements rooted in 18th century neoclassicism, though the actual buildings in the area were erected in the early 19th century. In the façade this is further revealed by the symmetric doorway and windows. The most significant visible character of the structural alteration was the new architectural elements in the dwellings and the painted facades. The windows are tall and the door together with the cornice decorated with 18th century ornaments. The overall impression is that of a classical architectural idiom and thus strict and far removed from the former vernacular architecture round about and from the unpainted farmhouses devoid of windows and classical architectural elements.

For the people and animals at the farm, the separation of different activities at the farm was the most evident result. Cattle and other animals were separated from the humans in the stone-built annex. The farmhand and maid were moved out from the main building to new chambers in the annex fenced off from the main farm building (Gadd, 2000). The farmer, his wife and the children acquired bedrooms and a big drawing-room for festivities. The rooms had high ceilings and tall windows, wooden floors and decorative wall-paintings. The rooms, especially the drawing-room, situated in the centre of the farmhouse, were made for entertaining.

The drawing-room with its wall paintings was another element mediating the distinction between new building typology and the old. In some cases all the areas were painted - floor, ceiling and walls. The floor was made imitation stone, the ceiling given a blue sky, foliage and a wooden structure. The walls were decorated with all kind of motifs, e.g. from the Bible, exotic animals from contemporary illustrated magazines, paintings of Thorvaldsen's statues and finally paintings depicting the farm's exterior. This part was of some interest for the present study. The façades show the colours and the surroundings at the time when the farms were

The drawing-room in the new type of farmhouses with wall-paintings on all walls. The wall-paintings visibly inspired by similar paintings in country manor houses include one showing the exterior of the farm complex from the time when the new farm was erected in 1849. The three-legged chair and trousseau chest in front of the painting are typical of the County of Blekinge. The three-legged chair was common in the old-fashioned farm buildings. The room thus unites the old building´s interiors with the new farmhouse's spaciousness. This room was only in use during festivities and nothing like it was to be found in the former "högloftsstugan" building typology. Hemmingsmåla, Jämshög parish.

constructed. The paintings were made by both professionally trained painters and in some cases by more autodidactic painters. The wall-paintings are to be found during a period from the 1850s to the 1920s. Not all of them depicted the farmhouse and its surroundings.

The layouts with a central room in the main building were to be seen in the mercantile homesteads in the nearest town, Karlshamn, where the farmers went to sell and buy goods (Öller, 1996 (1800)). Karlshamn was at this time a town characterised by wealthy burghers and merchants' homesteads. The planning could be found in mansions at the time

(Erixon, 1947). No rooms traverse the building and the series of rooms facing the yard are smaller, while the central drawing room looks out onto the garden. The central rooms are in some exceptional cases the only rooms traversing the building.

These buildings' exteriors were strongly influenced by 18th century Rococo architecture (Rentzhog, 1967). The Rococo inspiration is obvious in farmhouse exteriors, with their mansard roofs, which were considered extraordinary rare in the rural areas or among the peasantry of Sweden (Svensson, 1973). Details such as fluted pilasters, capitals, the design of the main doors and cornices are apparently influenced by the builders Karlshamn or even made by their apprentices. These building contractors were affected or inspired by the construction of the Rococo mercantile homesteads in the late 18th century. Another detail from the Rococo was the frequent use of the rhomb at cornices and doors. Nevertheless the main character of the farmhouses was mainly influenced as well by the contemporary advent of Neoclassicism.

Karlshamn in 1767 had nineteen building contractors (Bengtsson, 1946). The architect Carl Wijnblad worked in Karlskrona for fifteen years till 1740, when he went back to Stockholm (Söderström, 2009). These examples are symptomatic of the development already mentioned, in which this region of Sweden with the towns of Karlshamn and Karlskrona played an important part. One example of the activity and situation is the imposing *Skottsbergska Gården* complex, today preserved and showing a piece of high quality architecture from 1766 (Bengtsson, 1946). The builder of *Skottsbergska gården* was also the owner of the ironworks at Lilla Holje, Jämshög parish, Olof Ohlsson. The mansion at the ironworks erected during the same period as the estate in Karlshamn was burnt down and replaced by a new building before 1766 (Söderberg, 1935). Both the second building at Lilla Holje and *Skottsbergska gården* was grand examples of the high quality of the architecture in the area during the 18th century which might have influenced the architectural approach at the farms and especially the organisation and the detailing of the architectural grammar in the façades (Söderström, 2009), though we have to observe the change from Rococo ornaments in the mercantile homesteads of Karlshamn to a more early Neoclassical ornamentation, with pilasters having a more strict classical appearance as ionic capitals. This, as already mentioned, is emulated in the farmhouses built in Jämshög and even in some cases in

Skottsbergska as perceived today. The Rococo style is especially present at the mansard roof, the entrance and door. The concealed joints from the timber constructions are used as an architectural element of rhythm. Skottsbergska gården, Karlshamn.

the wooden farms of Mjällby parish.

In contrast to the traditional construction of buildings in the villages, new buildings like these were put up by craftsmen such as building contractors and glaziers called into the villages (Werne, 1980). Materials such as nails, glass, tiles and planed wood were also acquired from places

outside the village. Finally the use of a new material is established, namely paint for colouring the façades and interiors.

The division of the farm into one part specially for social activities and one part for dirty work with animals and crops led to a very clear and distinct division of the farm buildings. To establish the new building complex, in some cases the farm buildings were pulled down and in other cases where the land reform compelled a new location for the farm new buildings were a necessity. The materials for the façades were also contrasting, since the main building had planed wood and decorative details and the annex buildings on the other side of the fence were built of stone or of wood with rough boarding. The planed wood was painted with linseed oil paint and the rough boarding or visible timber structure

Painting hanging in the farmhouse at Bommarstorp, Jämshög parish, from the 1930s, showing the same space disposition at the time of its construction in 1856 and today. The division between animals and work and the farmhouse is obvious and so is the boundary with the surrounding landscape. Both are made clear by the building typologies and the gates. The original colour scheme of the manor house is changed in the painting to the colour scheme of yellow and white even more common in the area today than in the 1930s.

with red soft distemper. Façades made out of big stones had joints lime-washed white. Summing up, the man part of the farm and the animal part were separated due to building typology, building materials and paint materials. This is a big difference from the traditional farm preceding the changes, when all buildings on a farm and in a village were made in the same building technique and part of the same building typology, contained the same building materials and were all unpainted.

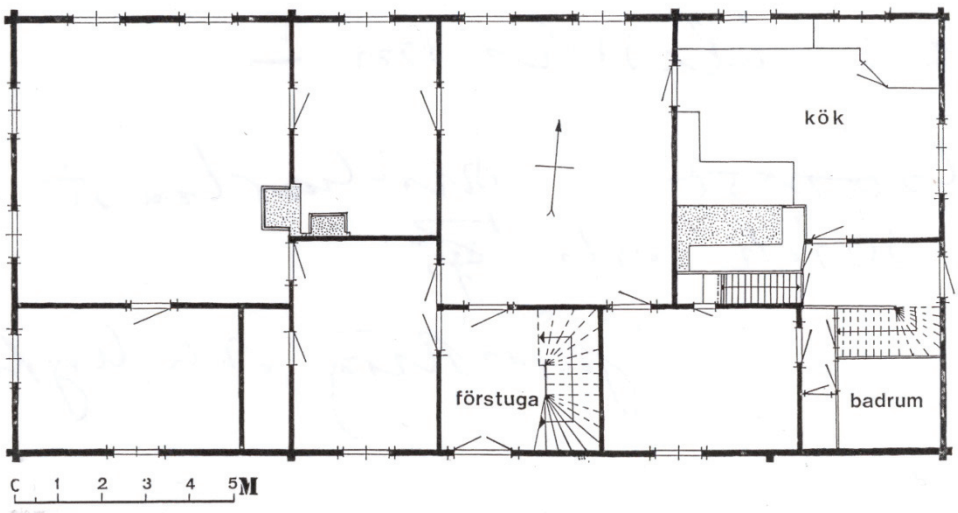
So it seems that the new farm buildings were establishing the use of a number of new materials and situations at the farm complex in the rural area; this situation was very likely not specific or unique to Lister hundred or Jämshög but conceivably observable all over Sweden, and the rural built environment moved closer to the bourgeois, in particular the vicarages, spreading the new way of living through the new building typology (Bergström, 1991). This does not imply that the economic situation was the crucial cause promoting building activity and new building typology. For instance, some of the highlights of interior painting in northern Sweden, *Hälsingland*, were created during an economic depression in the 1830s (Andersson, 2000). Farms and dwellings of small means were still being made using the traditional building technique at the time when the new farmhouses were under construction. A differentiation in the earlier equal building tradition was then obvious and visible. It is important to bear in mind the new situation, with the unpainted and colourless remaining buildings in the rural areas standing alongside the new building typology of the painted and colourful spaces at the farms. Suddenly the homogeneous landscape is provided with farms which are painted and strictly organised.

The rural areas during the 18th and 19th centuries in Sweden

Each farm during the 18th century and onwards till the early 19th century could be identified as a system of duties or occupations. But many of the duties were performed in the same main building. The farm conformed to its surroundings and to each unit in the communal system of the village. The farms consisted of well-defined functions in each building together with tools, humans and animals. Everything had its appointed time, place and situation. Every farm was in addition related to the other farms in the

village and the villages to each other etc. This made the villages and farms really dependant and reliant on each other and in such different situations as from harvest to construction of buildings (Werne, 1980). The building materials for the construction of buildings were produced and processed on the farm or at least in the village. The boundaries of the village were strong and clear. This was the situation before the coming of the industrial revolution.

As mentioned earlier, the land reform implemented in most areas during the 19th century changed the situation in the rural areas, due to the concentration of the land to one spot and furthermore in many cases the moving of the buildings to new spots. Simultaneously the typology of farmhouses changed into something similar to what you could see in country manorial buildings from the late 18th century. The plan of the new farmhouses is the six-fold layout with a big central room and two smaller rooms at each end together with the *"längsgående plan"*. The latter with a wall parallel with the long sides.



An example of the "längsgående plan" in a restored and partly changed farm house, though the wall parallel with long sides appears clearly. After (Svennsson, 1972).

New building materials are introduced as well, such as planed boards nailed to the timber structure still in use, though in a new type of building, big windows and doors. When the buildings are erected, linseed oil is introduced. Theinspirational architectural ideal could probably be found in the mercantile homesteads in nearby towns or in country manorial buildings and vicarages in the area.

It is not only changes in the building technique and treatment of the surface but political changes as well that facilitated the transition. This was done through a reduction of the nobility's land holdings and by cutting taxes, which made it easier for the commoner to gain a share in the output from the land (Magnusson, 1996). This led in the next step to a focus on the condition of buildings. Credit institutions and agricultural societies (*Hushållningssällskapen*) also paved the way for changes and requested the farmers to carry out investigations of their properties and farming practices (Magnusson, 1996). With the process of change, work in the villages was changed, bringing about agricultural specialisation and use of better tools.

The rural areas during the 19th century were developing from subsistence to specialised production of crops for sale and crop rotation (Gadd, 1998). As a consequence of this, cattle farming became more common. This in turn called for certain specialised buildings. The land reform also entails the possibility of putting up new buildings, since the settlements were given new locations. The politicians together with the king enjoined economisation on wood and consequently the use of stone for building purposes. The clergy wanted their parishioners to improve their hygiene and manners. All these things combined prompted changes in building standards and in conditions for human habitation, animal husbandry and work.

Architectural Painting in the rural areas of Sweden during the 18th and19th centuries

We are told that red distemper paint for wooden façades in Sweden came to be widely used on Baroque manor houses and palaces during the 17th century, to give the appearance of best-quality brick façades (Fridell Anter and Wannfors, 1997). It was not until early 19th century that this way of painting farmhouses became widespread in the rural areas of Sweden. Because of this, contemporary colour schemes of rural dwellings from the 19th century are completely dominated by red

distemper, especially as regards smaller dwellings and outbuildings. Falling pigment prices at this time, the first part of the 19th century, are often given as the reason to the increased desire to paint with linseed oil paint (Fridell Anter and Wannfors, 1997). Either way, bright colours do not dominate façade elements in the rural landscape during the early 19th century, though it is possible to find exteriors in the new and stronger hues of the industrially produced red pigment, zinc green or ultramarine blue (Kjellström, 2004). So the access of clear pigments in blue, red and green from industrial production was of course important but not particularly where façades were concerned. A vogue of painting furniture and interiors is notable during the late 18th century and the 19th, and the pigment of specific interest was Paris blue used as a setting at furniture (Andersson, 2000). However, the reason behind the fashion for painting must be more than just a fall in the prices of certain desirable pigments. As already mentioned, some extraordinary interior paintings in northern Sweden were executed during the depression in the 1830s. Therefore it is of great interest to delve deeper into the situation during the time of the changes in the rural areas in order to better understand the new habit of painting the façades.

One difficulty as regards painting activity during the 19th century is the guild system, which caused activities such as painting in rural areas to be undertaken mostly by farmers as a spare-time occupation, which reduces the possibilities of finding information in records today concerning the activities of painters in rural areas (Andersson, 2000). The master house painter, member of the guild, could only be found in the towns. In this case the closest situated town was Karlshamn. The individual painter had to create his own experiences and make a sort of pattern or typology of colour schemes and colours. These could be individual to local areas or regions (Andersson, 2000, Kjellström, 2004).

It is important to note that the guild system was rendered old-fashioned by the ongoing industrialisation of Sweden during the 19th century, and the guilds were dissolved in 1846. In 1864 freedom of trade was introduced, whereas previously trade had been the prerogative of the biggest towns. These were of course two decisions of supreme importance for rural areas. They changed the way in which new impressions came to Sweden. Before the deregulation of the trade many of the goods used to make paint had to be bought at the pharmacy and earlier no organised paint shops existed at all (Johansson, 2001).

Impressions mainly came through the travelling journeyman, this being a time when the young painter travelled, often to Germany, and came home with new ideas and skills. With the new orders and deregulations it was easier both to buy the goods and to work as a painter in the rural areas. The number of painters increased heavily, in some areas by more than 100 % between 1860 and 1875 (Mårtensson, 1993).

As already mentioned, painters' materials remained hard to come by after trade had been deregulated. The establishing of paint shops took time, due to the old privileges stipulated for pharmacies (Johansson, 2001). Even after 1864, therefore, vicinity to Karlshamn was of great importance for the painters in the area. Here they could get their goods from pharmacies. Industrially made linseed oil paint remained more the exception than the rule. Instead the production of pigments was getting more industrialised with special mills grinding the pigments (Johansson, 2001). Efforts during the first industrialisation of the paint activity were focused at the processes of industrialised pigments and thus during this process the craftsmen adhered to the same old traditions when painting.

The ideals from the Enlightment transformed in Sweden

During the 18th century a series of directives and instructions from the king of Sweden declared the intention of making better use of the resources of the kingdom. One consequence of this was an eagerness to find out about the agriculture and any other sources of income, and now the first steps towards statistics were taken (Gadd, 2000). They concerned activities ranging from how to develop an alternative domestic production of blue pigments for uniforms (indigo was very expensive) to a comprehensive development of agriculture. It also called for ideas on how to improve buildings in rural areas. Timber, it was declared, was being wasted and buildings should therefore be constructed of stone. Great areas of the southern part of Lister hundred were emptied of wood (Land Survey Board Archives). These depictions of the situation in the rural areas were common and the most well-known in Sweden is the trips around different parts of the country made by Carl von Linnaeus, which have to be seen in the light of the authorities' intentions to facilitate utilisation of the country's resources (Gadd, 2000). Things ranging from the temper of the peasants to geology and building methods were

described in detail. This wish to develop the use of material was a prime concern of the rulers of the country, and this was not unique to Sweden but spread from the rest of Europe (Gadd, 2000). In this way the ideals of the Enlightment were put into practice (Ambjörnsson, 1980, Söderström, 2009). These intentions were spread through different publications and in particular by the county governor. Another important link for this communication of directives was the clergy. The vicar especially, who often had a close relationship to the parishioners, could spread new findings and encourage new methods (Adolfsson, 2000). The vicar was not just responsible for the preaching of Christianity but also for the education and upbringing of both young and old.

> ”En förnuftig underwisning i Christendoms kunskapen, hwad Landtfolket i synnerhet beträffar, är äfwen i Politiskt afseende, högst nödig och nyttig; ty huru skulle många ibland dem blifwa förnuftige menniskor, lydige och trogne undersåtare, nyttige medborgare, och således för Samhället gagnelige, om intet Prästen ofta wore den förste, som lärde dem tänka, at tänka förnuftigt och Christeligen.” (Öller, 1800).
>
> “A rational instruction in the precepts of Christianity, especially for the rural population, is also supremely necessary and beneficial to the body politic, for how could many among them become rational human beings, obedient and faithful subjects, useful citizens, and thus of benefit to Society beneficial, but for the Priest often being the first to instruct them in rational and Christian thinking?”

The results of the Land Reform, for instance, were announced from the pulpit, with the vicar reading out the records of the proceedings. This is stated in the records of the Land Survey Board Archive. When the reorganisation of the villages was implemented the new structural order for the farms was one desired change. This was an appropriate opportunity to propose and advertise for more changes. The Land Reform

led to relocation of the farm buildings in many of the villages, new crops such as potatoes and then a new typology for the farm buildings. In Jämshög parish the vicar at the time of the ideas of the Enlightment and first Land reforms was Johan Jöran Öller.

Vicar Johan Jöran Öller and the Description of Jämshög parish

To write a Description of the parish where you are the incumbent might seem a way of securing and manifesting your knowledge of and power over the citizens in the area described. The phenomenon was not uncommon during the 18th century and was preceded by travelogues. The whole idea of depiction and travel was part of the Enlightenment's relationship to the world and the need to describe. The material presented in Vicar Öller's description of the parish is of great value as a source in the investigation, especially in order to create a broader context regarding the specific area of Jämshög and also a broader perspective on the socio-economic and traditional aspects in general. Öller's Description was first published in 1800.

Öller was born in 1740 in Karlskrona in the east part of Blekinge County. He was orphaned when only 12 years old. In 1756 he was a student at the University of Lund and studied for two years. He studied further at the University of Uppsala, where he took his degree in theology. In 1763 he is domestic chaplain to the family of Count Thörnflycht. This contact leads him further on to the Royal Court, where in 1768 he is appointed Court Preacher.

In 1775 the living of Jämshög fell vacant. During this time the vicar of Jämshög was chosen by the king himself, who could choose anyone and not only from the list of applicants for the post. Öller, still in Stockholm, called on the king, Gustavus III and declared his interest in the post. The king later on decided to appoint Öller to the living. The decision to move from the Royal Court in Stockholm some 550 km to the southernmost part of Sweden, to an isolated parish far removed from high society, might look strange to us today. At this time it was important to find a parish with many parishioners since it was they who provided for the vicar. Jämshög was densely populated and so was the whole county.

When in 1777 Öller moved to Jämshög the building typology was the old-fashioned "högloftsstuga" and so was the vicarage, built by the parishioners. After 11 years a new vicarage was built in keeping with the

current ideas of a farmhouse. An important architect at the time was Carl Wijnblad and his presentation of type buildings for the rural areas (Wijnblad, 1766, 1993 (1755)). The new vicarage is included by Öller in his description:

> ”Denna ganska wackra byggnaden, som enligt fleres utsago, öfwerträffar de fläste Prästgårdar, åtminstone här på orten, så i Städerne som på Landet, blef utom målningen och tapeterne, dem jag sjelf sedermera på kostat, på Församlingens bekostnad aldeles nybygd år 1788, på det sätt, efter Församlingens åstundan, at jag, åtog mig, at, efter egen smak och ritning, upbygga den, …”

> ”This building, passing fair, which according to many, surpasses most Vicarages, at least in the local area, both in the towns and in the countryside, was apart from the painting and wall-paper, which I myself later paid for, quite newly built at the expense of the Parish in 1788, in such wise, at the desire of the Parish, that I undertook to construct it after my own taste and drawing …”

It was thus Öller himself who, according to the Description, made the drawings for the vicarage. Surely he emulated the most fashionable architects and experiences from his time in Stockholm, when his circle of acquaintance must have brought him into close contact with culture and art of the highest quality in Sweden? Öller was on close terms with Carl Christopher Gjörwell (Sjöberg, 1994). Gjörwell’s son and namesake was one of the most significant neo-classicist architects. He was a pupil of Olof Tempelman at the Royal Academy of Fine Arts and later on also a pupil of Gustavus III’s favourite Louis Jean Desprez, who was born in France and worked in Stockholm (Sjöberg, 1994). In other words, Öller could gain highly topical impressions of architecture from his period in Stockholm.

The new vicarage was destroyed by fire in 1803 and was immediately re-erected with a similar building but in a new location. This building as

well as the destroyed one is related to the dwellings constructed in Jämshög parish in relatively large numbers during the following decades. One of the earliest to follow the vicarage is the neighbour and tradesman Malmqvist in 1823, then 25-30 years pass until the house-building boom in Jämshög materialises. The spate of building peaks between 1840 and 1865. As argued earlier, during this period it was the vicar's role or task to inform, teach and guard the parishioners through their lives. In a letter to the publicist and librarian Gjörwell he proclaims the task ordered him as a vicar:

> ”Trenne Herr Assessorens värda och angenäma Skrifvelser, hafva intill denna stund blifvit obesvarade, men icke af glömska, icke af vårdslöshet; utan af överhopande gjöromål i stora och folkrika församlingar, både som Präst och som – Mantals Skrifvare, att icke en, utan 2ne gånger, tätt på hvarandra, uprätta Längder öfver allt manbart folk från 19 till 38 år, innom församlingarne, som förmodel af misstag blifvit Prästerskapet ålagt. Och si, allt detta, utom vanliga i sednare tider, mångdubblade gjöromål, regnade öfver mig korrt före sistledne Julhelg. Allt detta må medverka till min förlåtelse” (21/1 1809)

> ”Three of Mr. Assessor's worthy and pleasant Letters have until this moment gone unanswered, but not because of oblivion, nor out of carelessness, but owing to an excessive burden of duties in large and populous parishes, both as Priest and as Clerk of census-registration, the clergy having been enjoined, erroneously as I presume, not once but twice over, in rapid succession, draw up registers of all male parishioners between the age of 19 and 38. And look you, all this, over and above regular duties, themselves multiplied of late, deluged me shortly before this Christmas past. All this I trust may contribute to my being excused.” (21st January 1809)

If we assume that the vicar was charged with both watching over and caring for his parish through his commission to teach and encourage the parishioners, could it then be possible that the world of the vicar became the idealistic and in a way glorified way of life to the parishioners? In this case the vicar's choices and standpoints in different matters such as farm management, improved hygiene and new ideas concerning building constructions would be parameters. The vicarage became to the wealthy farmers in the parish the example of how to design a good built life. A given task for the vicar was to improve agriculture and make it more efficient. The improvement could be seen in the parish and show the beneficial effects on incomes. This was of course of particular interest, since the farmers paid the vicar in kind. In Öller's case it also involved a more or less research-focused investigation concerning a difficult disease, Raphania, which affected lots of citizens in Sweden. Öller succeeded in finding the cause of the disease and was honoured by the Royal Swedish Academy of Sciences in 1806.

> "Den nämnde dragsjukan är af en faselig beskaffenhet, den sammandrager lederne i en alldeles förwänd ställning på fingrar och fötter; knän ofta up mot hakan, och munnen mot öronen. Denna swåra sjukdom, som i förra tider medfört de swåraste qwarlämningar, såsom dels wanwettighet, dels fel på målföret, dels Contraction i hela kroppen, för den siukes öfriga lifstid." (Öller, J J 1800)

> "The said Raphania is of a fearful nature, it contracts the joints of the feet and fingers in an utterly distorted posture; the knees often up to the chin, and the mouth up to the ears. This severe disease, which in former times resulted in the severest complications, such as madness, speech defects and contraction of the whole body, for rest of the patient's lifetime". (Öller, J. J., 1800)

We also find Öller campaigning for the establishment of special "working institutions" where pauper children of working age could be given employment. He also wanted, to establish a county hospital which

would be financed by taxes on spirits. And finally there was a suggestion concerning the founding of an authority in each county to give economic advice, e.g. to farmers. This was an early forerunner to what would later be the "*Hushållningssällskapen*" (County Agricultural Societies), dedicated to enlightenment on the streamlining of agriculture and its various branches (Svensson, 1970). These authorities were given a centre in each county of Sweden. Transforming the organisation and the methods of agriculture in the parish of Jämshög could be a complex and controversial enterprise (Adolfsson, 2000). Though the effort was demanding, it seems that Öller was not the only person to stand forth as a good example to the parishioners (Kjellström, 2004). The transformation discussed occurs all over Sweden at about the same time. At the same time the vicars were enlisted for a "civilisation process" (Bergström, 1991). From the mid-18th century onwards the parish administration was developed and the vicar had to suggest reforms like those mentioned above if that had not already been introduced by the vicar before him (Bergström, 1991). It can be stated that the changes of the physical formulation, the vicarage, were part of a conscious detachment from the farmers and a concomitant rapprochement to the bourgeois and the townsmen (Arvastson, 1977).

Be this as it may, there are some other possible influences in the nearby area. Just north of Jämshög a steelworks was founded during the 18th century. The manor house, Lilla Holje manor of the industrial community was from the late 18th century the home of Colonel C H Börrein von Dannfelt, who later in 1811 bought the place (Werdenfels, 1970). He had the place made into a proper manor house set in an "English park" with pavilions, fountains, a hot bath and an orangery with over 1,500 plants (Werdenfels, 1970). There was also a liqueur plant, a guesthouse and a manorial distillery. This complex could have impacted on the development of the parish, though the necessity to guard and care for the parishioners is missing. Another possible source of influence close to Jämshög is Ryedal Manor, erected in 1772 and the only real manor in the area. As can be seen from these examples, Öller might have influenced the parishioners, in particular the wealthy farmers who could afford such modifications as these.

In the 1790s Öller bought a farm in the annex parish of Näsum and built a farmhouse there similar to his vicarage. His caring attitude towards the parishioners was also present, since half the building was thought of as a

Lilla Holje, photographed in 1912. The exterior of the manor house at the steelworks is here much the same as it had been in 1811. Both the mansard roof and the semi-circular extension are clearly inspired by the Rococo, which some years earlier had been a dominant architectural influence in Sweden. The mansard roof became common in farmhouses in the Jämshög area also the semi-circular extension can be seen in the area . The building was pulled down in 1914. Photo: Herman Sander. Olofström municipality archive

school and the other half as a home for the elderly and infirm (Adolfsson, 1993). But this building activity did not inspire the same imitation among the farmers as in the case of Jämshög. From the Description of Jämshög parish it is clear that Öller was proud of the parishioners, and he is remarkably close in his description of the parishioners as well (Adolfsson, 2000). This is rather unusual in contemporary depictions. In the northern part of the parish, however, the influence of the building typology is decreasing. This part was hived off from Jämshög parish in 1865 and made into an independent parish named Kyrkhult. This might be interpreted as a division in the parish not just concerning efforts to follow a certain style of building. The similarities in building typology are especially noticeable in the nearby areas.

Farmhouse in Jämshög, showing similarity to Lilla Holje mansion concerning the semi-circular shaped room but with no mansard roof. No colour investigation has been carried out, but artistic paintings depict the façades with soft red distemper. Ekmanska Gården, Jämshög parish.

In the eastern part of the hundred, close to *Mörrums ån* (Mörrum stream), the building typology is increasing again and so it does in the eastern parts of the county, this time with the influences presumed to come from Karlskrona, the county town, naval base and third most populous town in Sweden in about 1800. By the middle of the 19th century, when the farmers' building activity is peaking, the Jämshög vicarage represents the ideals of bygone times. The late 18th century building ideals and grammar of architecture are strikingly present at the farms in Jämshög, while new approaches were presented in nearby towns such as Karlshamn. It is not unusual in some parts of Sweden at this time for old-fashioned details and elements to prevail due to some special local motive (Rentzhog, 1967).

Results

The main question in the project, concerning the local differentiation of colour schemes, was partly answered in the first part of the project, presented in the licentiate thesis. To make the result more concise and convincing, the study was concentrated on one main geographical area as already described. The results are accordingly presented in relation to the geographically differentiated local areas of Lister hundred. This seems most relevant since the region and the local circumstances have been most interesting and important for the process of studying and developing the results. Other relations such as differentiation of the colours due to time or economic resources are also important for the development of the colour schemes. Nevertheless the local areas are an appropriate mode to present the results from this study and also the important part of the enquiry.

Even if more building objects have been examined and more samples have been made, the results still represent indications of the reality from the time when the buildings were erected. It is doubtless impossible to declare any comprehensive truth about the complex of painting and colour schemes during the estimated period set up in the project. On the other hand the colour and colour schemes found are part of the history even if more seen as fractions with the possibility of representing a more complete statement. It is important to remember this when demonstrating the results related to the different local areas: these are clearly an undisputed delimitation at this point. It is also possible to generalise concerning the results, subject to the limitations which have been declared.

The project has mainly been concentrated in its second part on the areas in Jämshög parish. This followed from the results presented in the licentiate thesis. The sources that pointed out a possibly locally produced red pigment had to be investigated. The other two local areas within Lister hundred were chosen mainly because of the possibility of comparing them with the results from Jämshög parish. The two local areas close to Jämshög area have another context in both the prerequisites from the landscape and consequently the source of income as well as the building tradition. At first these two local areas were one and during the work appeared to have interesting differences. The brick buildings

around Mjällby seemed to be older then the wooden ones and of some interest. Therefore this local area was divided into one consisting of the wooden dwellings close to the sea and another of mainly brick-built farmhouses on the plain, *Listerlandet*, surrounding Mjällby. The buildings in the fishing villages were equal to the surrounding farmhouses in building technique and materials. Thus with this division into three local areas the examination and consequently the result became more complex.

Jämshög parish - the wooden farmhouses

The middle part of Lister hundred with the investigated local area Jämshög parish centring on Jämshög village shows a dominance of light red oil paint on the façades in the early part of the 19th century. The earliest evidence found is from the vicarage re-built in 1803. Though this evidence was just found in one sample from the corner of the building it is not totally reliable. The next object with remains of the light red oil paint, is *Malmbergska gården* built in 1828. This is the earliest sample confirming the colour that was found. At least six buildings prove to have the light red oil colour as the innermost layer of paint on their boarding. The boarding in all the examined building objects is considered to be original i.e. from the time when the buildings were erected or at most five years later, since it is supposed that the established practice was to let the wooden structure settle before the boarding was nailed onto it (Rentzhog, 1967). Today most of the building objects are painted yellow. This colour is found in remarkably few inner layers in the examination of this local area. Other colours seen are light blue, grey and white within a period from the late 19th century and approximately till the 1930s. The light red colour is the clearest and most convincing finding. It is also found on façades depicted in wall-painting in the farmhouse drawing-rooms. Other sources are the presentation the vicar Öller makes of the parish, dating from 1800, where he mentions a red ochre pigment from the village of Norra Röhult used for painting purposes (Öller, 1996 (1800)). In the text he mentions the red pigment and its use on the buildings. The colour red was also found on the wooden structure at one farm in the village of Norra Röhult when it was restored and on the well at Bommarstorp Farm. In these two cases the paint material is distemper. These red colours are a bit closer to orange than the contemporary red colour found on farm buildings from the 19th century in the area today.

The details painted white today, such as corners, cornices, windowsills and windows, are all considered to have been white for a rather long time. The inner layers at the corners are black and red in some samples (Appendix C:I). More outer layers at the corners show light brown and grey. The evidence is not as clear as that concerning the light red colour. Windows are difficult to find from the time the buildings were erected. The main entrances to the farmhouses are rather detailed work in wood and so are the framings. There are indications of polychrome-painted framing. At least four buildings with presumably the same builder and the same design concerning the door have the polychrome in common today (Kjellström, 2004). Today many of the main entrances have a rather unexpected polychrome painting of the main door in yellow and white. At one of the farmhouses, Nybygden, a second door similar to the main door, now situated at the entrance from the garden, was a red colour during the examination. This door was not then polychrome and had few layers of paint. Furthermore the colour had an antiquated appearance similar to the red of the well at Bommarstorp. The colour seemed similar, in hue, to the light red found in the inner layers on the façades, but more saturated. A similar red colour on a door was also found at Håkantorp, again on a door to the garden abandoned and not really in use today. It could be considered as painted with few layers and the original door from the time the building was constructed.

The results in this area are reliable considering the light red colour due to a relatively large number of buildings examined and in some cases several samples taken at the same building all together to increase the reliability. The doubtless most important evidence are the wall paintings at the farmhouses, showing, among other depicted objects, the main façade of the farmhouse from when it was erected. At some of the paintings the surrounding can also be of interest since other nearby façades are visualised in the painting. It was the wall-paintings which initially revealed the light red colour of the façades. Other paintings and the wall-paintings together with the samples point-out ten buildings with light red or red as the facade colour during the mid-19th century. All of these buildings but one are today painted yellow in different hues. In the period in between red and yellow different white colours do dominate the samples.

The door from the basement facing south had paintwork of antiquated appearance when the ocular investigation was carried out. The pigment could be the same as in the light red oil paint on the façade. Nybygden, Jämshög parish.

Since one research question concerned possible local production of a red ochre pigment, mentioned in the literature, more evidence was needed to prove the conclusions. Analysis of soil samples taken in the area was

already mentioned in the licentiate thesis. The SEM analyses were supposed to answer the questions concerning the local production of pigments. This was not carried out totally since it was not possible to get results that could definitely prove that the soil samples found in the area were the source of the pigments used in the paint to make the light red linseed oil paint. On the other hand the analyses did not rule out the pigments found in the soil.

Finally to use the ANT was an effort to interpret the use to paint and how colour schemes were developed. The theory could presumably create opportunities concerning how to understand the situation at the time. This could strengthen the understanding of the role paint and colour schemes had at the time it was established as a common material for the facade of the new building typologies'.

Mjällby, Ysane and Gammalstorp parish - the brick farmhouses at Listerlandet plain

At first the local area on the coast consisted of wooden farmhouses together with wooden fishermen's houses. It was when it was made clear that the brick-built farmhouses without plaster had been and in some cases were still painted on the bricks that they became interesting enough to be examined. The colour was red and made of lime wash. Some other buildings are plastered and today most often white. In at least two cases it is possible to find evidence for a red pigment in lime wash on the plastered façades. The farmhouses with visible brick façades as well as the plastered ones were erected in the late 18th century and first part of the 19th century. Both these types of buildings are interesting to compare with the group of light red painted wooden buildings in Jämshög parish.

It was Knut Persson, a Swedish MP, who prescribed the need for farmers segregate human habitations and livestock accommodation on their farms. This was not the situation when he put forward his opinions. He put forward a proposal for a farm designed in accordance with his opinion. This forest the pattern of the brick-built farms on the plain surrounding the village of Mjällby. Knut Persson's farm, Knutstorp, was built according to his ideas in 1775 (Gods och Gårdar, 1938). The farmhouse, built of brick, was separated by a fence from the two farm buildings built of rough granite. The farmhouse was plastered and is

today yellow with white details and, under the present owner (a descendant of Knut Persson), been light red as a original lime wash. In the dining room there are wall-paintings and ceiling paintings from between 1830-50 by the locally well-known painter Carl Strömberg. A nearby similar farmhouse, Hannetorp, also with interesting wall-paintings, has light red lime wash today but no records or samples can indicate the history of the colouring. Knut Persson can with notice of this be seen as a person with the same possibility to inspire and set a good example as Vicar Öller in Jämshög. At least four farmhouses in the area were erected during the same period as the plastered buildings described and have traces of red colour on their unplastered brick façades. This façade appearance has similarities to much earlier buildings from the urban areas with brick buildings, such as the nearby town of Sölvesborg. A red lime wash on the brick façade without any plaster was also found in the fishing villages on the east

Ryedal Manor depicted in 1910s, showing the same appearance as from the early 19th century, when the building was rebuilt and presumably given new colouring.

coast of Scania during the first part of this project (Kjellström, 2004). This was a common way of treating façades during the 17th and 18th centuries in the towns, as can still be seen on façades from that time in towns such as Ystad, Malmö and Copenhagen, representing a manner from the Renaissance and Baroque (Lange, 1996).

Ryedal Manor, Gammalstorp parish, north of Ysane parish not far from Mjällby, was built of brick and had red paint on the façades in the late 18th century; this is mentioned in archives from 1789 (Lister District Court A I b:2, 1789). It is not clear if it was on the bricks or on plaster. The manor had its own brickworks, with an annual production of 60,000 – 80,000 bricks, a small output by comparison with the big brickworks in Scania, some of which turned out a million bricks annually (Bjerning, 1984). The bricks were sold in the surrounding rural areas and to the two nearest and biggest towns; Karlshamn and Karlskrona (Lister District Court A I b: 2, 1789). One farmhouse in Jämshög parish was built during the late 18th century with bricks from the Ryedal brickworks (Öller, 1996 (1800)). The sort of brickworks at Ryedal was common during this period at the manors concentrating on local production (Bjerning, 1984). The prices of bricks increased during this period due to a big fire in Karlskrona, the principal town of the County (Öller 1996 (1800)). Another example of red paint is to be seen at Stensborg Farm, Ysane parish, also situated in the northern region of the Listerlandet plain. When the farmhouse was restored in 2008, the wooden structure of the building was found to e painted in red distemper. The colour was light red, similar to the red found on the inside of the well at Bommarstorp. Another farm house with wooden structure coated red is Nya Ryedal, Gammalstorp parish. The facade is plastered and lime washed yellow.

At a wall painting in Ryedal from the 19th century the façade is depicted in white and the façade has an Empire style façade with a second storey added as the contemporary building has. To the group of white façade at the northern part of the plain it is also possible to include Lönneborg built in 1820 and with a wall painting showing it with white façade. Other farmhouses with white lime wash are Knutsbygd, situated close to Mjällby parish church, Hovgården in Hörby village, at the restored and protected Hörby 6:2 farmhouse and the nearby Slättåkra farmhouse, both also situated in Hörby village. The Hörby 6:2 farmhouse was built in 1841 with a white lime-washed façade, yellow lime-washed frames

around the windows and green windows and main door, the colour scheme being reinstated after a colour investigation by the authorities.

Returning to the arguments concerning the red pigment at the Listerlandet plain, it is hard to tell whether the pigment used on the plain and the red pigment in Jämshög are the same. The wooden structure investigated at the farm houses of Stensborg and Nya Ryedal being red-distempered makes sampling difficult, because the paint material is more like a powder and not a coat of paint. The red colour at Knutstorp and Ryedal is just found in records. One source for the background of the red pigment points to brickworks. Hörby, the village south of Mjällby village but still in Mjällby parish, had a brickworks before 1857 (Land Survey Board Archive, Description of Mjällby Parish 1857). In interviews it has been mentioned that a possible location for the brickworks could be in front of Hovgården. Sources also point out a small brickworks on Knutsbygd Farm in Mjällby, near the church (Persson, 1941). This type of small brickworks was made for private use at the farm during the construction of a new farmhouse (Persson, 1941). Using crushed bricks as a red pigment was not unusual. Crushed bricks were also used in the mortar, to make it hydraulic. These brickworks have since long pulled down and the source is difficult to confirm. Nevertheless the red colour and pigment are different from the red pigment used later; the very common red distemper used on buildings all over Sweden. Furthermore these are two local areas with partly different traditions in building technique, using the same kind of colour but different paint materials, lime wash and linseed oil paint.

The group of farmhouses built of brick and with visible brick façades or plastered also includes a number having wooden structures with linseed oil-painted boarding. These buildings are in most cases from the second half of the 19th century, in other words younger than the previously described group and not examined in this project.

Mjällby parish – the coastal dwellings

The farmhouses in this local area have more in common with the fishermen's houses on the coast as regards the detailing of the façades and the colour schemes than with the farmhouses in the other local areas.

It seems that most of the façades was painted pale colours such as pale grey, pale green or pale yellow. No examples of light red were found on façades in this area, which further corroborates the affinity between fishermen's houses and farmhouses in this area.

Along the coast in the fishing villages the wooden buildings predominate. Buildings for all different purposes are wooden structures but the façade materials vary in character depending on the use of the buildings. Linseed oil paint and thereby colours are applied to the planed boarding of the dwellings and especially the more valuable ones. Outbuildings in the fishing villages were wood-framed and given rough weatherboarding coated with red distemper. The farms near the coast have farm buildings of rough granite stones and thus are not painted, but they do have lime-washed joints.

Crofters' holdings in the areas in between the fishing villages are of the same building typology as the fishermen's dwellings but in almost all cases painted with red distemper and with white detailing. Another colour scheme observed is the practice of painting the façade weatherboarding two different colours. This can be seen in photos from the late 19th and early 20th centuries (Schiöler, 1931). Two situations are distinguishable. One is that the gable's upper part, often separated from the lower part by a cornice, is a different colour. Another situation is for the lower part of the boarding near the ground to be differently coloured. The lower part of the boarding is then separated from the upper part by a cornice, in much the same way as with dwellings of the late 19th century. Some of the farm houses and as well fishermen's dwellings have more advanced polychrome colour schemes with three colours. Finally few buildings in the fishing village Hörvik show a local colour scheme with a divergent colour at certain parts of the architectural element flutings.

Summing up, the findings presented in the licentiate thesis are confirmed and new details and results have been revealed in the process. The red lime washes on the brick farmhouse façades in Mjällby parish both confirm and widen the results from Jämshög parish. Two separate local

An amazing colour scheme found in the local area of the Listerlandet plain, the coastal dwellings. The evidence comes mostly from photos taken in the late 19th and early 20th century. Contemporary colour schemes like this are uncommon in 19th century buildings. Photo: Johan Adolf Nilson, Blekinge museum archive.

areas with clear differences in building materials and technique but with the use of red in common are located. Probably there were two different pigments, both locally produced: the one in Mjällby most likely as a by-product from the brickyard. The traces of red lime wash on the façades are so scanty that samples are not readily obtainable for analysis. But if the brick used in the construction came from locally produced brickworks, as was customary at the time, then people would be unlikely to go to another source and parish for red pigment.

Concerning the local area dubbed “the coastal dwellings”, the main result is concentrated on deducing how the architectural details of the façades were painted in the fishing villages. No single dominant colour or unanimous development of colour schemes was identifiable on the planed weatherboarding in the fishing villages. The farmhouses and the crofter’s holding yielded more unequivocal results. Even so it is interesting to note the differentiation of the dwellings in the coastal local area in relation to the results for the farmhouses in the other two local areas, as the coastal dwellings in some cases had a much divided colour scheme with linseed oil-painted gables and a red distemper-coated

construction below the gable. This has not been observed at any of the dwellings in the other two local areas. The wooden farmhouses in coastal area have not been painted in red linseed oil, which could be attributed to a later construction date. The farmhouses in this area were erected mainly from the 1850s till 1870s. Light red oil paint or red lime wash went at this time from a common colour on the façade to a less admired one. As a consequence of this the wooden farmhouses built around the 1850s and later have other colour schemes, without any red. Yellow, green, white and grey and sometimes even light shades of blue were commonly. Details as corners have been white but are in inner layer or mid layers in some cases green or brown.

In the area of Jämshög parish the most significant finding concerns the light red and the presumed locally produced pigment. Another notable finding in this area is the polychrome painting of the main doors.

4. Conclusions

There is a tendency in each of the three local areas investigated pointing towards a specific setting in each local area concerning the way in which local colour schemes were created and developed. In the area of Jämshög the results point to a dominant use of one pigment in a paint material specific to the local area, light red linseed oil paint. Lilla Holje Manor together with the appearance of the vicarage built by Vicar J. J. Öller points towards a strong influence from these two persons, towards a new building typology and colour schemes. The samples from the façades achieve good results and reliability, especially in the area of Jämshög, where the façades today are in a pristine condition. The SEM analyses performed to find out if the pigment in the light red paint was locally produced did not really prove successful.

The brick façades in Mjällby parish, both plastered and with visible bricks, could not be sampled. It is hard to tell whether the plastered façades have been re-plastered or not and the age of the red lime wash on the brick façades is difficult to assess. Therefore the results concerning these building objects are concentrated on the idea of the façades being lime-washed red and if the pigment could be from the same place as the brick, i.e. locally produced. At least two brickworks are mentioned in the records of Mjällby parish and the time when they were in coincides with the construction of the brick-built farmhouses and the new church. The influences might come from the farmer and Member of Parliament Knut Persson.

The façades in the fishing villages are in many cases well-kept, most of them from the time when they were first weatherboarded, but the dating of their weatherboarding was attended by considerable difficulties. Late 19th century photos from the village of Hällevik show that in most cases the façades had bare timber structures which were either unpainted or coated with red distemper or tar. On the other hand many buildings in Hällevik today are still without linseed oil paint, unlike Torsö and

Hörvik, where nearly all the building objects have planed weatherboarding and have been linseed oil-painted. In either case the samples from the linseed oil-painted façades reveal many changes in colour schemes during the time the buildings have been weatherboarded. The variation seems to be more pronounced. Many more colours appear on the same building at different times compared with the farmhouses surrounding the fishing villages or the farmhouses in Jämshög parish. This variation of façade colours is not to be seen in the other local areas. It was presumed in the Licentiate thesis that the variation in colours in the fishing villages was connected with contacts and influences across the Baltic Sea and local shipping business. Most of the pigments were produced in Germany and shipped over to Sweden. This might explain how and why the fishing villages and especially those with shippers developed a colourful façade colour scheme (Kjellström, 2004).

The paint on some of the façades has aged for lack of maintenance. In these cases ocular investigation can already reveal the first evidence concerning the earlier colour schemes. Malmbergska Gården, Jämshög parish.

Summing up, all three local areas have a complex of sources and the conclusions have to be drawn from all the different sources combined. The field studies are insufficient basis for conclusions concerning the appearance of local colour schemes or concerning the ideas of the colour schemes reconstructed. Besides, the cause and development of a certain colour scheme has to be established with different sources in support of each other, as mentioned in the method chapter. Accordingly the following analyses will be based on the information from the other sources combined.

When a field study is made of historical objects, it develops certain problems concerning relations with reliability and the need for generalisations. This has already been mentioned in the methodology chapter. In some cases the difficulties could be as simple as the fact that the owner of a certain building could not be reached and consequently no field study took place. All the same it was possible to make archive studies of such an object. In relation to the number of building objects that were needed and searched for in this study, few went uninvestigated, but of course with unlimited resources even more sampling and studies would have been possible. Even so, the amount of information put together in this field study is sufficient for reliable analyses concerning the existence of locally differentiated colour schemes during the estimated time.

Analyses

Jämshög parish - the wooden farmhouses

One possible source of inspiration to the building typology and the light red colour in this area could have been the vicarage. The building was built in 1788 at the instance of Öller and it burnt down in 1803 and was rebuilt in 1804. The rebuilt vicarage is the building still in use today. Since Vicar Öller mentions the pigment in his description of the village, he could have been the one to introduce the new way of using the pigment in linseed oil-based paint. It has not been possible, however, to obtain evidence from the vicarage, the paint having been removed from the façade at some point in time. The samples from the vicarage façades are not reliable enough, even though taken from weatherboarding close to the roof at the gable where it could be presumed that remains of paint were to be found. Just one very small trace of the light red similar to the

other farmhouses in this local area has been found on the façade of the vicarage. This might not be reliable enough as evidence.

At the nearby dwelling *Malmbergska Handelsgården* a number of samples taken reveal a light red colour in the innermost layer of paint. This building was erected in 1828 and is the earliest example of the light red shown in the investigation. The façade can also be studied in a wall-painting in a farmhouse in Norra Röhult where the façades are depicted light red together with the vicarage and some barns coated with red distemper (Kjellström, 2004). The red colour of the barns is important as a reference to the colour of the other buildings as light red and not red, since otherwise it could be argued as the light red colour was a matter of aging of the wall painting. The typology of both the burnt-down and rebuilt vicarage is similar to that of the *Malmbergska Handelsgården*, which accordingly was the first dwelling in the area with a typology similar to that of the vicarage, followed by a great number of farmhouses in the 1840s and 50s. It is important to mention that the building typology in the area is not at all considered unique. On the contrary, this was a very distinct tendency in Sweden during the late 18th and early 19th centuries. But in the surrounding areas, especially to the north, the typology is wholly non-existent and to the west considerably fewer objects are to be found. Even if the building typology is possible to find in many parts of Sweden, the idea of a light red linseed oil paint dominating an area as small as a parish is not the interpretation most frequent today.

Another contribution to determining whether the red pigment used was locally produced comes from chemical analyses. Scanning electron microscope (SEM) analyses of samples found in the soil at Norra Röhult, the place mentioned in Öller's description of the parish, were compared with samples taken at farmhouses with red colour in the inner layer of the weatherboarding paintwork. SEM analyses cannot confirm that the specific red soil found in Norra Röhult and the pigment found in the linseed oil paint on the façades are the same, but the possibility of one and the same pigment being present on the façades and found in the soil at Norra Röhult cannot be discounted. Conjecturally speaking, the soil might have been used from the beginning and then perhaps another pigment used. The comparison of the samples establishes a concentration of metal compounds in the soil samples equalling that in the samples from the façades.

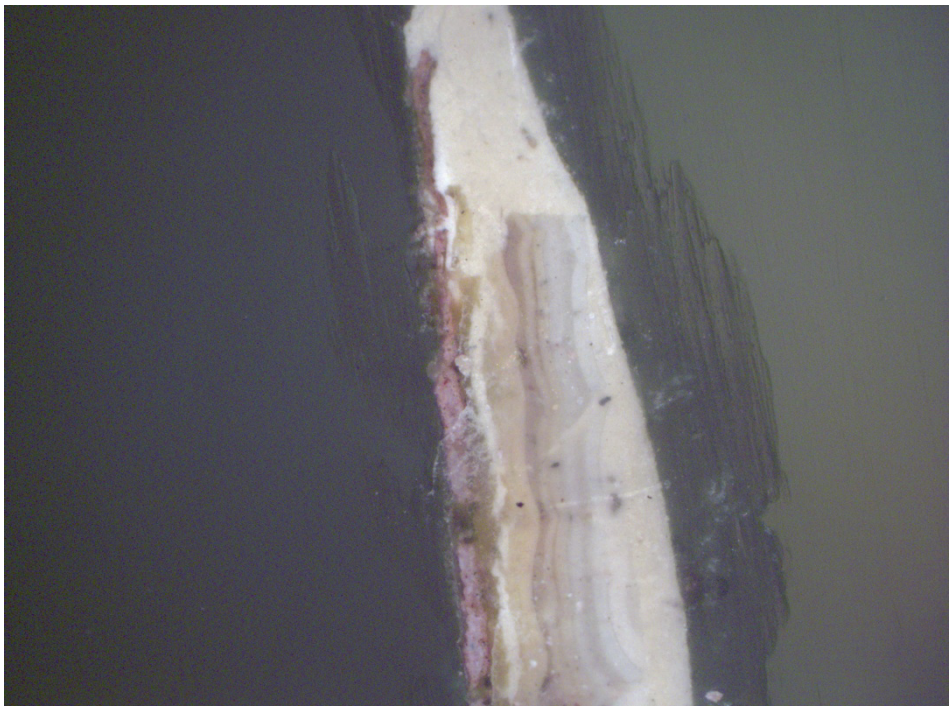
Altogether seven different samples from five farmhouses and the vicarage were analysed together with two soil samples from the areas at Norra Röhult. The farms are situated together in two groups. *Baggeboda*, *Malmbergska Handelsgården, Norra Röhult* and the vicarage are geographically in one group and the more northern group consists of six farms: *Boa*, *Bommarstorp, Erikstorp, Hemmingsmåla, Nybygden* and *Olsgården.* Most of the buildings have been considered, on the strength of at least two sources out of, paintings, ocular investigations and cross-sections, to have reliable layers of the light red colour as the innermost layer. In one sample from the vicarage at a corner a red paint was revealed with similarities to the other light red layers in the area. The other samples from the vicarage do not reveal any red pigment in the inner layer comparable to the other findings in the area, though a red layer is revealed further out. This is another type of pigment possibly from the 20th century. The vicarage was painted red during the 1940s in this other, stronger hue which can be corroborated by photos from the period. A wall-painting in a farm depicts the vicarage with red corners and window surroundings it is dated 1914. So eventually is the red layer at the corner from this period which could be considered as typical for the period of the 1910s. Other farmhouses with colours differing from white or grey at the corners are Boa and Bommarstorp (Appendix C:II, III).

Considering the innermost layer of light red the SEM analyses give us interesting information. Even in the redder layer in the sample at Erikstorp, lead and zinc was compounds in the red layer (Appendix B:IV). This point towards a paint layer with contents of white pigments. In this way it is possible to exclude the red distemper as paint in this layer. At Hemmingsmåla the impression of the innermost red layer is more light red but the compounds are similar to Erikstorp (Appendix B:V). The conclusion is that the impression of the colour of the red and light red are hard to judge as a consideration of the hue and saturation of the colour. It might be possible to argue that there are at least a couple of varieties of red.

Other layers of paint found in many samples apart from light red are three different white layers and finally yellow, the most common contemporary colour. The white layers could be defined through the SEM analyses as lead white innermost, followed by zinc oxide and titanium dioxide. Lead paint was not that common in the second half of

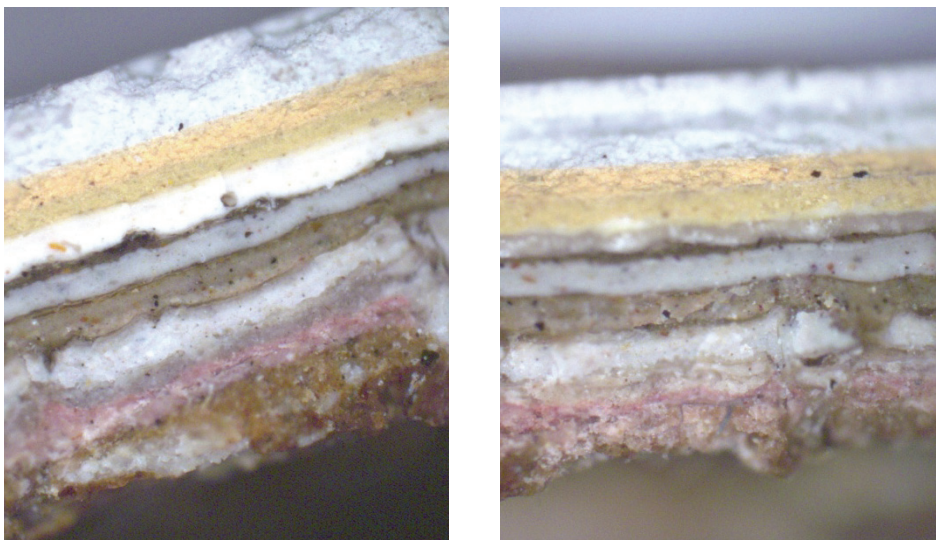
the 19th century (Johansson, 2001). The existence of lead white together with the other two white layers are good indicators of the age of the weatherboarding and consequently identifies the light red as the original layer of paint.

Archive studies have not disclosed a more advanced production of the red ochre pigment. No production is mentioned in the records at the Swedish National Board of Trade during the first years of the 19th century or in any of the descriptions from the Land Survey Board Archive from the mid-18th to the mid-19th century. Therefore it seems



Cross-section of the weatherboarding at "Malmbergska gården" revealing on the left in the picture the light red layer as the innermost. The following layers give evidence of white lead paint followed by white layers containing zinc oxide and, outermost, a layer of modified white. The chemical results were obtained from the SEM analyses and the layer containing lead indicates the age of the light red as the innermost layer. Probably, then, the light red dates from the time when the building was erected. The indication from the first ocular investigation is confirmed by the subsequent analyses, compare with figure showing close-up of the facade.

more plausible that red soil if used was washed, or possibly burnt, to get a cleaner and stronger hue and mixed with the linseed oil paint at each place where it was used. Mixing the pigment and the linseed oil at the place to be painted was standard practice at the time (Fredriksson, 1993; Johansson, 2001). So in this case we have professional painters in the countryside, though not craft-guild painters, using a local deposit of red ochre which might be refined to a red pigment at the farm either by the painter or someone at the farm. Another possibility considered was that of the pigment being a by-product from the ironworks nearby in Olofström, where Lilla Holje Manor was also situated. This has been examined, but from the records make no mention of any by-product from the ironworks. An additional possibility is the brickworks at Ryedal, but the records do not show this to have been a source of pigment from crushed brick. Finally the pigments could have been bought in Karlshamn, and a colour investigation of the mercantile homestead there could reveal whether light red was a colour used on house fronts in Karlshamn. The earlier mentioned mercantile homestead, *Skottsbergska gården* was examined and samples taken for cross sections. The results



Two samples taken at the fronts of Skottsbergska gården facing Drottninggatan in Karlshamn. The present grey colour at the top followed by another grey and then, 2 x yellow, grey, brown white and the red. It is as at some of the samples from Jämshög possible to discern to different red and the inner one more pale.

show in the innermost layer a light red colour similar to the one in Jämshög parish (Appendix C:XIV). Another mercantile homestead built in the early 19th century at the same street was investigated and the sample shows the same result, red as the innermost layer (Appendix C:XV). So it might be the Rococo facades of Karlshamn that inspired Vicar Öller whose college and friend Vicar Sticker was living just opposite Skottsbergska gården but in a plastered building.

The light red linseed oil paint was already revealed in the Licentiate thesis. In the following intensified work, more building objects and samples was carried out. This stage proves the relatively occurrence of the light red during the period between 1823 and 1856 as a façade colour newly built, weatherboarded farmhouses in Jämshög parish. The farmhouses within a short distance of the vicarage are more consistently painted light red. The appearance of the light red colour decreases with the distance from the vicarage. This situation could support the discussion about the red ochre mentioned by Öller and the way it was refined. A more advanced production might have spread the pigment in the area. The existence of the building typology is also strongly related to vicinity to the vicarage. In the northern part of the parish during this period the farmhouses were built in another manner: in two storeys and painted, not with linseed oil paint but with red distemper. This area has not been further examined since the red distemper paint cannot be coated with a layer of linseed oil paint: the linseed oil paint will not adhere to a surface coated with red distemper. It cannot have been painted in the same way as in the buildings examined closer to the vicarage. Therefore buildings with these façades can be eliminated as part of the same paint tradition as the one in the southern part of the parish around the village of Jämshög. The red distemper common in the northern part of the parish fades in time and for that reason is it not possible to take samples to find out the hue of red on the inner layer of the red distemper. Paint layers are unobtainable from a distempered façade, since the re-painting is done when the old coating has faded. Another distinction between red distemper and linseed oil paint is that the distemper was painted by a special red-painter wandering from farm to farm offering his skills (Fredriksson, 1993, Johansson, 2001). A painter would never apply red distemper and, for that reason, would not use lime washes either. Lime-washing was done by a plasterer (Fridell Anter and Wannfors, 1997).

The changes in painting taking place around Jämshög during the first part of the 19th century seem to have been closely bound up with the typology of building, which was the same as the vicarage. In the northern part of the parish, later separated from Jämshög parish, another paintwork tradition more akin to similar ones in Småland, north of Blekinge, was usual.

The vicarage and Vicar Öller himself certainly played an important inspirational part in the development of the new farmhouses, as regards both the typology of building and the colour scheme. During the 18th and 19th century the vicars in the rural areas of Sweden as in other parts of Europe distanced themselves from the farmers by, among other things, the erection of new vicarages in a new building typology (Bergström, 1991; Arvastson, 1977). So the position of Öller and his activity when he built a new vicarage is not unique but rather typical both of his position and of this period; though Öller's relation towards the parishioners through the Description he penned can be interpreted as benevolent and tutorial (Adolfsson, 1993).

The vicarage could be interpreted as the building built by the administrator coming from Stockholm and encountering tradition-bound parishioners accustomed to building with what they can get from their own village. On top of this, the vicar decided himself how the vicarage would be designed. The vicarage could possibly be construed as a symbol of the new efficient agriculture, especially since the campaign for agricultural improvement was set in train by the king and the vicar, the latter being one of many long arms of the national administration for realising these plans (Adolfsson, 1993). Together with the Lilla Holje mansion building at the ironworks and Ryedal Manor, Öller's vicarage was the main instance in the rural areas immediately surrounding Jämshög of anything approaching aristocratic or upper-class architecture.

When the farms were built to look like small country manors, the way of life in the building complexes was changed too. There was no place for cattle in a drawing-room with decorative wall paintings. The existence was of course not separated from the change in building typology but rather a conscious action. The bourgeois ideals together with the Land Reforms resulting in improved profit established both a new typology of building objects and a new structure of rooms and activities (Bergström,

1991). The supply of new materials such as planed boards, window glass and ironware was alluring and seems to have been *de rigeur* when building the new dwellings. At the same time there was a growth of semiprofessional builders and collective construction work decreased (Werne, 1980).

So far it seems that Öller and the policy aims of the authorities are possible explanations for the transformation of the rural area of Jämshög. But what happened at the farms situated in the villages and the surrounding rural landscape? Why did colour and paint gain such widespread currency? When these questions were put it was necessary to create opportunities for an even wider understanding of the situation at the farms in Jämshög during the specified time. An interpretation was necessary. The theory from Bruno Latour and others, actor-network theory (ANT), mentioned already in the method chapter, was tried out (Latour, 2005). This choice was made as an attempt to investigate paint and colours as activities important for the social progress.

The actor-network theory makes it possible to interpret the painting of the façades and the establishment of colour schemes at the farmhouses during the 19th century as a key action in the rural landscape. It might even be arguable that the action of painting was more innovative in the rural landscape than in the urban spaces simultaneously. Painting was an important part of other new architectural expressions shaping the modernity of the rural area during the 19th century (Kärrholm, 2004). The paint served to demonstrate the owner's affirmation of new and modern solutions at the farm, both with a key to the rooms and interior and exterior spaces and also as an interpretation of the modernity of production at the farm. It could also be claimed that the paint, painted material and colour schemes communicated differentiations of the spaces on the farm.

In what sences is it possible to use ANT about a painted wall? Since the paint itself is a new material at the farms as well as other new building materials new activities are established at the farm and in the rural areas. Painting an exterior involves paint, at least one brush, a person painting and a surface, for instance a planed board. All are actors. To make the act most rational a pattern, a method, is formulated. In this example it would be to the best to apply the paint with one of the brushes on the planed side of the board. No other way is possible. For instance the paint could

be applied with the handle of the brush or with the painter's hands, but the most convenient course is to follow the pattern. The pattern could be called a schedule, or is often termed an inscription, which in some cases affects the actors in the network. The colour, once applied, arouses expectations concerning the buildings. The planed board need paints for protection and the protective stuff is linseed oil. When the linseed oil alone is applied to the façade it turns darker. To develop the expression of the building, pigments are added as seen on other buildings, for instance the vicarage or the mercantile homestead in Karlshamn. When patterns for painting and colour schemes are followed, a new type of façade is developed in the rural landscape. The façades in the area would not have been that innovative if they had not been coated with a paint containing pigments.

A new network is established, a "paint-the-façade-network". This network was necessary, otherwise the expectations would not have been fulfilled. The inscription results in a new relation between the building and its surroundings, both on the farm and in the rural landscape.

There are also other new networks established during the early 19th century, containing new tools, new rooms and spaces and buildings; livestock and humans become parts of many new networks on the farm. Some networks, such as "construct-buildings networks", expand the number and variety of agents and also expand of the location of the activity beyond the boundaries of the village. These actors are nails, paint, carpenter, glazier etc. The work on the farm in the "production-network" is also expanding the number of actors and some of them affect the organisation of the farm to a great extent, for instance the new buildings and their division between clean and dirty spaces. For instance the visitors as actors enter the farm between the two flanked wings past the gate and walk in through the decorated main door. Finally this actor ends up in the wall-decorated big room. The whole activity and its actors are a network of an official sort, "the official network". The green gate, the whitewashed joints and the painted facade they are all part in the network. They act in a different network from the actors "production-network" entering from the back entrance at the gable of the building, related to the dirty activities and kitchen. . In this area tools and workers do act together with vegetables and other goods for the kitchen. One activity is manifested in colour and symmetric façades and creates one

In addition to paint, the new building materials coming to be more commonly used for farmhouses during the 19th century in Jämshög parish were glass, nails and boarding produced not only in the village. Additionally, the preferences concerning boarding and the shape of the pillar of the jointed construction were a transformation of preferences from non-local areas. They were all part of new networks at the farms with actors in areas far from the farm itself. Details from St Rösiö, Jämshög parish.

network, while the actors in the other network are part of activities and the spaces made more by the need to move easily when doing the work, the dirty activities. The back entrance is situated close to one of the flanking wings and its functions and also to the other functionally specialised buildings. Different activities take place separately from each other in relation to the manor building. These two networks do point out the order of the spaces at the farm in relation to the activities and the paint and colours are part of it.

The animals moved to the other side of the fence are excluded from the network taking place on the other side. This is totally different from the networks when animals were nearly all over the place. The buildings were few on each farm and different networks took place in the same room. In the evenings during winter the work of repairing tools, knitting, being together and the cattle were all actors in the same space. The actors

and the networks were fewer and acting close together, there was in this situation no use for showing differentiations.

So the new division of the farm is made even clearer through the way the paint materials and colour schemes are used. It is no coincident that the facades were painted. It was not just a matter of economy or a good supply of raw-materials. The farmhouse is unlike any farm buildings existing earlier, lightning up the rural landscape. The bright oil-colour, the polychrome doorway and the fence with the green gate make a unit together with the big whitewashed joints of the stone buildings. The modernity, described within new territories on the farms, is announced to the surroundings. Especially the spaces in front of the farmhouse can be

The picture shows a detail of a wall-painting. The farm is shown as it was in 1856 with its new buildings and activities such as keeping sheep. The bright shining manor and white lime-washed jointed stone annexes brighten up the landscape and create a distance. Centred in front of the main entrance to the light red farmhouse, a green-painted gate marks the aperture between humans and animals. A second gate, closest to the viewer, keeps the surrounding landscape apart from the farm Norra Röhult, Jämshög parish.

described as territorial classifications made for consciously shaping the situation on the farms. This must be explained in relation to the regulation and control exercised by the authorities. The construction of the farms using new typology is part of the creation of a new identity – a "we and them" (Hacking, 1985).

The whole new interior and exterior organisation is mediated from a distance by the use of colours. The colour indicates the new furnishing inside and the new life within the farm and its production. Also when you get closer, the paint materials divide the buildings and make the differentiation in building materials clearer. Red distemper is applied to rough boarding, which indicates the function of a working building and the bright and light-coloured linseed oil is applied to the planed boarding of the farmhouse building together with white painted architectural elements. There are also examples from other areas examined earlier in the project where the paint materials are differentiated in the same building between the façade facing the entrance and the façade facing the garden (Kjellström, 2004). In these cases the more simple material, red distemper, is used on the garden side and the more costly linseed-oil is used facing the entrance and courtyard where people arrive on social and official occasions. The colours and paints in their different appearance are very clearly defined actors in the "representative network".

Mjällby, Ysane and Gammalstorp parishes - the farmhouses on the Listerlandet plain

The results demonstrate a similarity to Jämshög parish partly concerning the dominating façade colour during the early 19th century, the presumed local production and the circumstances behind the development of the main façade colour and new building typology. There are strong connections to a prominent figure, in this case the MP Knut Persson, together with a local production of bricks and presumably of red pigment made from crushed bricks which was obtainable in areas with brickworks and brick production. The situation seem to be divided into one dominant colour during the late 18th century, red lime wash on the plastered buildings and on those with visible bricks. Later on, in the beginning of the 19th century, the farmhouses, now invariably plastered, are lime-washed white. Since white lime wash is the colour of the paint material itself, it can be considered as the colour obtained by default. The only

colouring of the lime wash on the façades with visible bricks is red and on the plastered building red is the only pigment added to the lime wash, and as already mentioned this applies to the buildings erected in the 18th century and the first two decades of the 19th.

The red lime wash on the brick façade was mentioned in a description of the nearest manor house, Ryedal in Gammalstorp parish, north of Mjällby. In the description from the 2nd of May in 1789 it is said that the manor house built of brick in 1772 was "coated with red at the top" and had a white cornice (Lister District Court LLA A I b:2). The brickworks at Ryedal manor were of course the supplier.

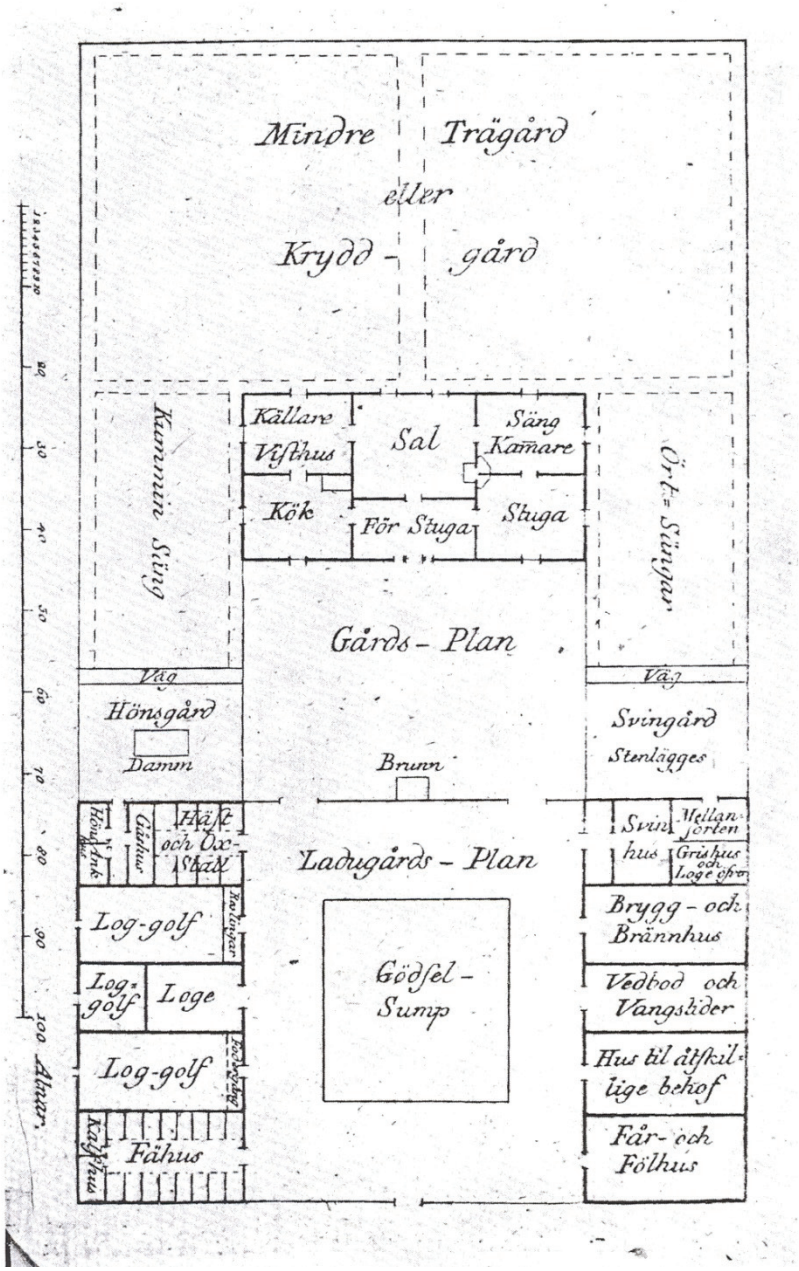
The above mentioned change at Ryedal during the 1820s to a white lime wash instead of red, could possibly be construed as a change from the light red inspired by the 18th century colour schemes or even earlier to white following the ideals of the Empire style which in Sweden often meant white plastered exteriors. Many buildings with visible half-timbered structures in the towns in the County of Scania, south of Blekinge, developed in this direction during the early 19th century, when the façades of these buildings were plastered over and lime-washed.

The fact that plastered significant buildings in Mjällby and Ysane parishes constructed 1820-1850 were lime-washed white at the same time as a group of newly constructed farmhouses in Jämshög from 1820-1860 were painted light red is of great interest for the study. Could it be explained as follows? Two different sources of inspiration – the vicarage in Jämshög and possible the manor at Lilla Holje – led to two different local colour schemes, the Jämshög vicarage in a way representing something old-fashioned – the 18th century colour scheme and building typology – and Ryedal manor, with its new attached storey and colour scheme, influenced by the now supremely fashionable Empire style.

The time building years of the farmhouses in Hörby and Mjällby villages tally closely with the time when the brickworks mentioned in the records were in use. Most of these buildings were erected from the 1790s to the 1850s. The new church in Mjällby was also built at this time, 1788-92, which of course demanded a lot of building materials, among them bricks. This further confirms the existence of local brickworks.

When it was time for the great redistribution of land holdings, the farmhouses in this local area were built of brick instead of two previously dominant techniques, namely half-timbered constructions wattle-and-daub structures or *skiftesverk* (bole-house) structures, which were less prodigal of timber than corner-joined structures using horizontal timbers.. Knut Persson's idea of building the farmhouse separate from the animals, almost as in Jämshög, seems to have had a big influence on the farmers since after this stipulation all farms came to be built in this way. It could then be argued that Knut Persson was also influential in Jämshög parish. On the other hand he was not mentioned in Öller's Description, which might be a possible counter-argument. His own farmhouse is dated 1789. Mjällby parish was part of another building technique tradition than Jämshög, with an absence of wood and access to clay. Therefore it seems obvious that the brickworks served the needs of the farmers and the new church that was built. It was also common to use the crushed brick by-product in the plaster to make it hydraulic and also to use crushed bricks to impart a red ochre-like colour to the lime wash. The notion of distribution to other areas does not seem relevant.

In the parishes of Ysane and Gammalstorp, some kilometres closer to Jämshög and with a predominance of wooden farmhouses, colour schemes in yellow with white details have been revealed in the boarded façades. It is also possible in this area to find wooden structures coated with light red distemper. At Stensborg Farm the wooden structure was revealed during a renovation and the colour exposed was a light red, not of the kind then being used on many barns but another light red more similar in hue to the red pigment in Norra Röhult, Jämshög. The sample from the board shows in cross section at the innermost layer a strong hue of red (Appendix C:XXII). In another building object, Nya Ryedal, the wooden structure is plastered and has a yellow lime wash and white corners. The underlying structure was coated with red distemper. Finally the farmhouse at Jockarp reveals remains of yellow at innermost layer of paint at the board (Appendix A:XVI). The results from the wooden farmhouses in Ysane parish show on the boarding examples of yellow with white detailing as well as grey and green with white detailing. There are also instances of green detailing. This might have been a colour scheme at the turn of the19th century together with a lighter green hue for the boarding. This was a colour scheme popular in the local area in



Knut Persson's plan for farms as described in his work "Åkerbrukskatekes – eller hjelpreda för landtmän angående åker och äng". The plan is similar to the changes developed in Jämshög parish with a clear separation between humans at one side and animal and crops at the other.

and around 1900 (Kjellström, 2004). In this local area no light red has been revealed in the inner layers of paint on the boarded façades with the exception of Stensborg already mentioned. This indicates a clear differentiation from Jämshög parish in the early 19th century, which can be partly explained by the lack of buildings from this time. The timber building objects examined in Ysane parish were erected in the 1860s and later on. On the other hand the fact that the farmhouses was erected later than in Jämshög is also part of the differentiation between the parishes in the area.

Earlier building objects such as Ryedal in the northern part of the local area, erected in 1789, show in an early phase the light red colour which could as arguably be the red found on the board and wooden structure at

In this painting the new organisation of the farms on the plain of Lister hundred is evident. The separation towards the landscape was in this area clear from the earlier building traditions, though the difference between the differentiated buildings of the farm is made clear by both choice of material and physical distance. The red brick façade lime-washed red together with a lime-washed foundation, corners and window surrounds is clearly depicted. Notice the absence of gate and of separation between the farmhouse and the outbuildings but the red painted gate towards the surroundings. Hörby 8:1, Mjällby parish.

Stensborg erected in 1815. This could be correlated with red lime wash on the brick façades of building objects erected in the late 18th century in the southern part of the local area and formulate a colour scheme from the late 18th – early 19th centuries in light red both on façades with visible bricks, weatherboarded and plastered. This was followed by a white lime wash in the mid-19th century, inspired by the Empire Style. Finally buildings erected right after the mid-19th century had a yellow and white colour scheme later on changed into a green colour scheme with darker green for the surrounds and corners.

Mjällby parish - the coastal dwellings

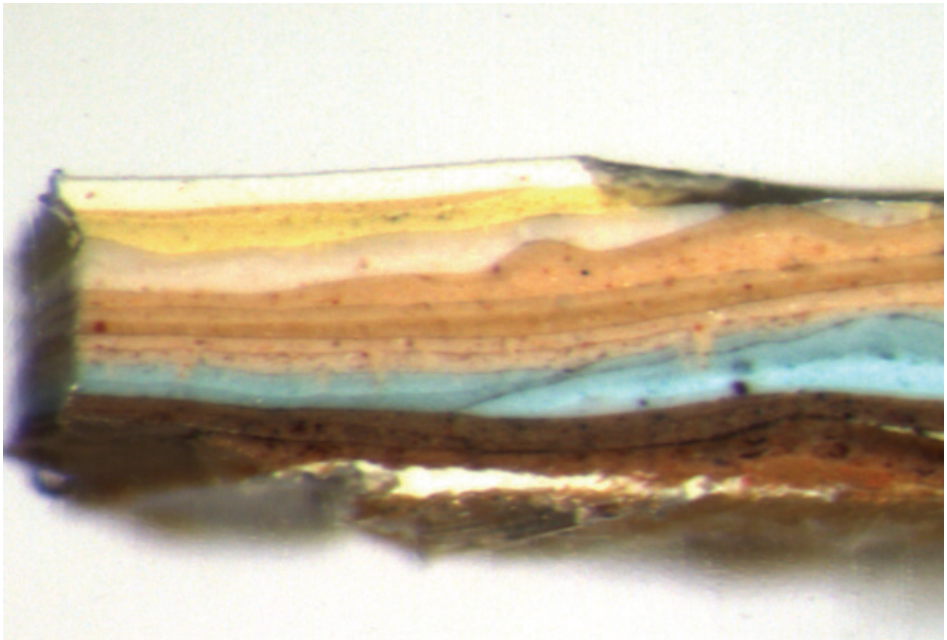
The farmhouses closer to the sea have a wooden structure with linseed oil-painted planed boarding. The typology of the farmhouses is differentiated from the typology in Jämshög most obviously through the absence of the mansard roof. Even the architectural ornaments such as the main doors, window and door surroundings and the shape of the cornice have another appearance. The organisation of the farm with two supporting rough granite outbuildings is similar to the situation in the other two local areas.

The samples from the façades show no evidence of the light red at all. Most of the farmhouses were built later than those in Jämshög, in the 1860s and 1870s. The samples show evidence of a light green colour for the boarding which might have been combined with a stronger hue of green at the surrounding, windows and corners. Earlier than the green described is a yellow colour with white details found at two of the examined farmhouses. These farms were, as already mentioned, erected in the second half of the 19th century and there seems to be a change and dissociation from the ideal of the late 18th and early 19th centuries seen in Jämshög and closer to Mjällby village and new impressions arriving after the 1850s. These impressions appear simultaneously with a change of the architecture as well, to the eclectic and later on Swiss style, often with stronger hues and often with the boarding and the architectural elements the same colour but with a stronger hue for the elements. Another possible argument is that actually the fishing villages with contacts around the Baltic Sea received influences which were spread this way to the nearby inland. Though this assumption is not valid for the

colour schemes inland, the colour schemes from the fishing villages seem to be unique in the local area, which will be explained as follows.

The investigations made in the coastal villages dominated by small dwellings close together at the sea were inconclusive. Even the issue of whether they were panelled at once when newly erected or later is difficult to answer. But it is obvious that many different bright colours have been used in the same village. The coastal villages differ in this respect from the farmhouses, which in the local areas investigated inland seem to have a more limited range of colours at a time on the different farms. On the coast there does not appear to have been any local production of pigments but rather many influences from contacts around the Baltic Sea and Bornholm. Both the contacts acquired from around the sea and also the necessity of painting the ships are possible sources of inspiration for the occurrence of bright colours (Kjellström, 2004).

In this area the dwellings have had many different colours on the layers in the middle of the cross-sections from the boarding. Many building objects seem to have had a reddish brown as their innermost colour (Appendix C). It is also clear that the colours of the dwellings in the fishing villages have changed more than those of the farmhouses from the inner layer to the outer ones. The variation of colours on the fishermen's dwelling façades in relation to the farmhouses can be the consequence of shorter continuity in ownership. Many of the farms in Jämshög parish and also the farms in Mjällby and Ysane parish have been in the same family for generations. Today many of the owners at these farms are well versed in their history and to a certain degree in their colour schemes. In some cases the development of colour schemes in Jämshög can be limited to a stronger hue of yellow on the façade. The tradition or the idea of the farmhouse as an object to manage till the next generation can be a reason why these buildings have stood so unchanged and well-kept to the present day (Söderström, 2009). The fishermen's dwellings have certainly been re-painted more often when it was economically feasible and possibly when a new owner moved in. It is also apparent from photographs that partial changes were not uncommon, such as weatherboarding one façade or even just one gable and leaving the rest of the façade bare. The fishermen's dwellings are not such a gem or flagship of the family as the farmhouses. Therefore the dwellings examined in the fishing villages could be seen as remains of a rather



Cross-section representative of the dwellings in Östra Torsö, the variety of colours with the dark brown innermost.

divided colour tradition, in contrast to the situation at the farmhouses erected till the 1860's, where the colour schemes have more similarities in the local areas during different periods which can be revealed by and read off from the samples taken.

Also pertinent here is the fact that the number of well-kept and relevant building objects in the fishing villages varies. In Östra Torsö the village is dominated by well-kept buildings showing a divided colour scheme for the village, though the details are painted the same way during different periods, white with few exceptions, often a moulding. In Hörvik the amount of well-kept building objects are few but interesting and showing local differentiations towards the situation in for instance Östra Torsö within a distance of ten kilometres, which I will come back to.

It might also be arguable that the colour schemes of the fishermen's dwellings were chosen with more than aesthetical considerations in mind. In some fishermen's dwellings investigated in the first part of the project, old fishermen maintained that the colour of the windows and doors was the same as they had on the rail of the boats (Kjellström, 2004). The

colour of the rail on the boats was also a way of distinguishing between the crews of the different fishing boats. This type of utterance together with the more accidental choice of colour could be explained by a more relaxed or less strict relation to buildings as a whole. When there was money to spare, the façades could first partly be boarded and painted with linseed oil paint.

Another phenomenon observed is that of painting the façade two disparate colours. This is more a matter of painting a gable a different colour or the lower part of the panel below the moulding. The purpose could have been to make it possible to change this lower part, since it deteriorates faster than the rest of the boarding. The upper part is then nailed horizontally way and the lower part vertically. So the lower boarding consists of short pieces of wood which are easily replaceable. As regards the first example of the gable, it was common for the gable's upper part at first to have a cladding of tarred paper and no weatherboarding. Possibly it might be given a change of colour when, later on, it was boarded and painted, later than the rest of the building. Photos from the second half of the 19th and early 20th century reveal a situation where the use of colours and paint and also the application of boarding to a building was something that could be done over a number of years, probably depending, as already mentioned, on financial circumstances. The custom of having boarding both horizontal and vertical could be an interpretation of the ornamented and enriched façades seen in Swiss-style buildings . Swiss style was rather widespread in the two closest towns, Karlshamn and Sölvesborg, but especially in Ronneby, which had a detached health resort spa with imposing buildings in this style.

There are also some specific ways of painting the architectural details at corners and window surrounds. For instance, the fluting at the corner is painted a different colour from the rest of the corner. This is seen in contemporary paintings of 19th century buildings in the fishing village of Hörvik. It is of course difficult to tell how frequent this local manner of emphasising this specific architectural ornament can have been. It appears in photos from the early 20th century and it can be an interpretation of the Swiss-style of painting details like this. In the Licentiate thesis other Swiss-style interpretations were presented from the fishing village of Östra Torsö. In that case it was different shades of

These two dwellings in Hörvik fishing village show the same details of how to paint the corner flutings a different colour (green arrow). Photos from the 1920s (left) and from 1904 (right). The building to the left has similarities of colour scheme to fishermen's dwellings in Torsö and to the Swiss-style villas in near-by health-resort Ronneby. The building to the right still has its flutings painted a different colour but matching the colour of the weatherboarding. Hörvik, Mjällby parish. Photo to the left: Severin Schiöler, © Nordiska museet. Photo to the right: Unknown. Private collection.

green used together with a red moulding. Nevertheless it is of interest to note the tendency for these interpretations of the painting of architectural elements to be found along the coast. The farmhouses both near the coast and in Jämshög parish enriched with similar details are closer to the established ideals of how to paint a building with architectural ornaments. This is probably related to the fact that the ornaments on the dwellings in the fishing villages were put up and painted in the late 19th century or even later while the ornaments in Jämshög were both put up and painted during another period, the mid-19th century. Again, economic conditions are presumably of importance for understanding the circumstances behind the differences appearing in the study between the different local areas.

This could be an answer to the differences between the farmhouses on the farms with a wider economic base than a fisherman's. Furthermore there is a difference between the fishing villages in the area as well. The biggest one, Hällevik, is the one with most buildings in red distemper especially close to the sea, as shown at photos from the late 19th century. As stated earlier, these building objects were not painted with oil paint and were only coloured red. Possibly they may have been tarred at the wooden structure before being weatherboarded.

It was also common at small crofts situated between the villages to use red distemper or not paint at all. The practice of painting the boarding with red distemper must be interpreted as a more simple way of protecting the façade. Linseed oil painting was a possible way of getting a more colourful façade and red distemper on the more wealthy farms was a paint material for the farm buildings, not for a farmhouse and absolutely not for a manor house during the 19th century. Therefore it is of interest that the use of red distemper was more frequent in some of the fishing villages than others. Dwellings in villages such as Östra Torsö and Hörvik show many different colours in the inner layers of paint on the façade weatherboarding but very few examples of boarding with red distemper.

Crofters' holdings surrounding the fishing villages are in all cases coated with red distemper and white details. In some of the fishing villages with similar typology of dwellings, this appearance is vaguely represented. However, in the inland surrounding the fishing villages they predominate among the small dwellings. Siretorp, Mjällby parish.

The most distinct inspiration might be the dwellings built by the captains in certain fishing villages (Kjellström, 2004). These dwellings were often a bit bigger, with architectural ornaments and details and brightly coloured. It is possible to compare this development with the situation in Jämshög and Mjällby: a new building typology introduced with the difference that the builder was a captain in the fishing village and the vicar or the Member of the Swedish Parliament in Jämshög and Mjällby.

It is not possible to find clear evidences of how the development of the bright and differentiated colour schemes in the fishing villages was established or took place. But it is interesting to see that they do differ in colour schemes from the farmhouses, partly close to the villages, and the farmhouses inland in Jämshög. This can be related to the crofters' holdings surrounding the fishing villages that in all cases observed have been painted with red distemper and white details, a more modest choice in spite of these dwellings also being decorated with architectural elements. In a way this is a stricter attitude towards painting and colour schemes, enjoined by modest economical circumstances.

Summing up, it is clear that the colour light red was used on the wooden boarded façades of the farmhouses in Jämshög. This is a local usage and not possible to find in at any contemporary colour scheme in the local area. In Jämshög it is not impossible that the pigment used for the light red paint was taken from the local area in Norra Röhult, though it has not been possible to eliminate other sources for the pigment. Nevertheless it is without any doubt clear that the yellow colour; the most common contemporary colour, did not dominate the local area of Jämshög when the farms were erected; if anything it was an exception. The farmhouses with façades of visible brick or plastered in Mjällby, Ysane and Gammalstorp parishes also show a light red colour on the façades, both bare brick and plastered, though not so dominant as in Jämshög. It seems to have been a colour scheme common in the late 18th and early 19th century but in the mid-19th century neglected in favour of white lime wash for the plastered farmhouses. The wooden farmhouses in Mjällby, Ysane and Gammalstorp parishes, *Listerlandet*, were painted in light yellow, grey or green colour schemes with white details and in some cases later in a colour scheme with the same colour for the details and the boarding, but with the details a lighter hue. The light red is not seen at all in these areas. Finally the fishing villages had a great variety of colours during the same period, the second half of the 19th century. It is very

likely that the colours and the relation to painted surfaces were more relaxed in the fishing villages, creating very local interpretations seen in the colour schemes. The farmhouses in this area have similarities to the colour schemes of the wooden farmhouses in Ysane and Gammalstorp parishes.

The light red colour in Jämshög of the wooden façades is of course not unique in Sweden, though no one would suggest or consider it as the dominant colour when these farmhouses were erected. This is the most significant and important conclusion. The surrounding geographical areas and the local areas investigated in this project further prove the local character of the results and conclusions from Jämshög. This does not rule out the possibility of finding similar geographical areas in other parts of Sweden, but rather the opposite: part of the significance of the conclusions is that the findings of local colour schemes prove the possibility of finding other, similar or different colour schemes in groups of building objects in other geographical areas or from other periods.

Reconstructions of colour schemes

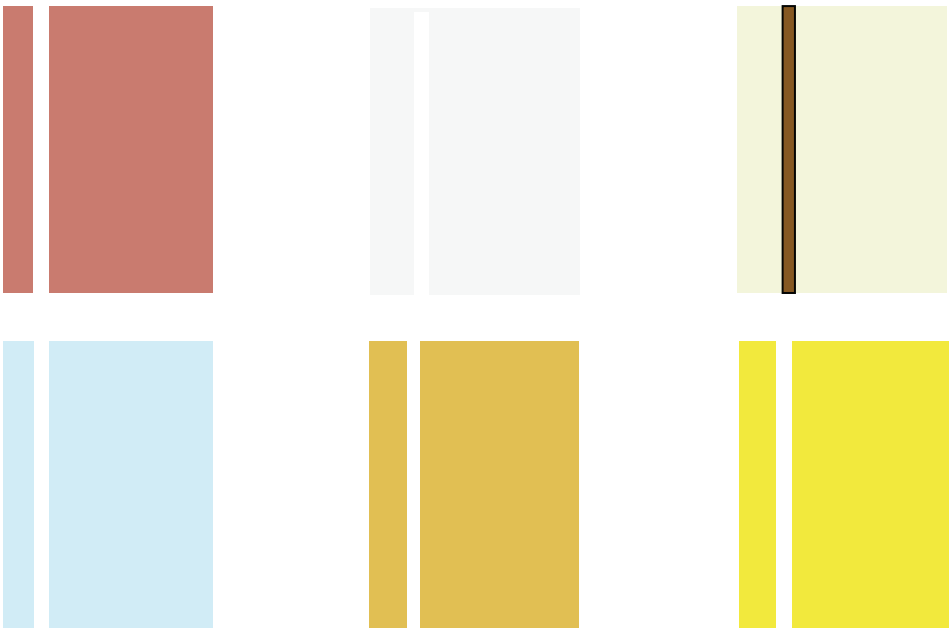
The results rendered possible by findings from samples and ocular investigations could be described through a reconstruction of the colour schemes found at the buildings. This would contain illustrative and pedagogical materials. A colour reconstruction of the façades from the investigations comes close in appearance to the way the results are seen in cross-sections and ocular investigations. The advantages appear in the way the reconstructed façade can be recognised and furthermore the comparison between different periods' colour schemes and the local areas' differentiated colour schemes.

The reconstruction of colours and colour schemes has its difficulties. Demonstrating one conceivable colour from a certain period does not tell us that all buildings were painted this way or even that this hue was the only one from the colour and pigment. It can also be difficult to ascertain which pigment was used and to find a similar pigment from the contemporary production, especially since the colours were made in situ at the building site. Small differences between buildings painted with the same pigments were part of the situation. Nevertheless a reconstruction

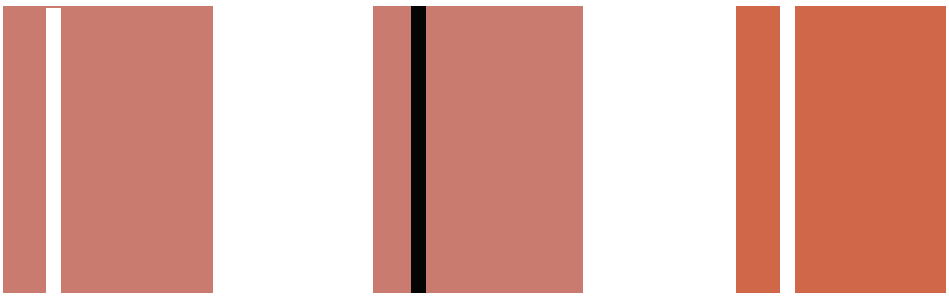
has convincing benefits and contributes in a good way to make the results more accessible.

The reconstructions have been thought of in two dimensions. The first is a matter of how to show a building's exterior colour scheme and the development from the time the building is erected until the contemporary colour scheme. Another dimension is the possible hue of the colour from a certain pigment in use during a specific period. The red in Jämshög has different hues which can be observed at the microscopic analyses from the cross-section and at the façades small parts made visible from the flaking paint and detailed ocular investigation. This is difficult to separate from the aging of the paint and dirt, both of which can give the remains of the paint a colour not comparable to the one it had when newly applied. At least the components seen in the samples from the SEM analyses of the paint can form a conception of the presumed tints of the colour.

The most desirable and significant way to do a reconstruction is to do it at one of the building objects, re-painting in situ. This could be an aim for future similar projects and of course a visualised manifestation of the results obvious for anyone passing the building as the painted buildings had their function when they first were painted in the early 19th century.



The blocks above show the colour schemes, the colour of the rectangle is the colour of the board and the "pillar" is the corner at the building. At the top to the left is an interpretation of the colour schemes when the building was erected. Then follows in the middle the colour scheme during the late 19th century followed by the situation approximately at the turn of the century, with typical dark brown corners and a light brown (beige) board. At the bottom to the left is a colour scheme dating around 1910s to 1920s which in some cases instead of light blue have been light grey. Finally a rather typical development of the yellow the last fifty years to stronger hues and saturations. All reconstruction represents Jämshög parish.



Above are some different possibilities of the combination of black corners and the red colours from the innermost layers at the facades in Jämshög parish.

These four blocks are from planed board timber farm houses at Listerlandet plain. Both in the coastal area and in the more northern area in Gammalstorp and Ysane parish but not representing the plastered brick buildings. To the left yellow, presumably golden ochre found even at one farmhouse with plastered timber construction. The second green colour scheme has been revealed at a couple of farm houses. Thirdly a grey still occurring in the area. Finally a colour scheme very common today which still increases.

These four colour schemes is an effort to find out of the development at the fishing villages from the last part of the 19th century till today. First of all it has to be stated that it has been hard to get the information concerning what time the facades were covered with board. Anyhow the most common first layer at the board seems to be a reddish brown. At the turn of the century light brown or even more often green appeared with similarities to the farmhouses in the surrounding, though with more in common with what was possible to find at the Swiss-style villas and cottages. Darker hues at architectural elements and a moulding or some shapes in a divergent colour as red. In the early 20th century white or barely broken white was rather common. Regarding the architectural elements, it has changed a lot whether they have been in the same colour as the board or as the corners. Today they are predominantly white together with yellow board and often English red windows and door.

Final Conclusions.

The possibility of identifying and describing local differentiations concerning colour schemes at façades from the past is demonstrated. The method of finding groups of building objects with similarities of building typology has made it possible to generalise in the local areas. To find out of which pigments that was used in different situations was problematic. The different sources for local production have been investigated and SEM analyses of samples from the soil do not totally contradict a local production. Brickworks which are absent today and forgotten do indicate a situation and production of a local character which has to be taken as part of the local society at the time. This has to be taken as part of common and general situation and therefore point towards other areas and regions were as well forgotten and absent production can be found through literature and records.

Some of the results from the revealed layers show similarities with contemporary colour schemes of buildings from the 19th century, but in rather few building objects in relation to the group of the same typology. The most evident conclusion is that colour schemes revealed during this project are forgotten and not at all visible in the local areas. They might be possible to find in other areas or regions but in the investigated local areas these colour schemes are lost. These have to be seen as the most interesting results and conclusion within the project. Especially the extent of the local colour schemes, within rather small distances the colour schemes is changed.

When the local colour schemes were indicated it was of great interest to try to understand and reconstruct the process whereby the colour schemes were first established in the local areas and to ascertain whether the pigment in use during the period was also locally produced. This approach yielded results pointing to certain activities as important and significant inspiration sources for the inhabitants in the areas investigated. To accomplish this part of the project it was necessary to

use methods from other research fields. Further archive and literature studies and together with ANT were done which led to a possible interpretation of the situation at the time when the revealed colour schemes were established.

Since the colour schemes found in the group of building objects could be part of a wider interpretation and understanding of the history of the local areas, the colour investigation not only describes the buildings' appearance during a certain period but also explains a part of the situation in the area and how certain persons and activities were necessary in order for a new situation to take root.

5. Applications of the results

The project shows the possibilities of revealing and understanding colour schemes of groups of buildings that in contemporary colour schemes of façades of buildings erected for instance during the 19th century are forgotten and no longer in use. Generalised suggestions made today concerning how to paint façades when restoring them can be totally misleading. In all sorts of spaces, rural as well as urban, local differences concerning the façade colour schemes need to be looked for if a space is meant to show the unified historical values of the architecture. Lots of values concerning socioeconomic, spatial, architectural and geographical history can be further elucidated when groups of building objects are examined.

Since the need to search for knowledge about the traditional building materials is part of the restoration profession, the same should be done to reach further knowledge about the colour schemes. It might be the researchers' aim to establish the method and purpose, hence the practitioners have to focus on the need to use colour investigation as a necessary tool to fit all pieces together in each restoration. In this case the group of building objects has been a focal point, but colour investigations are important in each case and for each restoration undertaken.

Every building object presumed or known to be worth restoring should be part of a colour and paint investigation to re-establish and reconstruct the exterior colour schemes from the past. It would strengthen the characteristics of the local areas at all kinds of levels. To just leave the colour schemes as something thought of as general and not as important as the paint, stone works, wooden structure or understanding and reconstruction of the spaces in a building object is a fatal mistake. Many are the buildings seen with correct restorations done but generalised

colour schemes. No investigation concerning the exterior colours has been made at all. Since this project presents opportunities of fairly evident results the next step should be to create further frameworks concerning colour investigations in the field of restoration and a database to establish local facts about colour schemes.

The colour and paint investigations are important for the single object and the visualisation of the architectural grammar. But even more important and challenging is to find out about local colour schemes strengthening the local character in an area. The results can be made accessible both to professionals and to private property owners, which offers a valuable application of the results.

Today various so-called reconstructions of colour schemes are readily obtainable in paint shops or even at local museums, but they are insufficiently related to the local circumstances in each area and period.

The presuppositions of this project, focusing on groups of dwellings in the rural area, are several: colour research of vernacular architecture is a neglected field of research; the character of the evidence is suitable in the sense that rural houses in many villages or districts are contemporaneous; and thirdly, there is the attraction of being able to strengthen the character of local communities by producing knowledge of local colour schemes of 19th century buildings. In vernacular architecture, especially in urban areas of particular cultural interest, the effects of global changes in colours and colour schemes are often drastic and obvious and thus easy to study. Another important aspect is that the outcome should in some sense ideally benefit the local community where houses still have their original functions.

6. Future Research

The results presented in this project put forward possibilities of recognising colours and colour schemes which have been superseded. It is of some interest to adopt the method to create knowledge concerning the relation between society and the built environment, in this specific case colour and paint and rural development. It would be possible to use the method for investigating groups of buildings to find out about other alterations not revealed before, and not solely in this research field.

At all events, a future research task in this discipline could be to identify further areas for similar research. The areas could focus on geographical as well as economic or historical aspects of colour schemes. It would be of interest to use the experiences from this project and unfold new information concerning the built environment. As the project reveals forgotten colours and colour schemes in the investigated areas, this is certainly possible in all kind of areas.

The research field of Architectural Colour & Paint is a research field started during the 20th century and with its frames and position established in the early 21st century. To make this field a part of contemporary living architecture and in that spirit doing research presenting results which can be made accessible to the public is one branch of the future. As the building objects worth saving grow younger, the necessity to inform the public and other property owners is becoming more evident. If the knowledge of buildings and the maintenance of the same among the public are considered as the main path towards achieving a future “living” heritage, this type of research and results are even more important.

Examples of important issues in future research could be to answer:

- *It is eligible to expand knowledge and ideas of colour schemes through research projects. There is a need to get further into the matter and achieve deeper comprehension for each time and place. For a start it would be important to question, through research projects, many of the generalised and simplified colour schemes seen today. There are many aims, for instance:*

- *What exterior colour schemes were common during the 18th century Louis Seize period in Sweden? Is it possible to find local differentiations?*

- *What are the differentiations concerning local colour schemes in the coastal areas of Sweden?*

- *Is it possible in general to make reconstructions of local colour schemes in areas dominated by ideas of generalised national or international "memories" of colours?*

- *Could socioeconomic differentiations in colour schemes be identified through architectural colour & paint research?*

- *What are the possible developments of suitable research and practitioner methods concerning future colour investigations in Sweden?*

Summary

Colour plays a vital part in our perception of our surroundings, not least where the built environment is concerned. The architectural design of buildings at different points in history has included colours and colour schemes typical of their time. The painting of classical sculptures and architecture in the ancient world was hotly debated in the 19th century. Would we admit to our notion of the pure, white beauty of classical antiquity being a notion built up over a long period of ignorance? It was a touchy issue, and even today I think many of us have difficulty in accepting the colour schemes discovered in excavations at Pompeii and Herculaneum as part of the interpretation of ancient architecture. In other words, notions about colour-scheming in different situations and periods are presumably very unamenable to change and conditioning.

There is a widely touted generalisation and simplification about colouring in the Swedish countryside during the 19th century: buildings with rough weatherboarding painted with red distemper, planed weatherboarding coated with yellow linseed oil paint and, finally, the white lime wash on buildings with rendered exteriors. These simplified notions form the basis of an investigation as to the existence or otherwise of local differences in colour-scheming in 19th century rural communities.

Traditional colouring materials have been a topic of investigation in recent decades, both in popular journals and among scholars. Good research initiatives have made knowledge of linseed oil paint and lime wash available once again both to practitioners and as research material. Experience of uncovering the previous colouring of old buildings has been described in research reports. Colour-schemes have also been studied, albeit in works of a more general nature or in more scientific and detailed investigations of individual, unique buildings which have not primarily made possible any generalisations. Other works in the research field of importance for the present study are Bente Lange's two studies of colour-schemes in the cities of Copenhagen and Rome. At its first specialised conference in 2001, the research field of *Architectural Paint Research* drew up recommendations on methods for uncovering paint finishes. Non-destructive methods, accessibility aspects and sustainability issues are important research considerations, not least where the conservation of

buildings is concerned. The present study is confined to a more traditional process of collecting from groups of buildings which are not really listed or particularly unique. Parallel to the development of theories and methods, it can be considered justifiable to continue the work of collection, because the sources are constantly exposed to degradation and decimation. Internationally too, it is vital to point out the importance of investigating groups of settlement in the geographic regions which we believe ourselves to be knowledgeable about, though sad to say, our knowledge is very often founded on non-scientific generalisations.

The aim of the present study is to further hone the findings presented in my Licentiate thesis concerning local differentiations of external colouring in 19th century rural housing construction. The existence or otherwise of local variations of colouring in 19th century settlement has not been previously studied in Sweden. The main concern of this doctoral thesis is to show whether the geographic differences visible today with regard to the colouring of 19th century rural buildings also prevailed when they were first erected, but also to see how those differences developed.

My reason for confining the study to the south of Sweden is the more complex local colouring to be seen in that region today. Red distemper is not quite so paramount, but there is also the purely practical consideration of Lund and its university being located within the region. Following my work on the Licentiate thesis it was only natural that the choice of geographic region for deeper study should fall on one of the regions already identified. It should also be stressed that the geographic region includes several different areas. Every local area can be termed a macro area comparable with other projects in which a building is carefully studied. The decision to study rural colour-scheming is founded on the fact of few scholarly studies having been undertaken there and also on the importance of rural housing as a heritage for the future. Besides, work is made easier by studying just one type of building, namely housing, rather than several within the same time and space. The choice of the 19th century reflects the growth at that time in the number of painted buildings. New building development during the land redistribution reforms, very often in the form of new types of building, also meant a growth in the number of painted farmhouses. Before that the countryside had to a great extent been unpainted, with the exception of manor houses, vicarages and churches. Finally, limitations have also occurred, of course, in the selection of geographic areas, in that the local areas where the studies are to be carried out must include a reasonable number of relevant buildings with parts worth carrying out paint research on.

As has already been made clear, the main topic of inquiry is whether there existed a local differentiation of colour-scheming in the 19th century, but it is

also asked whether there were locally produced pigments. As the study progressed it became more and more important to try and establish how and why farmhouses came to be painted. Was the painting of them a deliberate act of differentiation between newly appearing groups of the population, a manifestation of identity?

In the first phase, ending with the Licentiate thesis, a process of selection was conducted by ocular analysis of buildings in order to identify suitable geographic areas with groups of buildings. At the commencement of the project there were no buildings to be studied. First the buildings had to be identified. An initial study was made of these buildings and the findings presented in the Licentiate thesis, which was completed in October 2004. The first part of that thesis gives the first indications of locally definable variations of colouring having existed. Interviews with building conservators familiar with the geographic areas, and with the property owners, were initially conducted in order to identify geographic areas with relevant buildings.

Work in the second part of the project took the form of a deeper study of one of the geographic areas, Lister hundred, where further buildings were collected to substantiate the assertion of a local differentiation of colour-scheming in the 19th century. In particular, the occurrence of a pale red stratum in the innermost coat of paint on several buildings was to be further investigated by collecting paint samples from more parts of buildings and more buildings. Scanning electron microscope (SEM) analyses were carried out to establish whether a red earth pigment described in the literature and excavated at the site was the same type as was used when the local pale red paint was applied to exteriors. These findings partly confirmed, though not beyond any shadow of doubt, that pigments for the pale red paint had come from the geographic area. On the other hand the relatively copious array of buildings with the paint finish described showed it to be a local choice of paint, both geographically and chronologically speaking.

Paint section analyses were performed on samples from different elements of the majority of buildings. This is done by taking samples with a scalpel right down to the material to which the paint has been applied, after which the sample is embedded in an epoxy solution and the cross-section studied under the microscope. The advantage of this method is that all paint layers will quite certainly be made visible and amenable to study. Furthermore, several sources such as spectrum analysis, archive materials, secondary works and iconographic material are used to enhance the reliability of the end result. The parlour paintings executed at the time of building are an important iconographic source, because very often they show the exterior of the farmstead as it was then painted.

The research method used in this project is triangulation. The diversity of sources precludes the drawing of conclusions if only one source is consulted. Instead all the various sources are needed in order to build up observed tendencies. The conclusions concerning different buildings are built up in similar fashion, and each local area can be seen as a macro object in which every building is a part of conclusions applicable to the local area as a whole. Thus, instead of each individual building being studied in depth, the buildings are used as parts in order to understand relationships common to several buildings. Many works in this research discipline employ an interpretative – historical – research methodology, in which case, most commonly, just one building is considered, often a unique object of which a detailed and thorough investigation is made. Since in the present case a quantitative and qualitative process of selection takes place, after which work is transformed into a more interpretative – historical – research methodology, the latter part is also more quantitative, so as to facilitate certain generalisations in the conclusions. Another aspect deciding the choice of research methodology is the fact of this study being impossible to perform on all buildings erected within the delimitations. Some buildings are identifiable, others have been demolished, been drastically renovated or for other reasons have no accessible paint layers.

In order better to understand the context at the time of the new building development and painting, specially in the parish of Jämshög, further studies of literature were undertaken, e.g. concerning Dean J. J. Öller, who was the first person in the parish to build a dwelling house in accordance with the new building typology. Social development and change, both in Sweden and more locally in the area round about Lister hundred, was studied. Finally the Actor Network theory (ANT) was tested in order to arrive at an understanding of the value and implications which painting possessed.

One decisive reason for continuing the studies in Lister hundred was the occurrence of sources which singled out a pale red paint as original linseed oil paint on the house fronts in parts of the parish of Jämshög. To bolster and clarify the conclusions, more paint scrape analyses were performed on the façades, added to which the archival studies were broadened and more paintings examined depicting the area defined for this study. In the first part, up until the Licentiate thesis, the fishing settlements in Lister hundred and the homesteads outside them had been studied. This was continued in the second part of the project, at the same time as this local area was divided into two parts: *the Listerlandet plain* – the parishes of Gammalstorp, Ysane and Mjällby – and *the coastal dwellings*, i.e. the parish of Mjällby. The reason for this subdivision was that the area presented to areas with building type differences in the 19th century. The first area was dominated during the first half of the 19th century by brick buildings, some with rendering and others with the brick left bare. The

second area is dominated by corner-jointed housing and somewhat later dwelling houses dating from the second half of the 19th century.

Pre-19th century building development in the parish of Jämshög was dominated by corner-jointed *högloftsstuga* dwellings. These had a *ryggåsstuga* in the middle or else comprised two *högloftsstuga* units joined end to end. These buildings contained the central room, which, in the most rudimentary instances, would have a stone floor, an open hearth and a smoke hole in the roof. Then there were modifications of this basic version, complete with chimney, wooden flooring and windows. Building practices on the Listerlandet plain at this time included both *högloftsstuga* dwellings and low-slung, enclosed half-timbered farmsteads like those to be seen in Skåne (Scania). There was also another building technique in use, namely *skiftesverk* (post and plank, aka bole houses), mostly for outbuildings of different kinds. The coastal areas, finally, were hardly settled at all prior to the land distribution reforms and did not acquire permanent populations until some way into the 19th century. Before that they consisted mainly of primitive sheds and shacks, and accordingly did not number many dwelling houses until after the mid-19th century.

In order to arrive at a better understanding of the spreading practice of painting dwelling houses, a deeper study was made of the situation in Sweden just before 1800 and until the land redistribution reforms at mid-century. Efforts by King and Riksdag (parliament) during this period to achieve more efficient utilisation of the country's resources resulted in directives for the improvement of agricultural and building practices and also in descriptions of geographic areas such as parishes and provinces, best known among them being no doubt Linnaeus's various journeyings through the country, but local descriptions such as Johan Jöran Öller's of the parish of Jämshög have also attracted attention through their wide-ranging, well-informed accounts of everything from the mindset of the local inhabitants to geology, building methods and customs. Öller's description has been a particularly important source for the present work, because he describes not only his own vicarage but also the occurrence of a red ochre pigment in the locality.

Öller's parochial importance has been gauged by studying his biographical details and contemporary demands on the incumbent and his role as the parishioners' mentor. This led to the conclusion that Öller had played a very important part in communicating new tendencies both in agriculture and in the transformation of building methods, which is not to be considered peculiar to him but rather typical of the view taken at that time concerning the incumbent's role in the parish. Öller builds his first vicarage in 1788, and it is a building rooted in the manorial typology: a *corps de logis* with a hipped roof, big windows, planed weatherboarding, a centrally positioned door, building

sections of good architectural design and a parlour with wall paintings. In addition, the whole complex has a dwelling unit clearly segregated from the livestock part, which was new to the parish but typical of the contemporary pursuit of hygienic improvement and spatial changes. This type of building spreads through the parish, not directly but in connection with a boom during the 1840s and 50s. Other possible sources of inspiration round about are Lilla Holje Manor in the same parish, Rydal Manor and Karlshamn, which at that time, together with Karlskrona, Sweden's third largest town, was one of the fastest-growing towns in the country. Several of Sweden's foremost architects and urban planners were active here, including Nicodemus Tessin the Younger, Erik Dahlbergh and Carl Wijnblad.

The Listerlandet plain during the late 18th century also had, in MP Knut Person, someone who made an important difference to local developments. He drew up a scheme for the layout of farm properties, with human dwellings segregated from the management of livestock and crops. His scheme has several points in common with contemporary developments in the parish of Jämshög and it achieves a major impact. Both men may be presumed to have influenced those members of the population who could afford to develop both their farming and their buildings.

The findings from the continued investigations show further occurrence of a red pigment on at least ten dwelling houses in the parish of Jämshög. The farms present a certain geographic subdivision, into an area just north of the old village of Jämshög, surrounding the church, and another near the church. There were also two colours in the innermost layer on the corner joints, namely back and white. Furthermore, in several instances the weatherboarding has up to three layers of white paint followed, in certain case, but pale grey or blue and, finally, two coats of yellow, which in most case is the colour visible today.

The brick dwelling houses on the Listerlandet plain have in certain cases proved, through archive research, to have been painted with red distemper, and this applies to the oldest buildings accessible today, Knutstorp and Ryedal. The farms built in the 1840s and 1850s were white during the 20th century and there was no possibility of analysing earlier paint layers. White also figures at Ryedal Manor from at least the 1850s or even the 1820s, when the building was made over in Empire style. Wooden dwelling houses in this area present an early design with yellow weatherboarding or yellow rendered weatherboarding and white corners. There are also a couple of buildings coloured green, with a paler green weatherboarding and darker green corners and window surrounds. The weatherboarding shows no trace of red or pale red.
The coastal areas present dwelling houses with green colour-scheming as described above, and also yellow with white corners. Then there are grey paint

layers which may possibly be discoloured white lead. The fishing settlements have a more fragmented history, with not quite so distinct colour sequences common to the exteriors, one exception being a shade of brown occurring on the weatherboarding of several buildings, especially in Östra Torsö. Photographs show this weatherboarding to be of somewhat later date than the buildings themselves. Most buildings in Torsö were weatherboarded in about 1900, and the same applies, on a somewhat smaller scale, to Hällevik, the biggest of the fishing settlements. A uniform occurrence of red distemper is also noticeable on the crofters' holdings on the outskirts of the fishing settlements. People living there also take greater liberties regarding the colours which the different architectural elements can be painted. In some cases this is manifested through deviant colouring of fluting, and in others by different colours for the weatherboarding below and above a dado or on the top or body of the gable end.

Summing up, my conclusions demonstrate the possibilities of defining and demarcating specific local colour-schemes and interpreting the development of colouring. The possibility of identifying exactly where a pigment came from demands more time and resources than could be generated for the present work, but the red paint used in Jämshög is clearly original, as witness the identification of the elements in the red paint layers and in the various layers of paint on top of them. Both the light red and the innermost later of white contain white lead and the next white in succession also contains white lead, while subsequent layers contain zinc white followed by titanium white. This, coupled with the occurrence of light red farmhouses in a number of paintings and parlour murals, corroborates the notion of the light red paint later as original. A concluding phase of work also included analyses of the street façade of an important building in Karlshamn, namely Skottsbergska Gården. Light red layers of paint could also be detected innermost on this building, dating from 1766, and are also in evidence indoors, on one of the wallpapers. Light red comes as no surprise in a Rococo building, though it is not mentioned in any of the documents. The connection with Öller's vicarage and the farmhouses built in the parish of Jämshög during the mid-19th century is inescapable. The colour-scheming of the Jämshög farmhouses could in that case have been inspired by the closing years of the 18th century, with a building typology having points in common with both Rococo and Neo-Classical architecture.

Finally this work has also focused on how and why painting became so widespread. In this connection, as mentioned previously, ANT was used in order better to understand the role of colour for the farms when they were painted. It is concluded that colour was highly important as an expression of change and belonging, and perhaps even more so than the new building typology in itself. The light red of the farmhouse is visible from a great distance together with the green gate separating the farmhouse from the two large

flanking buildings, built of granite rubble and with whitewashed pointing. The whole complex must have stood out as a distinct and momentous change in the formerly unpainted landscape. Colour was probably also an indicator of identity and distinction between different networks on the farm. Viewed from afar, the new organisation of the farm lit up the landscape, both externally and internally, as a result of the decision to paint it. The existence of the parlour wall paintings and the agents they include are proclaimed by the external painting log before various actants come near the building. In this way the people in the farmhouse set themselves apart from the rest of the village community, a choice which they made in common with the vicar. A new age of differentiation, as regards both buildings and population, had in this way effected an emphatic entrée.

Sammanfattning

Färg utgör en väsentlig del i vår upplevelse av omgivningen inte minst den byggda. Byggnaders arkitektoniska utformning har under skilda epoker haft för sin tid typiska färger och färgsättningar. Under 1800-talets fördes en livlig debatt om de klassiska skulpturerna och den klasiska arkitekturens bemålning under antiken. Ville vi acceptera att vår föreställning om antikens vita och rena skönhet var en föreställning som under lång tid byggts upp på okunskap? Det var ett delikat spörsmål och än idag tror jag att många av oss har svårigheter att beakta upptäckterna av färgsättningen från utgrävningarna i Pompeji och Herculaneum som en del av tolkningen av den antika arkitekturen. Med andra ord kan det antas att föreställningar om färgsättningar från olika situationer och tider är väldigt svåra att förändra och påverka.

Det finns en många gånger framförd generalisering och förenkling av färgsättning på den svenska landsbygden under 1800-talet: byggnader med obehandlad panel som är strukna med röd slamfärg, hyvlad panel som är bemålad med gul linoljefärg samt slutligen den vita kalkfärgen på putsad bebyggelse. Det är dessa förenklade föreställningar so ligger till grund för en undersökning om huruvida det finns lokal skillnader i färgsättningen under just 1800-talet på landsbygden.

Traditionella färgmaterial har såväl inom populär facklitteratur som inom forskningen blivit belyst under de senaste årtiondena. Kunskapen om linoljefärg och kalk har genom goda forskningsinsatser åter blivit tillgänglig både för praktiker och som forskningsmaterial. Erfarenheter från användandet av färgframtagningar på äldre bebyggelse har beskrivits i forskningsrapporter. Färgsättningar har också studerats om än i något mer översiktliga arbeten eller mer vetenskapligt och ingående av enstaka unika objekt som inte möjliggjort några generaliseringar i första hand. Andra arbeten inom forskningsfältet som varit betydelsefulla för detta arbete är Bente Langes båda studier av färgsättningar inom städerna Köpenhamn och Rom. Forskningsfältet inom *Architectural Paint Research* utarbetade under den första ämnesspecifika konferensen 2001 rekommendationer för hur metoder vid arbeten med färgframtagningar bör se ut. En viktig del av forskningen inom byggnadsvård inte minst är ickeförstörande metoder, tillgänglighetsaspekter samt hållbarhetsfrågor. Denna studie ligger inom ett mer traditionellt

insamlingsarbete på grupper av byggnader som egentligen inte åtnjuter skydd eller är synnerligen unika. Det kan anses motiverat att parallellt med utveckling av teorier och metoder fortsätta insamlingsarbetet eftersom källorna ständigt utsätts för nedbrytning och decimeras. Även internationellt är det väsentligt att peka på betydelsen av undersökningar av grupper av bebyggelse inom de geografiska områden som vi tror oss ha kunskaper. Kunskaper som många gånger dessvärre bygger på icke vetenskapligt gjorda generaliseringar.

Målet med denna studie är att ytterligare skärpa resultaten från licentiatavhandlingen avseende lokal differentiering av exteriör färgsättningen på landsbygdens bostadsbebyggelse under 1800-talet. Om det funnits lokala variationer i färgsättning på 1800-talets bebyggelse har inte studerats tidigare i Sverige. I detta doktorandarbete ligger fokus främst på att påvisa om de idag synliga geografiska skillnader som finns avseende färgsättning på 1800-talets bebyggelse på landsbygden också fanns vid byggnadernas uppförande men även hur den utvecklats.

Anledningen till avgränsningen av studien till södra Sverige är den mer komplexa lokala färgsättning som syns i detta geografiska område idag. Den röda slamfärgen är inte helt så dominerande men även rent praktiska ställningstagande att Lund och Lunds universitet ligger inom området. Efter licentiatarbetet var det även självklart att valet av ett geografiskt område att fördjupa arbetet inom skulle ske inom ett av de områden som redan var identifierat. Det är också viktigt att betona att det geografiska området innehåller flera lokala områden. Varje lokalt område kan sägas vara ett makroområde jämförbart med andra projekt där en byggnad genomgår omsorgsfulla studier. Att studera landsbygdens färgsättning är ett val som gjorts utifrån de fåtal vetenskapliga studier som gjorts där samt även att just bostadsbebyggelsen på landsbygden är betydelsefull som ett framtida kulturarv. Dessutom underlättas arbetet av att endast en byggnadstyp studeras, bostäder, och inte flera inom samma tid och rum. Valet av 1800-talet avspeglar den ökning av bemålad bebyggelse som sker då. Nybyggnationen under skiftesreformerna många gånger i form av nya byggnadstyper gav också ett ökat antal målade mangårdsbyggnader. Dessförinnan var landsbygden till stora delar omålad med undantag av herrgårdar, prästgårdar och kyrkor. Slutligen har avgränsningar förstås också uppstått vid valet av geografiskt områden, såtillvida att de lokala områden som undersökningarna ska utföras inom ska innehålla ett rimligt antal relevanta byggnadsobjekt med byggnadsdelar meningsfulla att utföra färgundersökningar på.

Huvudfrågan som ställts är som tidigare nämnts huruvida det existerat en lokal differentiering avseende färgsättning under 1800-talet. Men även frågan om det har funnits lokalt producerade pigment. Under arbetets gång blev det även mer

och mer betydelsefullt att söka svar på hur och varför uppstod de bemålade mangårdarna. Var den målade mangården en medveten handling för att skapa differentieringar mellan nyuppkomna befolkningsgrupper och därmed med färgen visa sin tillhörighet?

I det första skedet fram till licentiatavhandlingen utfördes en urvalsprocess genom okulära analyser av byggnadsobjekt för att finna lämpliga geografiska områden med grupper av byggnadsobjekt. Vid projektets start fanns inga byggnadsobjekt att studera utan dessa måste först identifieras. På dessa byggnader utfördes en första undersökning vars resultat redovisades i licentiatavhandlingen färdigställd i oktober 2004. I denna första del redovisas de första indicierna på att det har existerat lokalt definierbara variationer i färgsättningen. Intervjuer av byggnadsantikvarier, kunniga inom de geografiska områdena samt fastighetsägarna genomfördes initialt för att finna geografiska områden med relevanta byggnadsobjekt.

Arbetet fortgick i projektets andra del som en fördjupning i ett av de geografiska områdena, Listers härad. Här utfördes insamlandet på ytterligare byggnader för att kunna stärka påståendet om den lokala differentieringen av färgval under 1800-talet. I synnerhet skulle förekomsten av ett ljusrött färgskikt i det innersta färgskiktet på ett flertal byggnader ytterligare undersökas genom färgprover på fler byggnadsdelar och på fler byggnadsobjekt. För att kunna utröna om ett rött jordpigment som beskrivits i litteratur och grävts fram på plats var samma typ av pigment som används i den lokala ljusröda fasadfärgen utfördes Scanning electron microscopic (SEM) analyser. Dessa resultat kunde delvis bestyrka att pigmentet till den ljusröda färgen hämtats inom det geografiska området men inte utan tvivel. Däremot visade den relativt rika tillgången på byggnadsobjekt med den beskrivna färgen att det var ett lokalt färgval, både avseende geografi och tid.

På flertalet byggnadsobjekt har det genomförts färgsnittsanalyser av prover från olika byggnadselement. Detta utförs genom att prover tas med skalpell in till materialet färgen är applicerad på och provet ingjutes i en epoxilösning och snittytan studeras därefter i mikroskop - färgsnittsanalys. Fördelen med denna metod är att alla färgskikt blir helt säkert synliggjorda och möjliga att studera. Vidare måste ett flertal källor såsom färgtrappor, arkivmaterial, litteraturstudier och ikonografiskt material brukas för att öka tillförlitligheten i slutresultatet. En betydelsefull ikonografisk källa är de salsmålningar som utförts vid byggnadernas uppförande och som i flera fall avbildar gårdens exteriör med de då existerande färgerna.

I detta projekt är forskningsmetoden triangulering, mångfalden av källor medger inga slutsatser om bara en källa används utan de olika källorna är nödvändiga

som stöd för bygga upp iakttagna tendenser. På så sätt byggs slutsatserna om de olika byggnadsobjekten upp och varje lokalt område kan ses som ett makroobjekt där varje byggnad är en del i slutsatser som kan appliceras på hela det lokala området. Det görs alltså inga fördjupande studier av varje enskild byggnad utan de används som delar för att förstå sammanhang gemensamma för flera byggnader. Många arbeten inom forskningsdisciplinen görs med en interpretativ – historisk forskningsmetodik. Det är då vanligast att byggnadsobjektet är ett och då ofta ett unikt objekt som det utförs en detaljerad och genomgående undersökning av. Eftersom det i detta fall inledningsvis utförs en kvantitativ och kvalitativ urvalsprocess och därefter arbetet omformas till en mer interpretativ – historisk forskningsmetodik. Den senare delen är också mer kvantitativ för att möjliggöra vissa generaliseringar i slutsatserna. En annan avgörande aspekt för val av forskningsmetodik är den att studien inte är möjlig att utföra på samtliga uppförda byggnadsobjekt inom avgränsningarna. En del byggnadsobjekt är identifierbara andra är rivna, har renoverats hårt eller har inte tillgängliga färgskikt av ytterligare andra skäl.

För att kunna bättre förstå kontexten vid tiden för nybyggnationen och bemålningen inom speciellt Jämshögs socken utfördes ytterligare litteraturstudier bl. a. om prosten J. J. Öller som var den förste i socknen som byggde en mangårdsbyggnad enligt den nya byggnadstypologin. Samhällets utveckling och förändring både inom Sverige och mer lokalt i området kring Listers härad studerades. Slutligen provades Actor network theory (ANT) för att skapa förståelse för vad företeelsen att måla hade för värde och innebörd.

Ett avgörande skäl till att fortsätta studierna i just Listers härad var förekomsten av källor som pekade ut en ljusröd färg som ursprunglig linoljefärg på fasaden i delar av Jämshögs socken. För att göra slutsatserna starkare och klarare utfördes flera färgsnittsanalyserna på fasaderna vidare utökades arkivstudierna och flera målningar som avbildade det i studien avgränsade studerades. I Listers härad hade i den första delen fram till licentiatavhandlingen även de fiskelägena och gårdarna där utanför studerats. Detta fortsatte i projektets andra del och det uppstod även en delning av detta lokalområde i två: *Listerlandets slätt* - Gammalstorp, Ysane och Mjällby socknar samt *De kustnära bostäderna* - Mjällby socken. Denna uppdelning uppstod eftersom området kunde uppvisa två områden med olikheter i byggnadstyperna under 1800-talet. Det första området domineras under 1800-talets första del av byggnader uppförda i tegel i vissa fall putsade i andra med synligt tegel. Sistnämnda område är dominerat av knuttimrad bostadsbebyggelse och av mangårdsbyggnader av något yngre ålder, uppförda under andra halvan av 1800-talet.

Bebyggelsen under tiden innan 1800-talet dominerades i Jämshögs socken av knuttimrade högloftsstugor. Dessa bestod av en ryggåsstuga i centrum med en

eller två loftstugor hopbyggda på gaveln. Byggnaderna innehöll det centrala rummet med i de enklaste formerna stengolv och öppen härd och öppning i taket för rökens utgång. Vidare uppkom modifieringar av denna enkla form med såväl skorsten, trägolv som fönster. Byggnadsskicket på Listerlandets slätt bestod vid denna tid av såväl nämnda högloftsstugor men även låga kringbyggda korsvirkesgårdar likt de i Skåne förekom. Ytterligare en byggnadsteknisk form, skiftesverk, förekom främst då i uthusbyggnader av olika slag. Slutligen de kustnära områdena, de var knappt bebyggda innan skiftena. Fiskelägena blev inte befolkade året runt förrän en bit in på 1800-talet. Tiden innan bestod bebyggelsen främst av enklare bodar. Följaktligen var inte heller mangårdarna så talrika förrän efter 1800-talets mitt.

För att bättre förstå tiden för spridningen av skicket att måla mangårdsbyggnader så utfördes en fördjupning av situationen i Sverige under tiden strax innan 1800-talet och fram till skiftena under 1800-talets mitt. Kungens och riksdagens strävanden under denna tid att förbättra nyttjandet av landets resurser resulterade i direktiv om hur jord och bebyggelse bättre skulle brukas samt även i beskrivningar av geografiska områden som socknar och landskap. Den mest omtalade av dessa är säkert Carl von Linnés olika resor inom landet men även lokala beskrivningar såsom Johan Jöran Öllers beskrivning av Jämshögs socken har uppmärksammats för sin breda och initierade beskrivning av allt från befolkningens kynne till geologi och byggnadsskick och seder. Just Öllers beskrivning har utgjort en betydelsefull källa för detta arbete eftersom han beskriver både sin egen prästgård men också förekomsten av ett rödockra pigment i bygden.

För att förstå Öllers betydelse i socknen har hans personhistoria studerats liksom samtidens krav på kyrkoherden i församlingen och hans roll som fostrare av sockenborna. Detta ledde till tolkningen att Öller haft stor betydelse som förmedlare av nya tendenser inom såväl jordbruk som inom byggnadsskickets förändring, vilket inte får anses som unikt för Öller utan snarare typiskt för tidens syn på kyrkoherdens roll i församlingen. Öller bygger sin första prästgård 1788 och det är en byggnad med rötterna i herrgårdens typologi; en mangårdsbyggnad med brutet tak, stora fönster, klätt med hyvlad panel, en centralt placerad dörr, arkitektoniskt välutformade byggnadselement samt en sal med väggmålningar. Dessutom får hela gårdsanläggningen med en väl avskild mangårdsenhet och en fägård anses vara nytt för socknen men typiskt för tidens lust till hygieniska förbättringar och rumsliga förändringar. Byggnadstypen får spridning i socknen inte direkt men med en boom under 1840-50 talen. Andra möjliga inspirationskällor i omgivningarna är Lilla Holje herrgård inom socknen, Ryedals säteri samt Karlshamn som vid tiden var en av Sveriges mest expansiva städer tillsammans med Karlskrona, Sveriges tredje största stad. Här

verkade flera av Sveriges främsta arkitekter och stadsplanerare såsom Nicodemus Tessin d.y., Erik Dahlbergh och Carl Wijnblad.

Även Listerlandets slätt hade under sent 1700-tal en person med betydelse för skeendet i bygden, riksdagsman Knut Persson. Han upprättade förslag på hur gårdarna borde gestaltas med separation av boende för manfolket och handhavandet av djur och grödor. Förslaget har stora likheter med det som sker i Jämshögs socken vid samma tid och får stort genomslag. Båda dessa personer får antas påverka befolkningen som hade resurser nog att utveckla sitt jordbruk men även sitt byggnadsbestånd.

Resultaten från de fortsatta undersökningarna påvisar ytterligare förekomsten av ett rött pigment inom Jämshögs socken på minst tio mangårdar. Gårdarna har en viss geografisk uppdelning. Ett område strax norr om Jämshögs gamla by kring kyrkan och ett område i närhet till kyrkan. Det har också framkommit två färger på innersta färgskiktet på knutarna, svart och vit. Vidare har panelen i flera fall upp till tre vita färgskikt och därefter i vissa fall en ljus grå eller blå färg och slutligen gult i ett par lager, vilket i de flesta fallen är den färg som är synlig idag.

Mangårdsbyggnaderna i tegel på Listerlandets slätt har i vissa fall genom arkivmaterial visat sig ha haft en röd kalkavfärgning och detta på de äldsta byggnaderna som är tillgängliga idag, Knutstorp och Ryedal. De gårdar som är uppförda under 1840–50-talen är under 1900-talet vita och någon möjlighet att göra analys av tidigare färgskikt har inte funnits. Den vita färgen finns även på Ryedals säteri från åtminstone 1850-tal eller rent av från 1820-talet när byggnaden fick sin karaktär av empire. Mangårdar i trä från detta område uppvisar dels en tidig form med gul panel och eller gul revetering samt vita knutar. Vidare finns ett par byggnader som visar på en grön färgsättning med ljusare grön panel och mörkare grön knut och fönsteromfattning. Ingen röd eller ljusröd panel finns i något färglager

De kustnära områdena uppvisar mangårdar med den gröna färgen enligt ovan samt den gula med vita knutar. Det finns också grå färgskikt som möjligtvis är åldrad blyvitt. Fiskelägena har en mer splittrad historik med inte fullt så tydliga serier av färger som är gemensam på fasaderna, ett undantag är en brun färg som förekommer på flera byggnaders Panel i synnerhet på Östra Torsö. Det är även enligt foton möjligt att datera panelen som något yngre än byggnaderna. De flesta har fått panel runt 1900 på Torsö med något mindre förekomst på det största fiskeläget Hällevik. Det går också att se en enhetlig förekomst av röd slamfärg på torpen belägna utanför fiskelägena. Vidare finns en friare tolkning från de boende av hur de olika arkitektoniska elementen kan bemålas. I vissa fall tar det sig uttryck i form av en avvikande färg på kannelyrer, i andra fall

genom olika färger på fasadens panel under och över en bröstningslist eller på gavelspets respektive övrig gavel.

Sammanfattningsvis visar slutsatserna på möjligheter att definiera och avgränsa specifikt lokala färgsättningar samt att tolka färgsättningen s utveckling. Möjligheten att identifiera exakt varifrån ett pigment har erhållits kräver mer tid och resurser än vad detta arbete kunde skapa. Det är dock klart att den röda färg som används i Jämshög är ursprunglig genom identifikation av grundämnena i de röda färgskikten samt i de olika färglagren där över. Den ljusröda såväl som det innersta lagret av vit färg innehåller blyvitt och nästföljande vita också blyvitt för att därefter innehålla zinkvitt och senare titanvitt. Detta styrker tanken om det ljusröda färgskiktet som ursprunglig tillsammans med förekomsten av ljusröda mangårdar på ett antal målningar och salsmålningar. I ett sista skede av arbetet utfördes också analyser på en betydelsefull byggnad i Karlshamn, Skottsbergska gårdens gatufasad. Det gick även på denna byggnad från 1766 att innerst finna ljusröda färglager som också interiört går att se på en av gårdens tapeter. Ljusrött är inte en färg som på något vis förvånar på en byggnad från rokokon, det är emellertid inget som står omnämnt i några handlingar. Kopplingen till Öllers prästgård och de under 1800-talets mitt uppförda gårdarna i Jämshög socken är ofrånkomlig. Gårdarna i Jämshög skulle i så fall kunna vara färgsatta med inspiration från 1700-talets slut och med en byggnadstypologi som både bär likheter med rokokons som nyklassicismens arkitektur.

Slutligen har arbetet också satt fokus på hur och varför bemålningen fick så stort genomslag. I detta sammanhang användes som tidigare nämnts ANT för att öka förståelsen för hur färgen spelade roll på gårdarna vid den tid de målades. Slutsatsen är att färgen haft stor betydelse som uttryck för förändring och tillhörighet kanske även mer än den nya byggnadstypologin i sig. Mangårdsbyggnadens ljusröda färg syns på långt håll tillsammans med den gröna grinden som avskiljer mangårdsbyggnaden från de två flankerande stora uthusbyggnaderna i gråsten med vitmenade fogar. Hela gårdskomplexet har helt bestämt varit en markant och betydelsefull förändring i det tidigare omålade landskapet. Färgen har sannolikt också utgjort en markör för tillhörighet och åtskillnad mellan olika nätverk på gården. På långt avstånd lyste den nya organisationen på gården såväl exteriört som interiört upp landskapet genom valet att måla gården. Salsmålningens existens och de aktörer den inbegriper är genom den exteriöra bemålningen förklarad långt innan skilda aktörer närmar sig byggnaden. Mangårdens folk skiljde på detta vis ut sig från övriga inom bygemenskapen, ett val som man hade gemensamt med kyrkoherden. En ny tid med differentiering både avseende byggnader och befolkning gjorde på detta sätt sin tydliga entré.

References

Literature sources

Adolfsson, Maria. 1993: *Prosten Öller och hans Jämshögs beskrivning.* Blekingeboken 1993. Karlskrona.

Adolfsson, Maria. 2000: *Fäderneslandets kännedom: om svenska ortsbeskrivningsprojekt och ämbetsmäns folklivsskildringar under 1700- och 1800-talet*. Diss. Stockholm.

Agrarhistoria. 1999: Ed. Larsson, Bengt M P, Morell, Mats & Myrdal, Janken. Stockholm

Althoff, Calle. 2003: The architectural Colours of the Royal Palace, as Intended and Executed by Nicodemus Tessin and his Sucessors, *Konsthistorisk Tidskrift* Vol. 72 No 1-2.

Ambjörnsson, Ronny. 1980: *Från slott till koja. 17 uppsatser i svensk idé- och lärdomshistoria*. Uppsala.

Andersson, Maj-Britt. 2000: *Allmogemålaren Anders Ädel*. Diss. Uppsala.

Andes, Louis Edgas. 1887: *Nyaste handbok för målare och lackerare*. Stockholm.

Arrhenius, Thordis. 2003: *The fragile monument, on conservation and modernity*,
Diss. Stockholm.

Arvastson, Gösta. 1977: *Skånska prästgårdar : en etnologisk studie av byggnadsskickets förändring 1680-1824*. Diss. Lund.

Balksten, Kristin. 2007: *Traditional lime mortar and plaster: reconstruction with emphasis on durability*. Göteborg.

Bengtsson, Bengt. 1946: *Skottbergska gården: en köpmansgård från 1700-talet, Nordiska museets handlingar*.Stockholm.

Bergström, Carin. 1991: *Lantprästen. Prästens funktion i det agrara samhället 1720-1800. Oland-Frösåkers kontrakt av ärkestiftet.* Nordiska museets handlingar; 110. Diss. Stockholm.

Bethun, Carl Isak. 1994 (1727): *Carl Isak Bethuns målarhandbok*. Storvik.

Bjerning, Lars. 1985: Tegel och tegeltillverkning i Skåne under fem århundraden, *Skånes hembygdsförbunds årsbok 1984*. Kristianstad.

Bjurklint Rosenblad, Kajsa. 2005: *Scenografi för ett ståndsmässigt liv: adelns slottsbyggande i Skåne 1840-1900,* Diss. Malmö.

Brænne, Jon. 2006: *"*Would you please do a scrape of my living-room wall and find the original colour?" Architectural paint research seen in a wider context*, Paint research in building conservation*, Ed. Bregnhøi, Line, Hughes, Helen, Lindbom, Jenni et al. London.

Chalmers, Alan F. 2003: *Vad är vetenskap egentligen?* Nora.

Cronholm, Christopher. 1976 (1757): *Bleking beskrivning: Christopher Cronholm 1750-57.* Malmö.

Elmqvist, Bertil. 1986: *Präster och prästgårdar i Karlshamn*. Sölvesborg

Erixon, Sigurd. 1939: *Den blekingska lantbefolkningens byggnadskultur*, Stockholm.

Erixon, Sigurd. 1947: *Svensk byggnadskultur*. Stockholm.

Ferring, Mari. 2006: *Dionysos på Årsta torg: färgfrågan i svensk efterkrigsarkitektur*. Stockholm.

Franzén, Anders. 2008: *Skiftenas skeden: laga skiftets handlingar som källmaterial för byggnadshistoriska studier med exempel från Småland 1828-1927*. Jönköping.

Fredriksson, Jan. 1993: *Målare i Skåne*, Lund.

Fridell Anter, Karin & Svedmyr Åke. 1992: Åke, *Färgskalor hos traditionella pigment för utvändig målning,* Stockholm.

Fridell Anter & Wannfors, Henrik. 1997: *Så målade man.* Stockholm.

Från slott och koja. 2006: Ed, Fiebranz, Rosemarie. Uppsala.

Gadd, Carl-Johan. 1998: Jordbruksteknisk förändring i Sverige 1700-talet- och 1800-talen – regionala aspekter. I*: Ett föränderligt agrarsamhälle.*

Gadd, Carl-Johan. 1999: *Präster och landshövdingars rapporter*. Allmän jordbruks-statistik 1802-1864.

Gadd, Carl-Johan. 2000: *Det svenska jordbrukets historia*, Del 3: Den agrara revolutionen. Borås.

Granberg, Jan. 1984: *Gården i den förindustriella staden: en studie i stadsbebyggelsens regionala variationer*. Stockholm.

Groat, Linda & Wang, David. 2002: *Architectural Research Methods*, New York.

Hacking, Ian. 2002: *Historical ontology,* Cambridge Mass. & London.

Hantverkets bok: Måleri. 1938: Ed. Paulsson, Gregor. Stockholm.

Hædersdal, Ebbe. 1999: *Om att förstå ett hus, Den dynamiska modellen*. Diss. Lund.

Hällström, Jenny. 2008: *Non-invasive monitoring of architectural heritage; remote flourescence lidar imaging.* Diss. Lund.

Hantverkets bok, måleri. 1934: Ed. Paulsson, Greger, Stockholm.

Hughes, Helen. 2002: The problems facing the development of architectural paint research, *Layers of understanding: setting standards for architectural paint research,* ed. Hughes, Helen. Donhead.

Hughes, Helen. 2006: Colour investigation of an historic interior with the extensive use of cross-section samples, *Paint research in building conservation*, ed. Bregnhøi, Line, Hughes, Helen, Lindbom, Jenni et al. London.

Johansson, Alf. 2001: *Med pigment och kopaler: svensk färgindustri under 200 år*, Stockholm.

Kierkegaard, Bo Kjeld. 2006: Colour investigation of a historic interior with the extensive use of cross-section samples. *Paint research in building conservation*, Ed. Bregnhøi, Line, Hughes, Helen, Lindbom, Jenni et al. London.

Kjellström, Richard. 2004: *Exteriör färgsättning på bostadsbebyggelse under 1800-talet: fyra områden i södra Sverige*. Lund.

Kjellström, Richard. 2007: To examine historical exterior colour schemes in rural communities - a method to achieve local identity, *Regional Architecture and Identity in the Age of Globalization*. Tunis.

Kärrholm, Mattias. 2004: *Arkitekturens territorialitet: till en diskussion om territoriell makt och gestaltning i stadens offentliga rum*. Lund.

Law, John. 1992: "Notes on the Theory of Actor-Network: *Ordering, Strategy and Heterogeneity," Systems Practice* 5:379–93.

Lange, Bente. 1993: *The colours of Rome.* Diss. København.

Lange, Bente. 1996: *Københavns farver,* København.

Latour, Bruno. 2005: *Reassembling the Social: An Introduction to Actor-Network-Theory,* Oxford.

Lindgren, Bengt. n.d.: *Från utmark till samhälle: om fiskeläget Hörviks framväxt och utveckling fram till 1900*.Sölvesborg.

Linné, Carl von. 1977 (1749): *Carl Linnæi Skånska resa år 1749*. Stockholm

Lyckman Karlsdotter, Kerstin. 2005: *Historiska oljefärger i arkitektur och restaurering*, Stockholm

Malinowski, Ewa. 1992: *Pust på gamla hus*, Diss. Stockholm.

Magnusson, Lars. 1996: *Sveriges ekonomiska historia*. Stockholm.

Matero, Frank G. & Snodgrass, Joel C. 1992: Understanding Regional Painting Traditions: The New Orleans Exterior Finishes Study. *APT Bulletin*, Vol. XXIV, No. 1/2 (1992), pp. 36-52.

Milton, Hans. 1994: *Listers och Sölvesborgs historia: den förhistoriska och den danska tiden*. Sölvesborg.

Minnhagen, Monica. 1973: *Bondens bostad. En studie rörande boningslängans form, funktion och förändring i sydöstra Skåne.* Lund.

Moss, Roger, W. ed. 1994: *Paint in America: The Colors of Historic Buildings*. Washington D.C.

Moss, Roger W. 1981: *Century of Color: Exterior Decoration for American Buildings, 1829-1920*, American Life Foundation. New York.

Nesbitt, Kate ed. 1996: *Theorizing a new agenda for architecture: an anthology of architectural theory 1965-1995.* New York.

Persson, Knut. 1800: *Åkerbrukskatekes – eller Hjelpreda för Landtmän angående åker och äng*. Stockholm.

Persson, Per. 1941: *Tegelbruk i Sölvesborg*. Sölvesborg.

Popper, Karl. 1972: *Conjectures and refutations – The growth of Scientific Knowledge*. London.

Rentzhog, Sten. 1986 (1967): *Stad i trä: panelarkitekturen: ett skede i den svenska småstadens byggnadshistoria*. Uddevalla.

Riksantikvarieämbetet. 1989: *Byggnadsmåleri med traditionella färgtyper*, Stockholm.

Roos, Britta. 2006: *Värdeproduktion i kulturvårdande projekt: fönsterrenoveringen vid Stockholms slott: en fallstudie.* Diss. Göteborg.

Salje, Sven Edvin. 1963: *Med de våra genom sekler*, Stockholm.

Sanders, Hanne. 1995: *Bondevaekkelse og sekularisering. En protestantisk folkelig kultur i Danmark og Sverige 1820-1850*. Diss. Stockholm.

Shields, Rob. 2004: *Key thinkers on Space and Place.* Ed. Hubbard, P., Kitchin, R. & Valentine, G. Sage Publications, London.

Stubbe Østergaard, Jan. 2004: Antikens idéer i farver? debatten om antik skulpturell polykromi ca 1800-1900, *Classicolor: Farven i antik skulptur*. Ed. Nielsen, Anne Marie & Stubbe Østergaard, Jan. København.

Schiöler, Severin. 1931: *Listerlandet: Bygd och blommor*, Svenska turistföreningens årsskrift 1931. Ed. Fries, Carl. Stockholm.

Sjöberg, Ursula. 1994: *Carl Christoffer Gjörwell 1766-1837 : byggnader och inredningar i Sverige och Finland*. Stockholm.

Sjöborg, Nils Henrik. 1793: *Blekings historia och beskrifvning 1793*. Sölvesborg.

Stattin, Jan. 1980: *Hushållningssällskapen och agrarsamhällets förändring - utveckling och verksamhet under 1800-talets första hälft*. Diss. Uppsala.

Svenska gods och gårdar, del 9 Blekinge. 1938: Ed. Björkman, Ohlén & Sydow.

Svensson, Bengt. 1973: Bondgårdens klassicism – om byggnadsskick och snickarkonst i Jämshög och Kyrkhult, *Blekingeboken 1972*. Karlskrona.

Svensson, Bengt. 1973: *Byggnadsskick i omvandling,* Olofström.

Svensson, Sigfrid. 1970: En socialreformator på 1790-talet. Blekingeprästen J. J. Öller – hembygdsforskare och pionjär. *Studiekamraten, 1970:6*. Tollarp.

Söderberg, Tom. 1935: *Olofströms bruk 1735-1935 : Minnesskrift utgiven av Svenska Stålpressnings A.-B. Olofström*. Karlshamn.

Söderström, Rose-Marie. 2009: *Bostadskultur, informationsflöden och hantverkare 1740-1820 med utgångspunkt i Bålby (Närke) och Skottsbergska gården (Blekinge)*. Diss. Lund.

Tronner, Kate et al. 2006: *Slutrapport för FoU-projektet: Undersökning av en unik färgprovsamling på Kungl. Konsthögskolan: dokumentation, analys och sammanfattning*. Stockholm.

Yin, Robert K. 1994: *Case Study Research: Design and Methods*, Thousand Oaks.

Ulväng, Göran. 2004: *Hus och gård i förändring: uppländska herrgårdar, boställen och bondgårdar under 1700- och 1800-talens agrara revolution*. Hedemora.

Upplysningen i periferin. 1998: Ed. Ambjörnsson, Ronny, Eliasson, Pär & Olsson, Björn. Umeå.

Wallin, Sigurd. 1947: *Byggnadsskick i Herrgårdar, boställen och städer*. Stockholm.

Werdenfels, Åke. 1970: *Kring Lilla Holje*. Olofström.

Werne, Finn. 1980: *Allmogens byggnadskultur: förvandling och upplösning intill 1900-talets början.* Göteborg.

Wijnblad, Carl. 1993 (1755): *Ritningar på fyratio våningshus af sten, och trettio af träd, samt åtskilliga lusthus, m.m. för högloflige ridderskapet och adelen, samt andra ståndspersoner på landet: uti 25 kopparstycken med bifogad förklaring och uträkning.* Stockholm.

Wijnblad, Carl. 1766: *Beskrifning, huru allmogens bygnader, så af sten, som träd, måge med största besparing upföras, enligit bifogade project-ritningar uti sex koppar-stycken, samt förslager uppå nödiga bygnings-ämnen*, Stockholm.

Öller, Johan Jöran. 1996 (1800): *Beskrifning öfver Jämshögs sockn I Blekinge*. Sölvesborg.

Oral sources - interviews

Lecturers in Landskrona, Sweden the 27 - 29 of October 2008. PhD Course, Scientific Theory with the emphasis on Research in Architecture and Planning of the Urban Landscape - SLU 2008:

Bucht, Eivor, *Frame of Theory of Landscape Architecture.*

Kärrholm, Mattias, *Architectural theory & research*.

Nylund, Katarina, *Urban theory.*

Estate owners at the dwellings investigated in Lister hundred.

Andersson, Kenneth, Holjebygdens hembygdsförening.

Wilhelmsson, Anders, SR1 Radio programme. 2008: *Nya Vågen.* Stockholm (2008-03-04).

Werdenfels, Åke, building antiquarian Skåne County.

Internet sources

A-Ritzer Encyclopedia: http://www.sagepub.com/upm-data/5222_Ritzer__Entries_beginning_with_A__%5B1%5D.pdf (2009-10-10)

Torsöhus, http://torsohus.shim.net/ (2009-10-20).

Land Survey Board Archive (Lantmäteriet, historiska kartor) http://historiskakartor.lantmateriet.se/arken/s/searchresult.html?archive=GEOIN&firstMatchToReturnLMS=31&firstMatchToReturnRAK=1&firstMatchToReturnREG=1&yMin=6210697&xMin=478791&yMax=6212947&xMax=481041 (2009-10-23)

Museums and Archive sources

The Regional State Archives, Lund (Landsarkivet i Lund);
Listers district court A I b:2
The National Board of Trade (Kommerskollegium);
årsberättelser, fabriker Serie 1-4 1740-1890

Brandförsäkringshandlingar (Fire Insurance Document)

Blekinge museum archive

Manuscript & Archives, Lund University Library
(Handskriftssamlingarna Lunds Universitetsbibliotek);
Carlshamns Tidning 1819.

Holje hembygdsmuseum, Holje, Olofström

Hällevik museum, Hällevik

Manuscript department (Handskriftsavdeliningen) Universty of Gothenburg; Descriptions of Öller.

Nordiska museet, Stockholm; Bildarkivet, Topografiska bilder

Appendices

Appendix A: Brief description of the examined building objects

Appendix B: SEM analyses

Appendix C: Microscopic analyses of cross sections and samples

Appendix A

Jämshög socken

A

Baggeboda 1:1, Jämshög parish, Blekinge

Date of construction:	1796, extended 1844
Building technique:	planed board, timber
Date of investigations:	summer 2003
Investigations, sources:	ocular, interview, painting, cross sections.

Painting from the 1870s at Baggeboda depicting the farm house in a strong yellow hue.

Painting from 1922 depicting the farm house in light red.

A:I

Boa 3:11, Jämshög parish, Blekinge

Date of construction:	1850, (1812)
Building technique:	planed board, timber
Date of investigations:	summer 2003 and autumn2009.
Investigations, sources:	ocular, interview, cross sections, paintings.

Painting from 1923 depicting the farm house in grey with white elements.

Painting depicting the farm house in colour schemes typical for the turn of the century 1900 till 1910s with brown architectural elements.

A:II

Bommarstorp 1:11, Jämshög parish, Blekinge

Date of construction:	1855
Building technique:	planed board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, cross sections, painting.

Painting depicting Bommarstorp in the 1940s.

A:III

Ekne gård, Jämshög 8:4, Jämshög parish, Blekinge

Date of construction:	1840s
Building technique:	planed board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, cross sections

A:IV

Erikstorp 1:24, Jämshög parish, Blekinge

Date of construction:	1853
Building technique:	planed board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, cross sections, wall paintings

Detail of wall painting with the farm depicted from 1872..

A:V

Hemmingsmåla 1:3, Jämshög parish, Blekinge

Date of construction:	1849
Building technique:	planed board timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, cross sections, wall paintings

Detail from wall painting dated 1849 depicts the farm house in light redat the west façade and the façade at south in a more yellow presumably because of the evening light.

A:VI

Håkantorp, Gränum 10:17, Jämshög parish, Blekinge

Date of construction:	1850's
Building technique:	planed board, timber
Date of investigations:	summer 2003
Investigations, sources:	ocular, interview, cross section, painting.

A:VII

The vicarage, Jämshög parish, Blekinge

Date of construction:	1803
Building technique:	planed paneled timber
Date of investigations:	summer 2003 and summer 2008
Investigations, sources:	ocular, interview, cross section, painting.

Detail of oil painting dated 1850's outcut showing the vicarage south of the church to the right in the picture.

A:VIII

Lilla Holje manor, Jämshög parish, Blekinge

Date of construction:	1811, rebuilt
Building technique:	planed board, timber
Date of investigations:	summer 2003 and summer 2008
Investigations, sources:	interview, painting. literature.

Painting from 1820's depicting the manor white facade together with the red distemper coated wings.

A:IX

Malmbergska gården, Jämshög 8:42, Jämshög parish, Blekinge

Date of construction:	1823
Building technique:	planed board, timber
Date of investigations:	summer 2003 and summer 2008
Investigations, sources:	ocular, interview, cross sections, painting.

Detail of wall painting from N. Röhult with Malmbergska gården at the arrow depicted in a dirty light red hue.

A:X

Norra Röhult 1:66, Jämshög parish, Blekinge

Date of construction:	1850's
Building technique:	planed board, timber
Date of investigations:	summer 2003 and summer 2008
Investigations, sources:	ocular, interview, wall painting.

A:XI

Nybygden 1:23, Jämshög parish, Blekinge

Date of construction:	1856
Building technique:	planed board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, cross sections.

A:XII

Södra Rösiö 1:6, Jämshög parish, Blekinge

Date of construction:	1815
Building technique:	planed board, timber
Date of investigations:	summer 2003
Investigations, sources:	ocular, interview.

A:XIII;

Gränum 41:1, Stövsåkra, Jämshög parish, Blekinge

Date of construction:	1840s
Building technique:	planed board, timber
Date of investigations:	summer 2003
Investigations, sources:	ocular, interviev, wall painting, painting.

Karlshamn

A:XIV

Skottsbergska gården, Karlshamn, Karlshamn parish, Blekinge

Date of construction:	1766
Building technique:	planed board, timber
Date of investigations:	autumn 2009
Investigations, sources:	ocular, interview, cross section.

A:XV

Ronneby 1, Karlshamn, Karlshamn parish, Blekinge

Date of construction:	early 19th century
Building technique:	planed board, timber
Date of investigations:	autumn 2009
Investigations, sources:	ocular, cross section.

Gammalstorp, Ysane and Mjällby parish

A:XVI

Jockarp 1:22, Gammmalstorp parish, Blekinge

Date of construction:	1840s
Building technique:	planed board, timber
Date of investigations:	summer 2003
Investigations, sources:	ocular, interview.

A:XVII

Bjäraryd 2:6, Nya Ryedal, Gammalstorp parish, Blekinge

Date of construction:	mid-18th century
Building technique:	planed paneled timber
Date of investigations:	summer 2003
Investigations, sources:	ocular

A:XVIII

Ryedal 1:22, Gammalstorp parish, Blekinge

Date of construction:	17th century, 1815
Building technique:	plastered brick
Date of investigations:	summer 2003 autumn 2009
Investigations, sources:	ocular, literature, wall painting, archive, photo interview.

Photo: Johan Adolf Nilson, 1927. Blekinge museum archive.

Painting from 1917 depicting Ryedal with the new extended façade from 1815..

A:XIX;

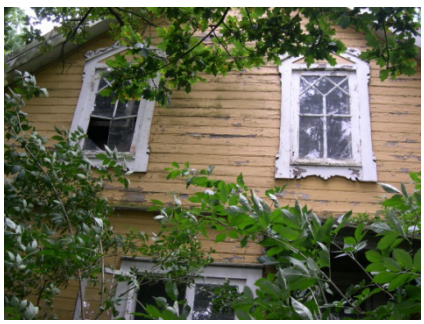
Ekeberg, Ysane 3:2, Ysane parish, Blekinge

Date of construction:	1870s
Building technique:	planed board, timber
Date of investigations:	summer 2007
Investigations, sources:	ocular, cross section, interview.

A:XX

Ysane 3:3, Ekengård, Ysane parish, Blekinge

Date of construction:	1860s
Building technique:	planed board, timber
Date of investigations:	summer 2007
Investigations, sources:	ocular, cross sections.



A:XXI;

Ysane 26:1, Lönneborg, Ysane parish, Blekinge

Date of construction:	1820
Building technique:	plastered brick
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview.

A:XXII;

Ysane 11:12, Stensborg, Ysane parish, Blekinge

Date of construction:	1815
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, cross sections, interview, photo.

A:XXIII;

Hosaby 12:8, Hörvik fishing village, Mjällby parish, Blekinge

Date of construction:	first part of the 19th century
Building technique:	planed board, timber
Date of investigations:	summer 2008.
Investigations, sources:	ocular, interview, photo.

Photo: unknown. Private collection.

A:XXIV;

Hosaby 13:15, Hörvik fishing village, Mjällby parish, Blekinge

Date of construction:	19th century
Building technique:	planed board, timber
Date of investigations:	summer 2008.
Investigations, sources:	ocular, interview, archives.

A:XXV;

Hosaby 15.7, Hörvik fishing village, Mjällby parish, Blekinge

Date of construction:	19th century
Building technique:	planed board, timber
Date of investigations:	summer 2008.
Investigations, sources:	ocular, interview, archives.

A:XXVI;

Hosaby 17:23, Hörvik fishing village, Mjällby parish, Blekinge

Date of construction:	19th century
Building technique:	planed board, timber
Date of investigations:	summer 2008.
Investigations, sources:	ocular, interview, cross section.

A:XXVII;

Hörby 5:1, Mjällby parish, Blekinge

Date of construction:	first part of the 19th century
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview.

To the left one of few farm houses in red

A:XXVIII;

Hörby 6:2, Mjällby parish, Blekinge

Date of construction:	1841
Building technique:	plastered bricks
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, investigations.

A:XXIX;

Hörby 8:1, Mjällby parish, Blekinge

Date of construction:	1858
Building technique:	brick building
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, paintings, photos.

Photo: Unknown, Private collection

A:XXX;

Hörby 1:95, Hovgården, Mjällby parish, Blekinge

Date of construction:	late 18th century
Building technique:	plastered bricks
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview.

A:XXXI;

Knutstorp 1:10, Knutstorp, Mjällby parish, Blekinge

Date of construction:	1775
Building technique:	plastered bricks
Date of investigations:	summer 2003
Investigations, sources:	ocular, interview, literature.

Photo: Johan Adolf Nilson, 1910. Blekinge museum archive

A:XXXII;

Mjällby 2:35, Knutsbygd, Mjällby parish, Blekinge

Date of construction:	late 18th century
Building technique:	plastered bricks
Date of investigations:	summer 2003 and summer 2009.
Investigations, sources:	ocular, interview, wall painting.

A:XXXIII;

Hörby 11:2, Slättåkra, Mjällby parish, Blekinge

Date of construction:	1840
Building technique:	plastered bricks
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, photo

Photo: Johan Adolf Nilson, 1910. Blekinge museum archive.

A:XXXIV;

Istaby 1:43:2, Kullarp, Mjällby parish, Blekinge

Date of construction:	18th century
Building technique:	bricks
Date of investigations:	summer 2008
Investigations, sources:	ocular, photo, literature.

A:XXXV;

Istaby 6:13, Östra Torsö fishing village, Mjällby parish, Blekinge

Date of construction:	1880's
Building technique:	planed board and cement board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, photos.

Photo: Unknown, Private collection

A:XXXVI;

Istaby 9:28, Mjällby parish, Blekinge

Date of construction:	1880's
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, cross sections, photos.

A:XXXVII;

Istaby 11:7, Istaby, Mjällby parish, Blekinge

Date of construction:	1880's
Building technique:	planed board, timber
Date of investigations:	summer 2004
Investigations, sources:	ocular, interview, cross sections, photos.

Photo: unknown. Private collection

A:XXXVIII;

Istaby 14:2, Mjällby parish, Blekinge

Date of construction:	1880's
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview cross sections.

A:XXXIX;

Istaby 52:1, Östra Torsö fishing village, Mjällby parish, Blekinge

Date of construction:	mid 19th century
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, cross sections, photo.

Photo: Unknown, Private collection

A:XXXX;

Istaby 54:1, Östra Torsö fishing village, Mjällby parish, Blekinge

Date of construction:	late 19th century
Building technique:	planed board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, cross sections.

A:XXXXI;

Enaholmsv 6, Östra Torsö fishing village, Mjällby parish, Blekinge

Date of construction:	second half of 19th century1
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, cross sections.

A:XXXXII;

Stiby 56:1, Östra Torsö fishing village, Mjällby parish, Blekinge

Date of construction:	1850's
Building technique:	planed board, timber
Date of investigations:	summer 2003 and 2008
Investigations, sources:	ocular, interview, photos. Colour scheme partly reconstructed from investigations.

Photo: Unknown, Private collection

A:XXXXIII;

Stiby 8:21, Kungsåsa, Mjällby parish, Blekinge

Date of construction:	1850's
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, photos, cross sections.

Photo: Unknown. Private collection.

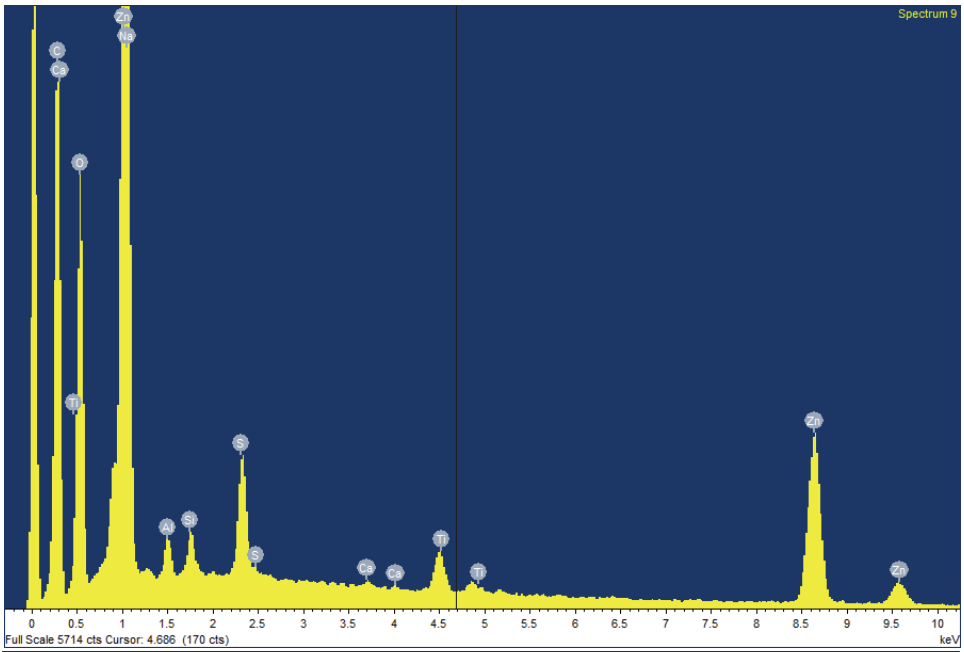
A:XXXXIV;

Stiby 56:12, Mjällby parish, Blekinge

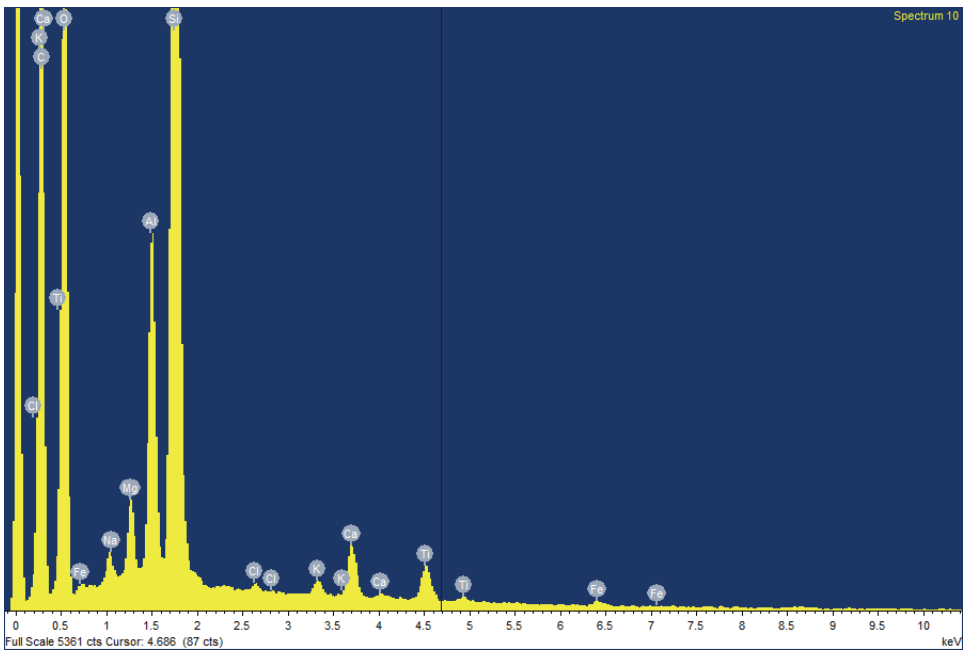
Date of construction:	1865
Building technique:	planed board, timber
Date of investigations:	summer 2008
Investigations, sources:	ocular, interview, cross sections.

Appendix B

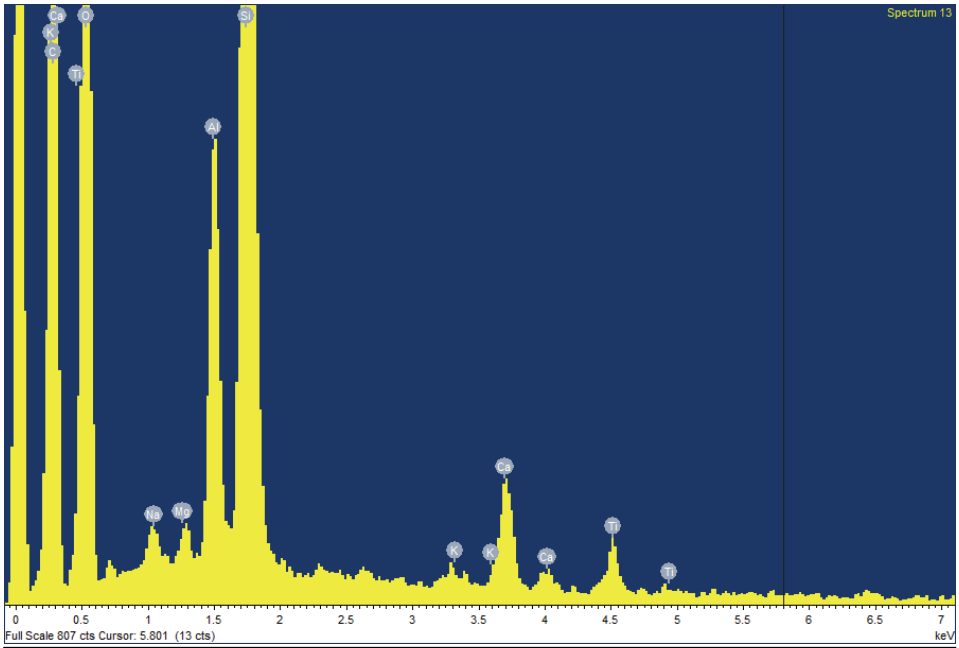
B:III; Bommarstorp 1:11. Sample from board, north façade.



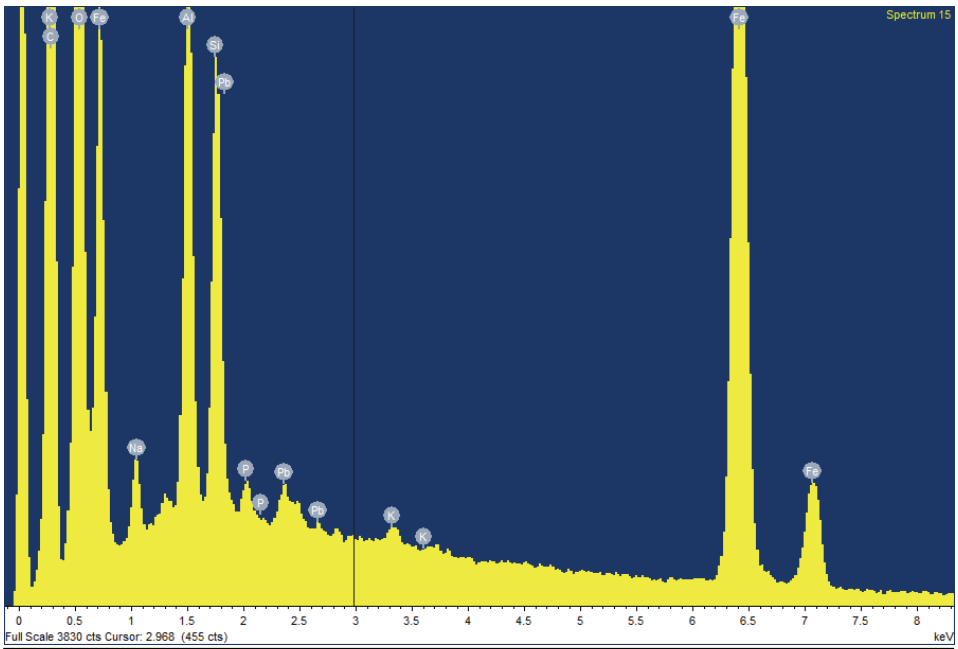
Bommarstorp, light blue layer. Spectrum 9. Titanium and Zinc, Zinc oxide dominating.



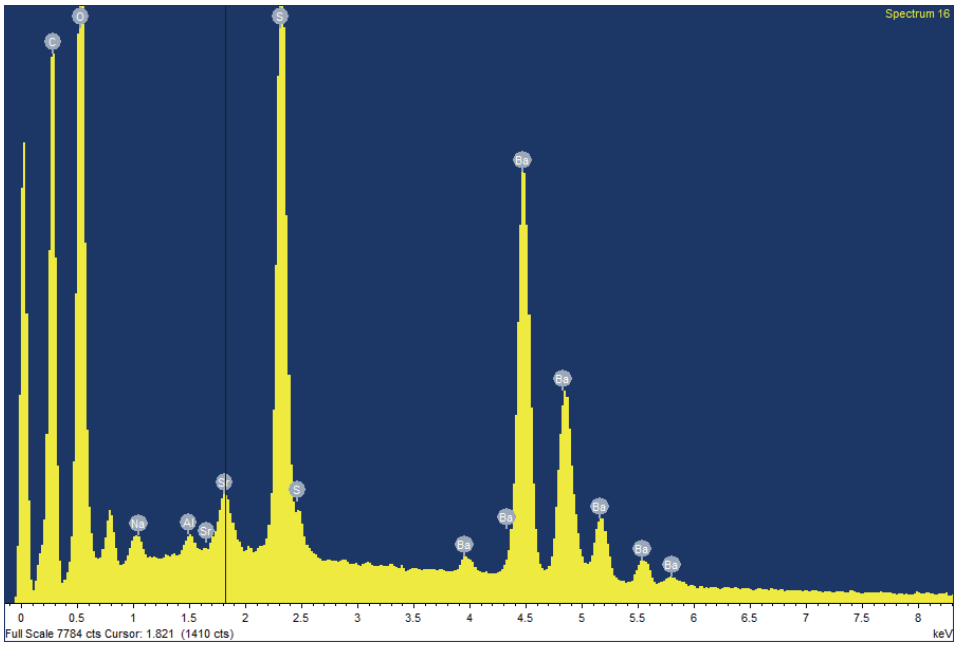
Bommarstorp, outer white layer outside blue layer. Spectrum 10. Small quantities of Titanium dioxide. Al, Si and Ca.



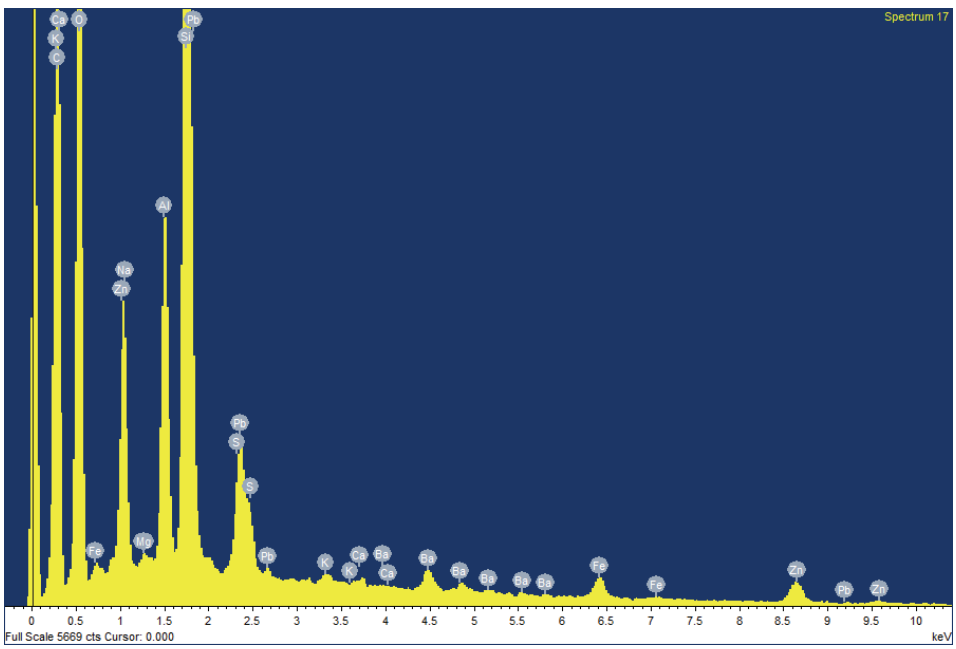
Bommarstorp, outer white layer. Spectrum 13. Al and Si. Titanium dioxide.



Bommarstorp, intense red part in the red layer. Spectrum 15. Highly ferruginous. Al and Si, low quantities of Lead.

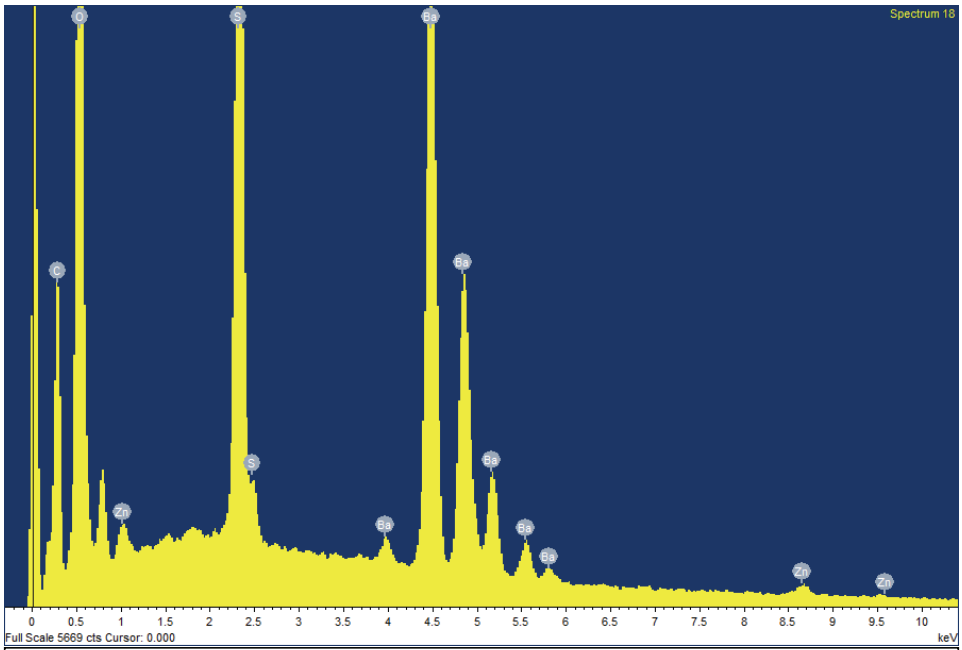


Bommarstorp." SEM-White parts" Spectrum 16. Containing Barium sulphate and small contents of Si and Al.

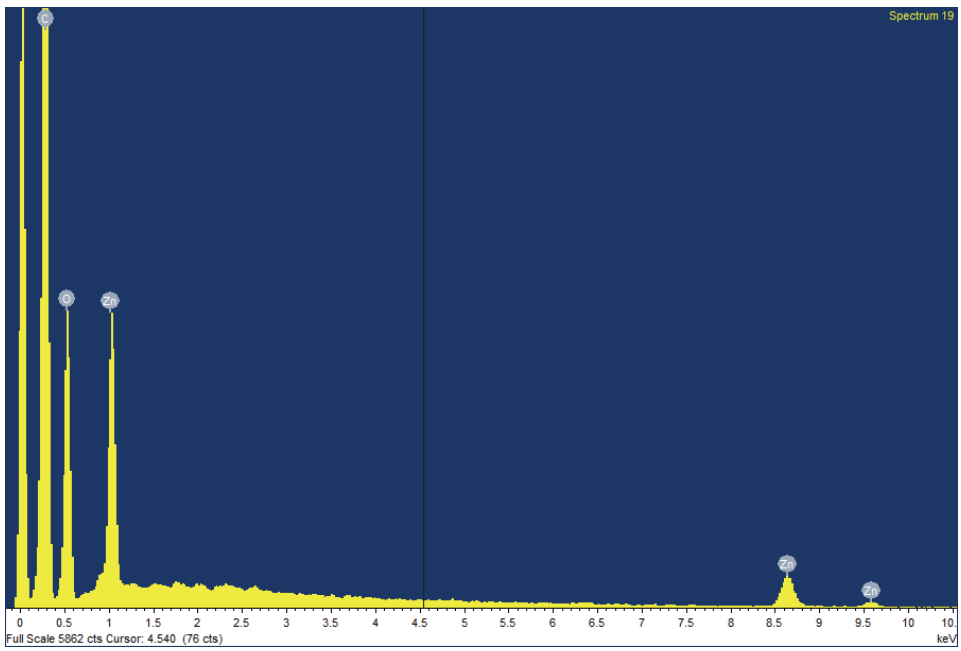


Bommarstorp. White layer. Spectrum 17. Bigger white areas with Lead and Barium sulphate some traces of Ferro oxide.

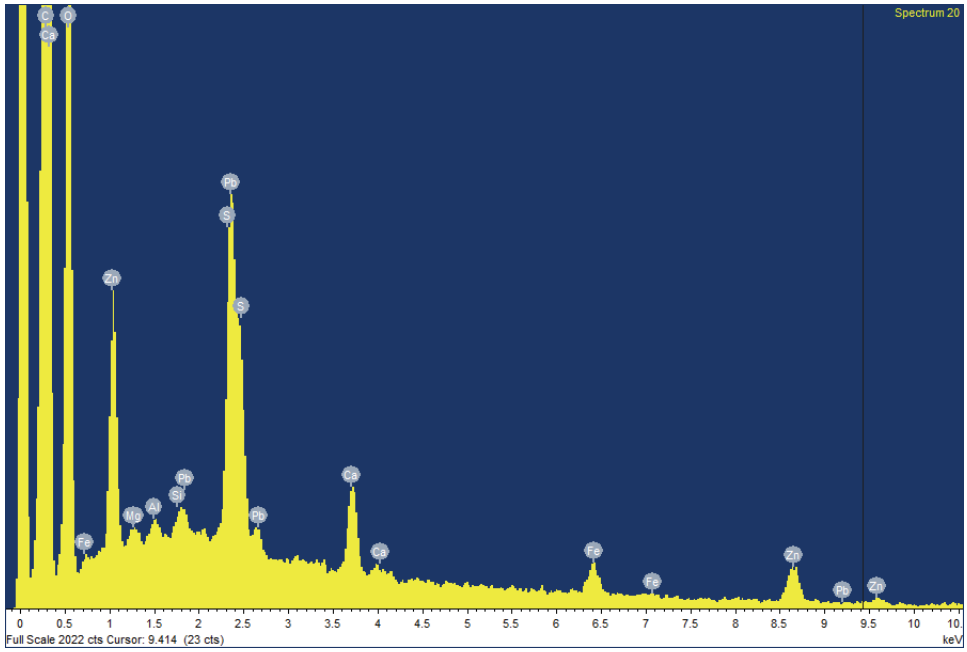
B:IV; Erikstorp 1:24. Sample from board, south façade.



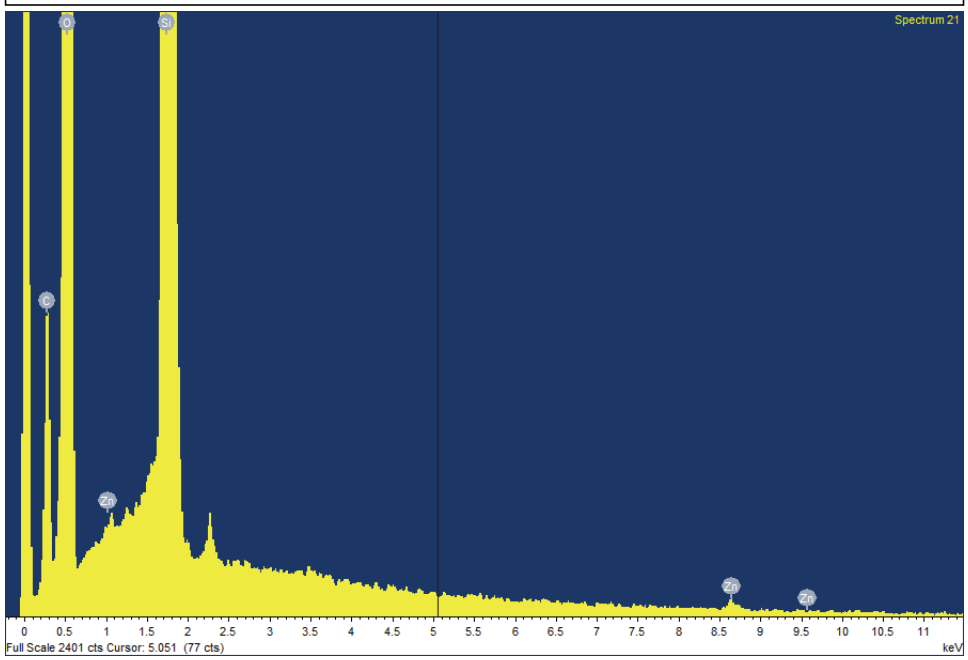
Erikstorp; white particles in inner most white layer. Spectrum 18. Barium sulphate. Small quantities of Zinc oxide.



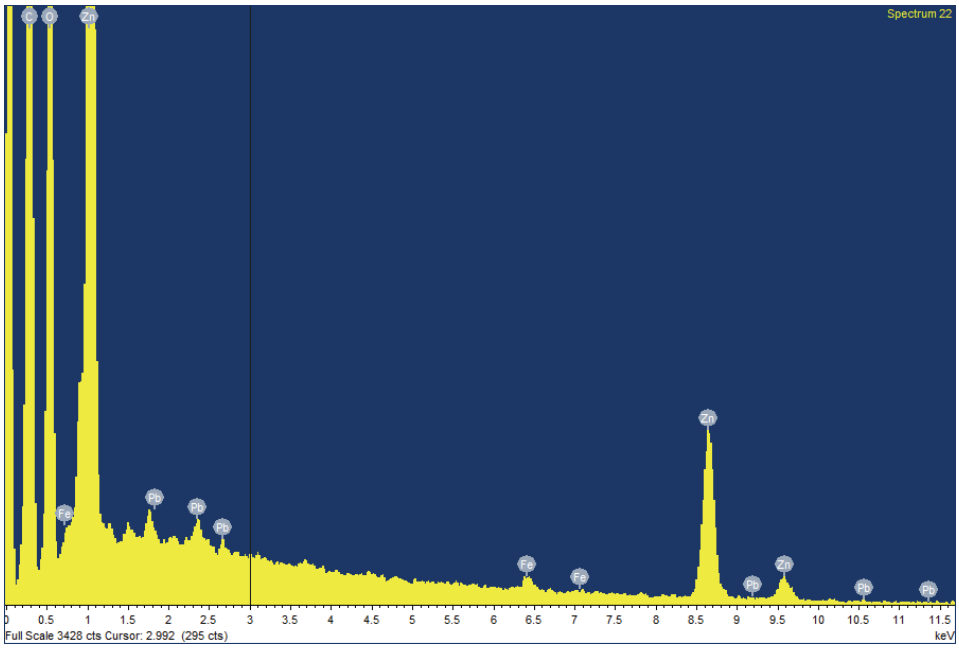
Erikstorp; grey mass surrounding white particles. Spectrum 19. Zinc oxide.



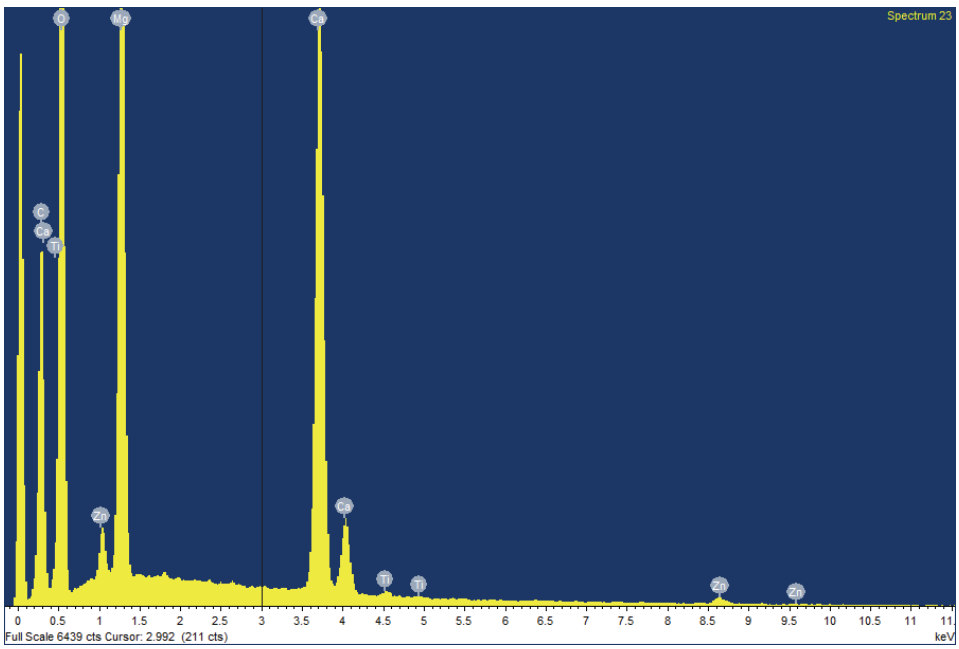
Erikstorp; part of the red layer. Spectrum 20. Mg-, Al- och Si contents are low. Zn, Fe and Pb contents.



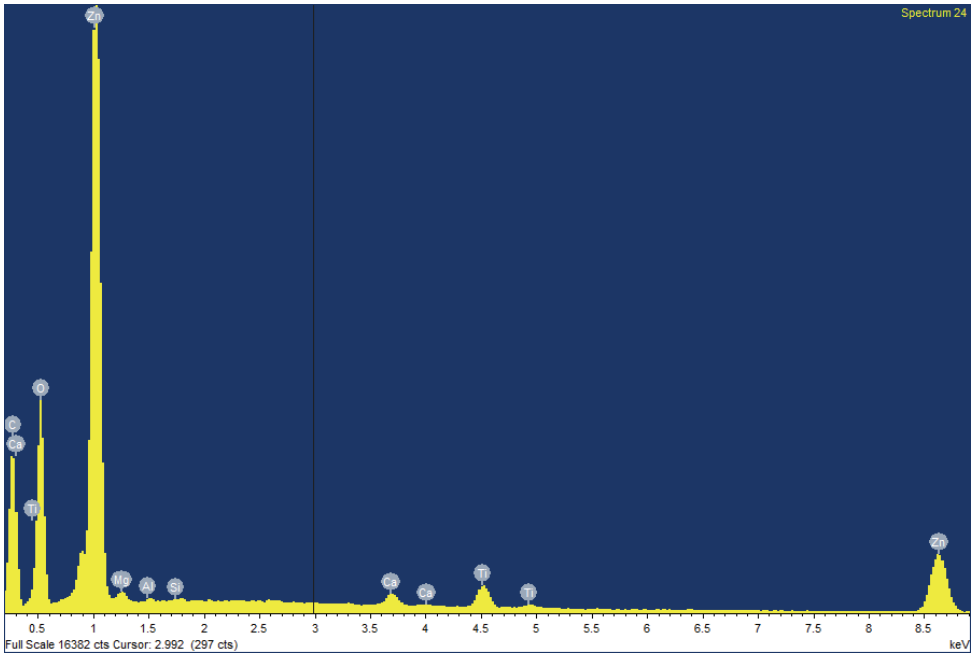
Erikstorp; homogenous field in the yellow layer. Spectrum 21. Practically pure quarts Si+ O2, traces of zinc oxide white, eventually traces of sulphur.



Erikstorp; fourth layer from outside. Spectrum 22. Zinc oxide

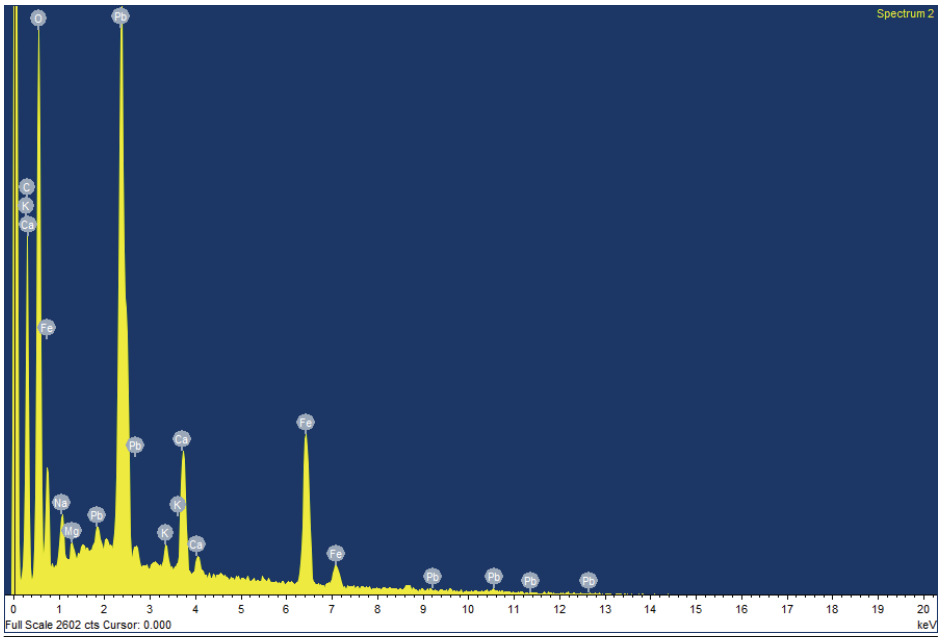


Erikstorp; third layer of white from the outside. Spectrum 23. Small contents of zinc oxide and Ti. High quantities of Mg and Ca.

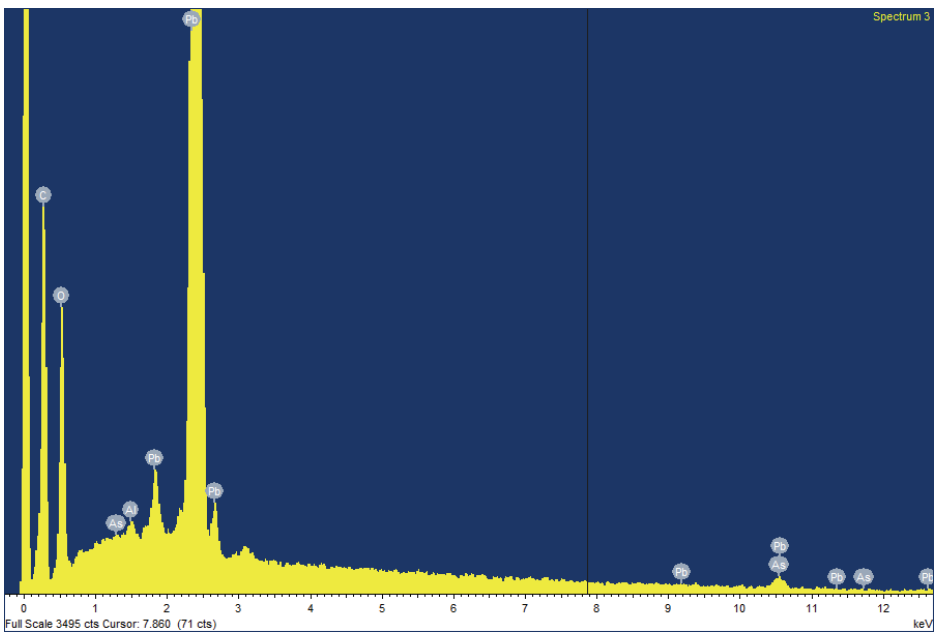


Erikstorp; white particle. Spectrum 24. Ti and Zn and really small quantities of Al and Si.

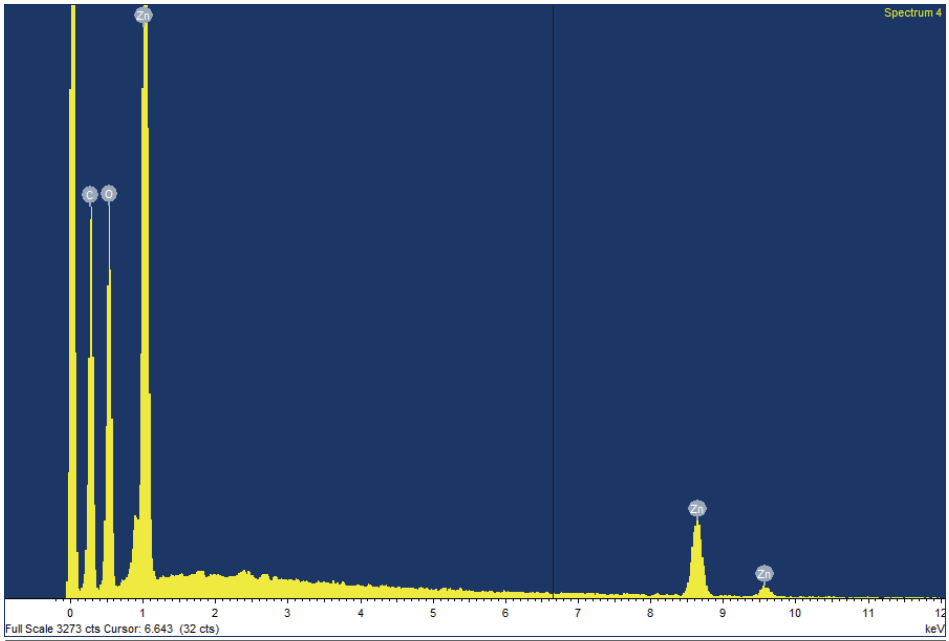
B:V; Hemmingsmåla 1:3. Sample from board.



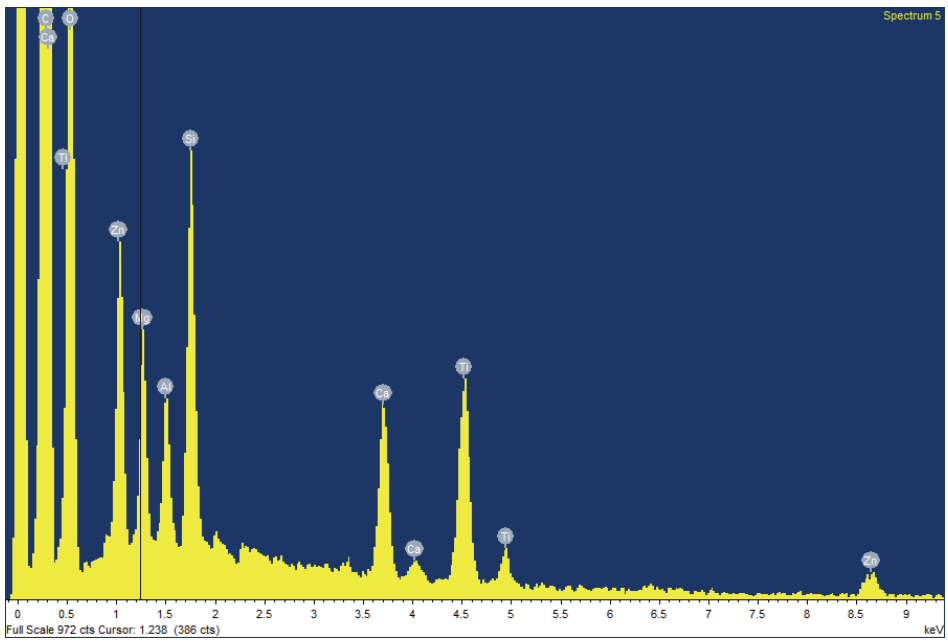
Hemmingsmåla; red layer. Spectrum 2. Ferrugenous, low Lead contents. No Silicon.



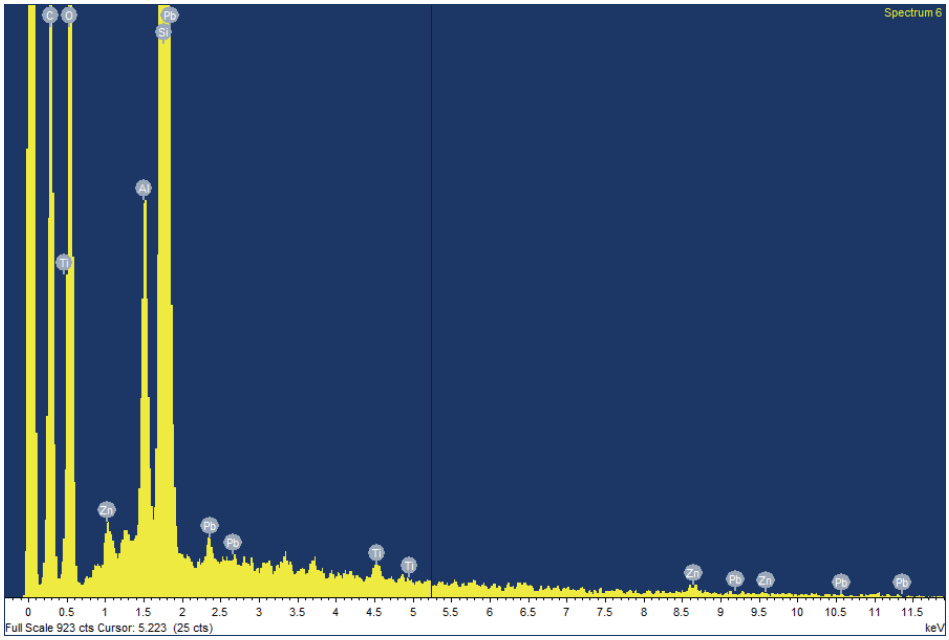
Hemmingsmåla; red layer. Spectrum 3. High contents of Lead. Ferrugenous low.



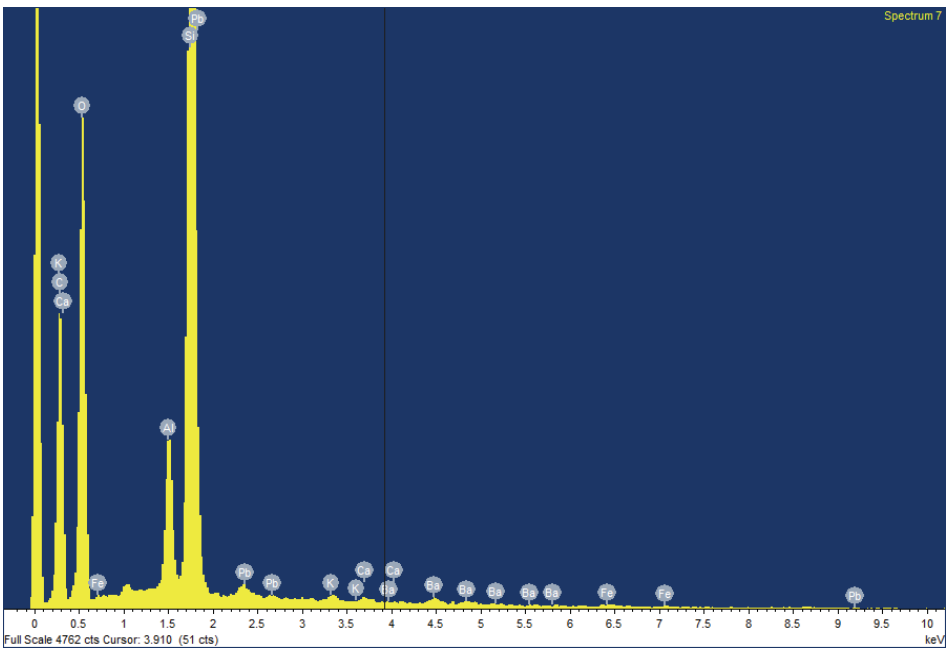
Hemmingsmåla; most inner white layer. Spectrum 4. Zinc oxide.



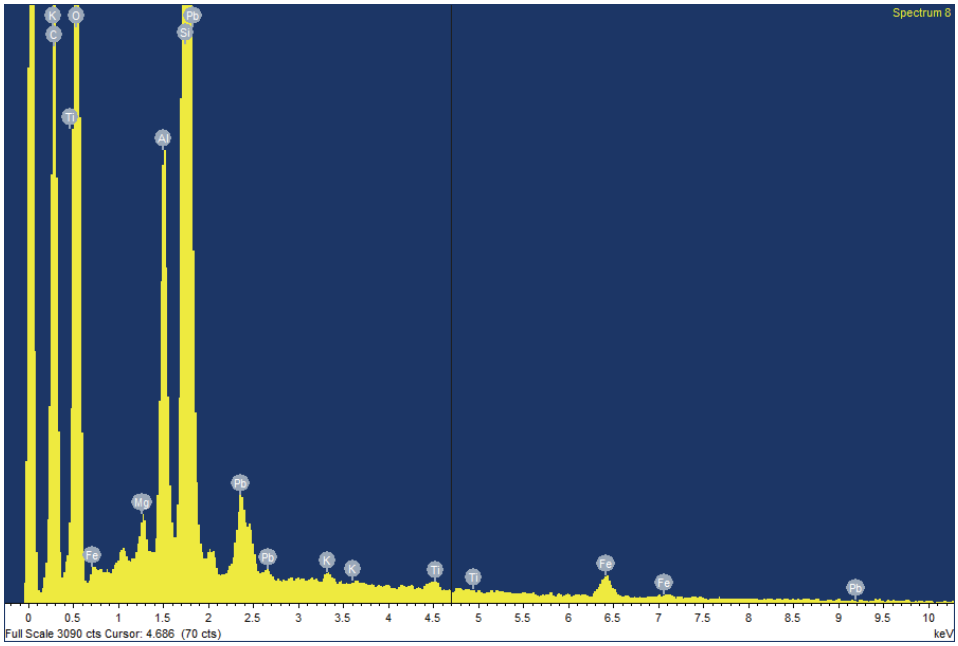
Hemmingsmåla; white layer. Spectrum 5. Titanium dioxide and Zinc oxide.



Hemmingsmåla, grey layer in between white. Spectrum 6, Pb and Zn quantities low.

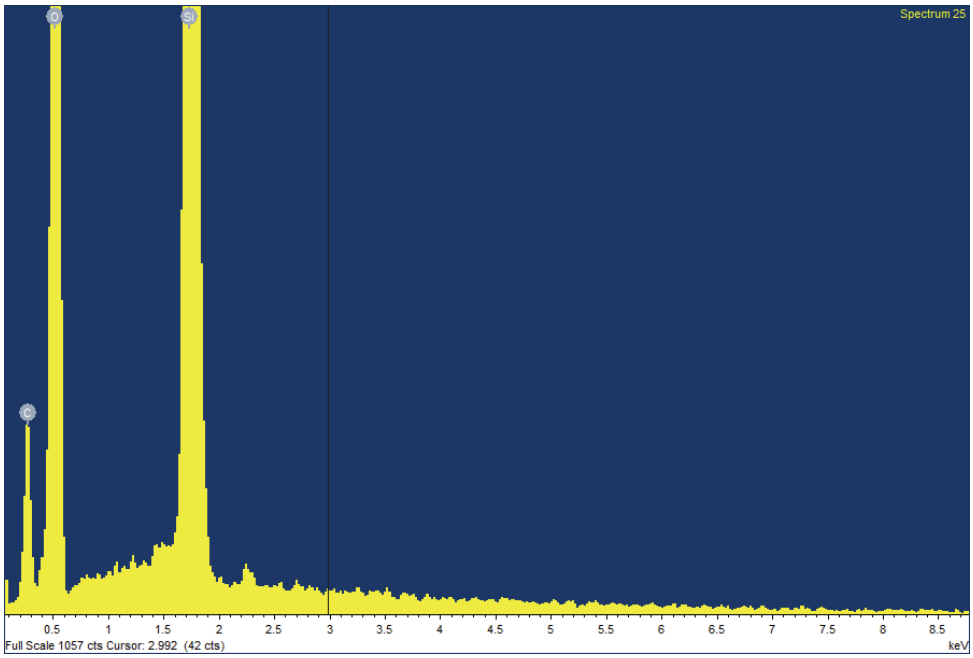


Hemmingsmåla, part of the red layer. Spectrum 7. Pb very low, also Ba low. High contents of quarts.

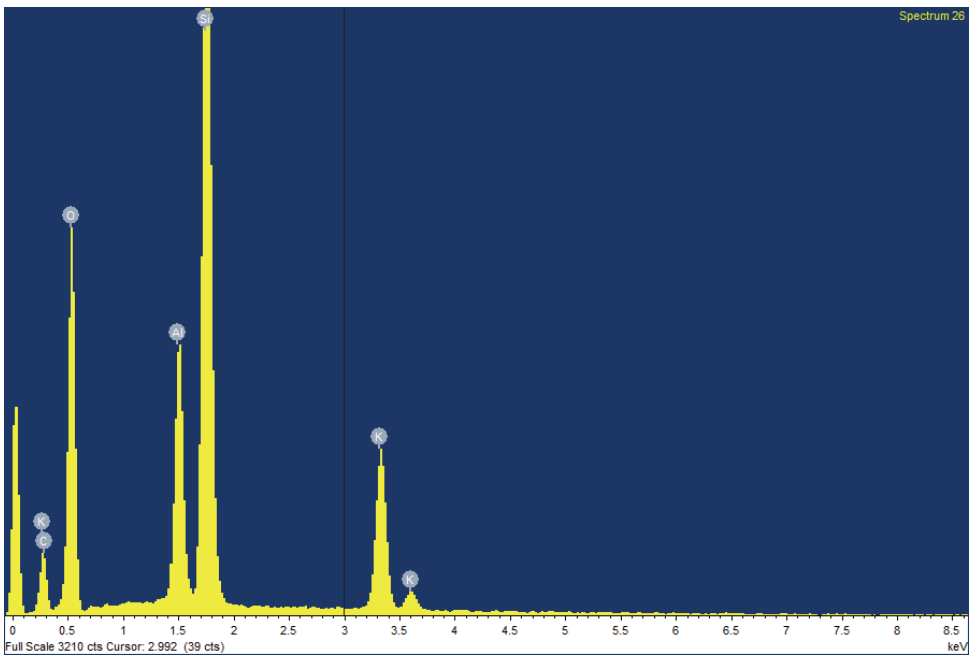


Hemmingsmåla, intensely red particle in red layer. Spectrum 8. Ferrugenous and Lead.

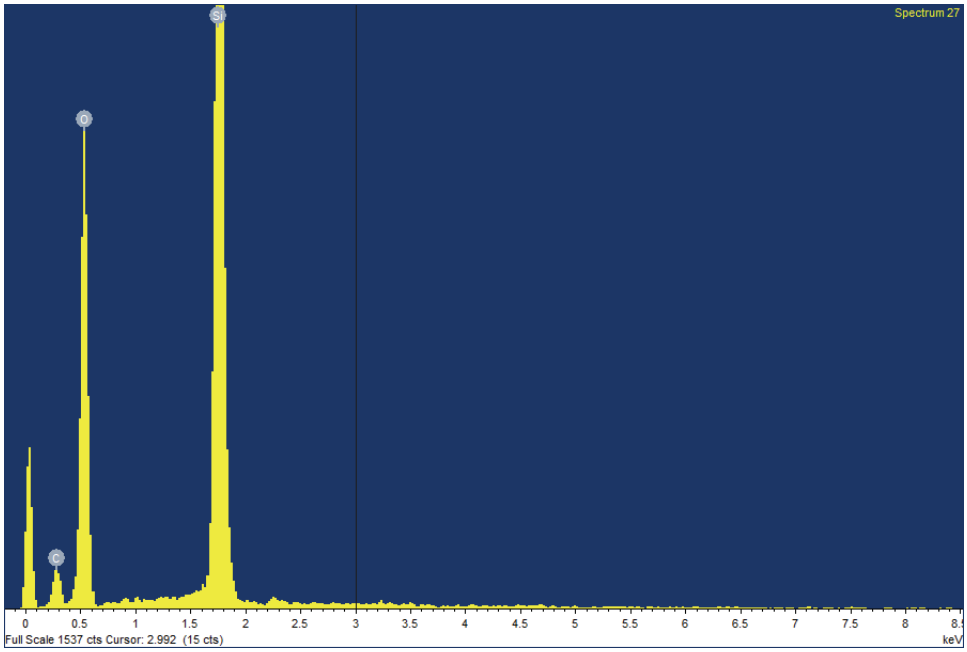
B. N. Röhult. Soil sample.



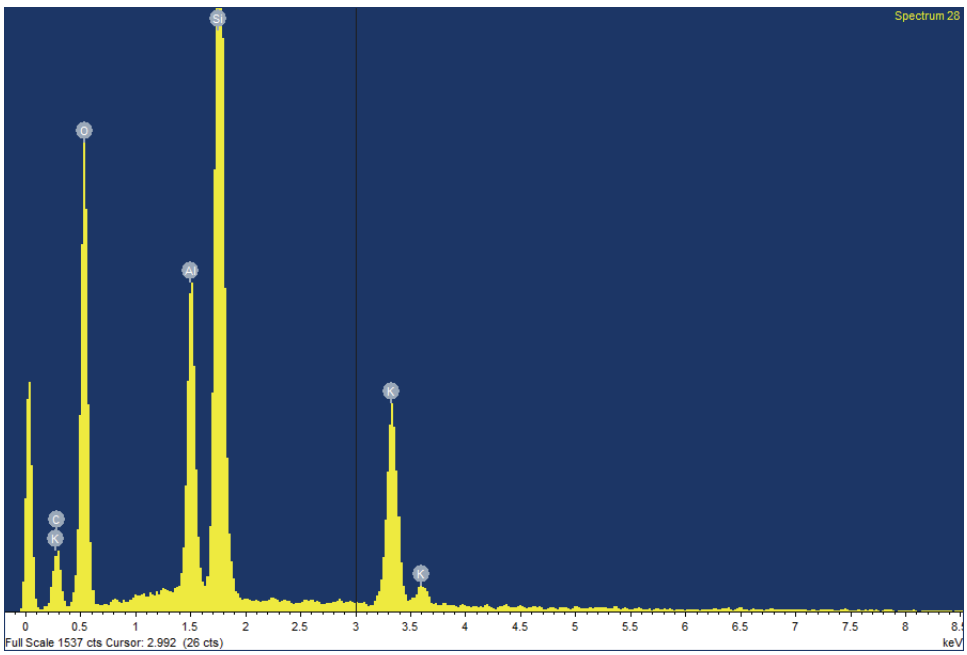
N. Röhult. Soil sample. Spectrum 25. Practically pure quarts.



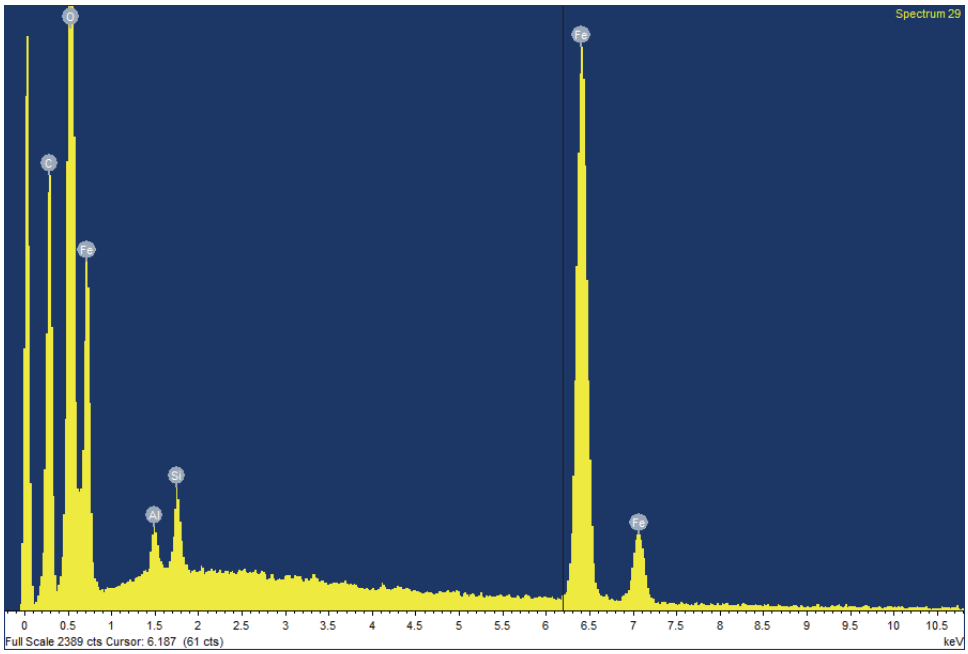
N. Röhult. Soil sample. Spectrum 26. K-feldspar.



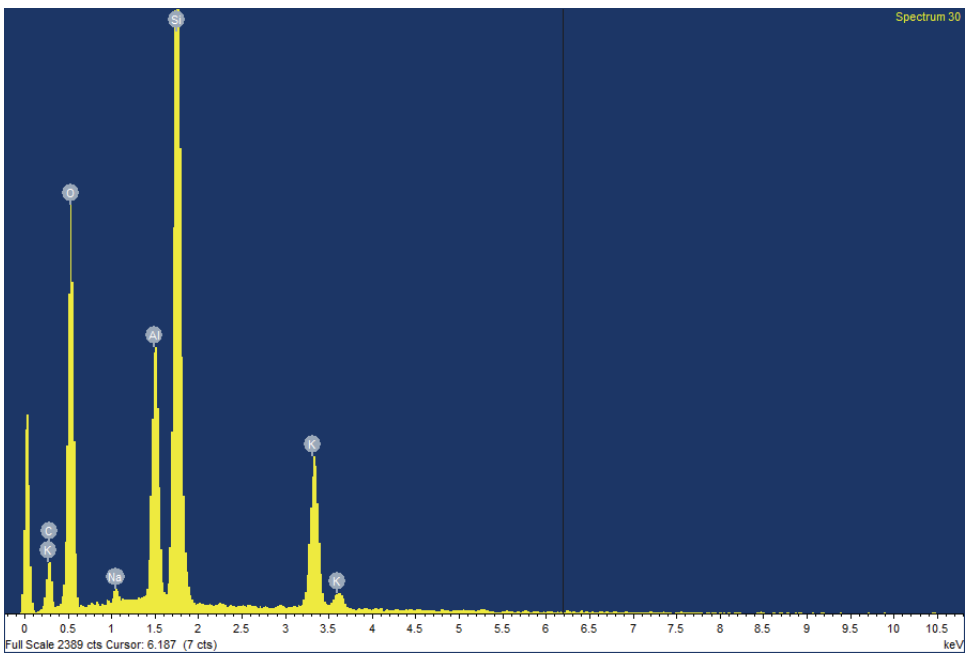
N. Röhult. Soil sample. Spectrum 27. Quarts.



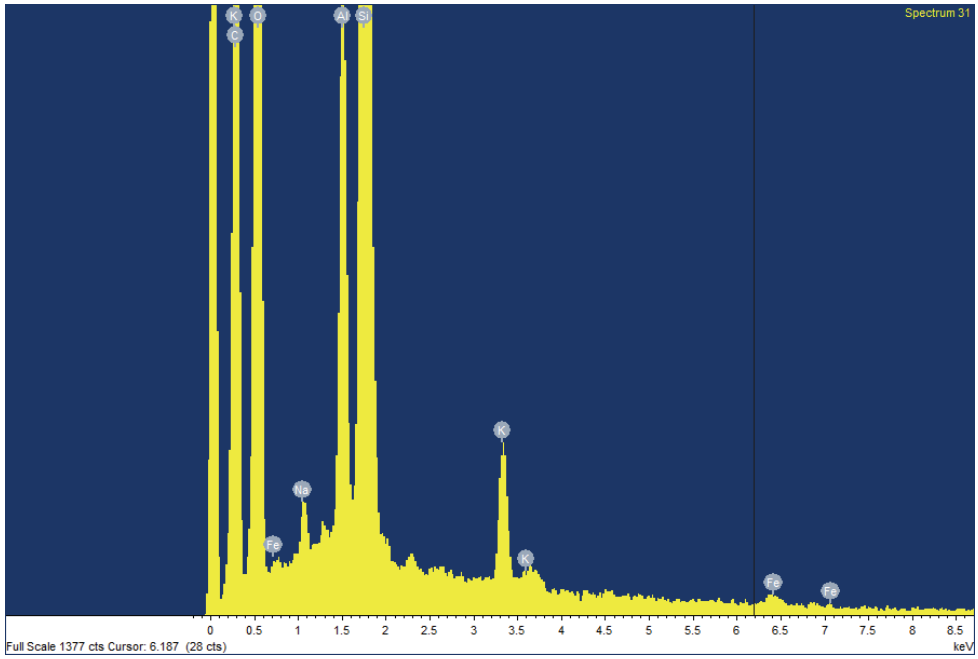
N. Röhult. Soil sample. Spectrum 28. Feldspar.



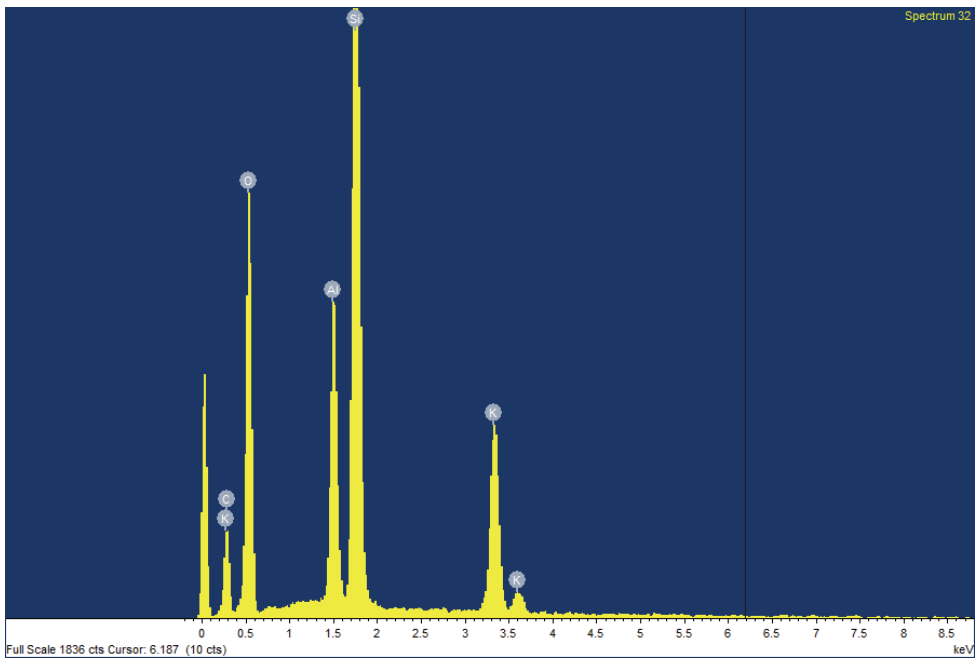
N. Röhult. Soil sample. Spectrum 29. Ferric oxide alternative ferric hydroxide with mainly aluminium and silicon.



N. Röhult. Soil sample. Spectrum 30. Feldspar with a component of albite component.

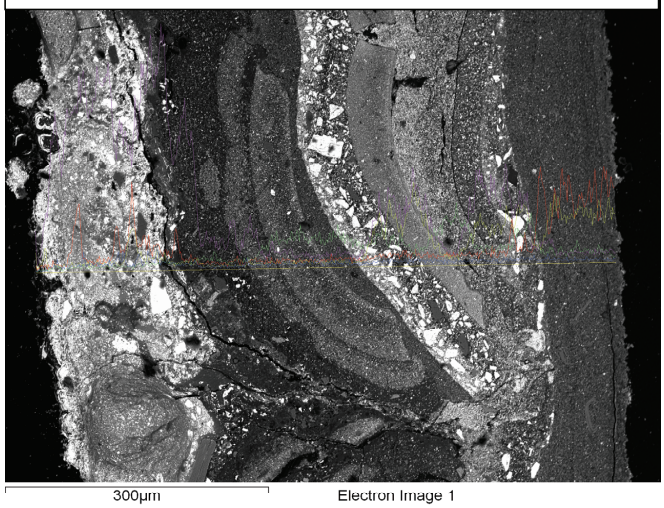


N. Röhult. Soil sample. Spectrum 31. K-feldspar with a low contents of albite component and traces of Fe- Mg-phases.

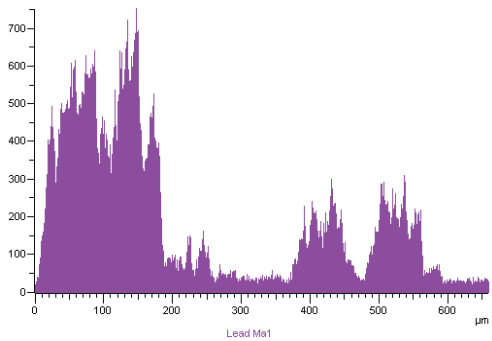


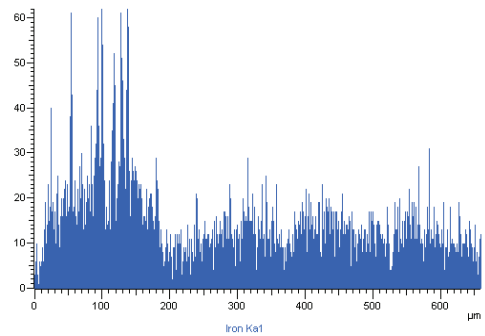
N. Röhult. Soil sample. Spectrum 32. Feldspar.

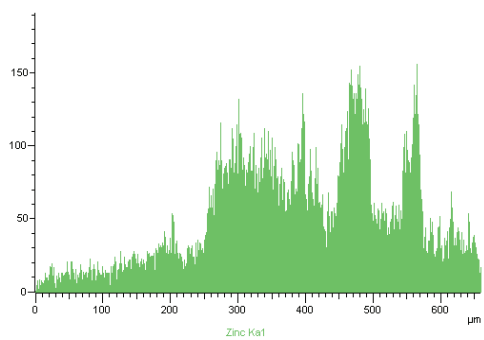
B:III; Bommarstorp, Façade board, the most inner layer of paint from the left to the right.

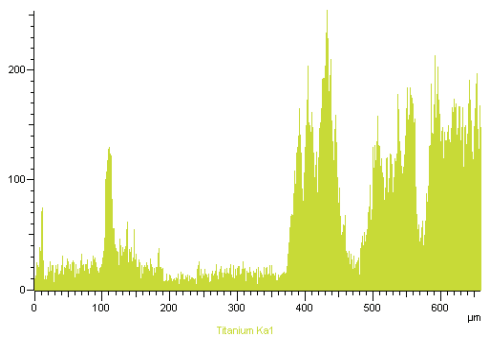


Comments: Line scan. The occurrence of Iron *(blue)* and Lead *(purple)* is most frequent in the inner and oldest layer of red paint. While the more modern white pigments secondly Zinc *(green)* oxide and later Titanium *(yellow)* dioxide are more frequent in the outer and younger layers of white. The youngest layer is yellow with titanium oxide as the white pigment.







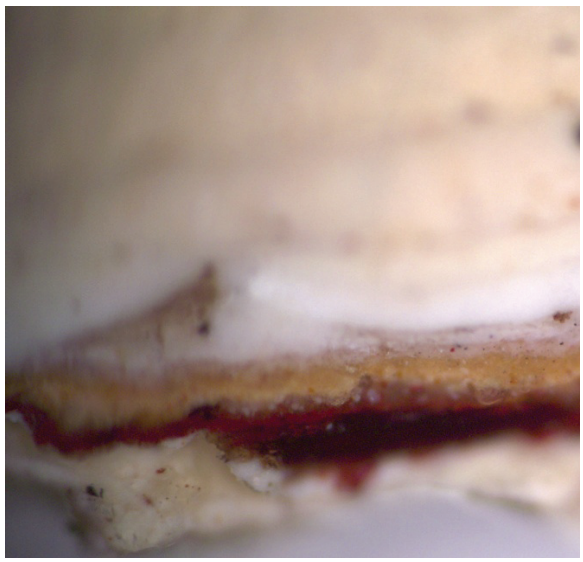


Appendix C

Jämshög parish

C, Baggeboda 1:1, Jämshög parish, Blekinge

Cross section of sample from board, north facade

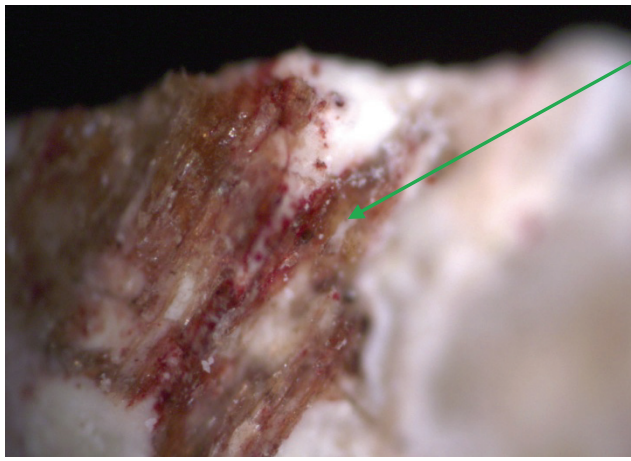


Detail of the inner layers, a couple of light yellow layers outermost followed by:

Light red
Yellow
Red
Finally light yellow paint from outer layers

Back of the same sample with red and yellow layers.

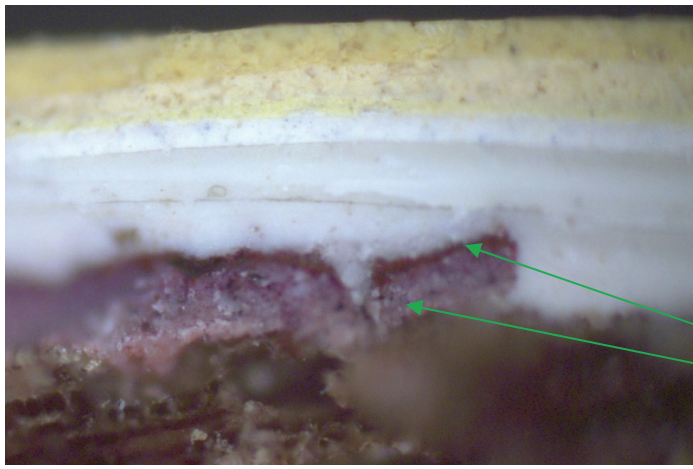
Microscopic photo of back of sample from corner, north façade



Red paint remains close to the wood and in the unclear part to the right, grey.

C:I; Boa 3:11, Jämshög parish, Blekinge

Cross section of sample from the northern facade
Board



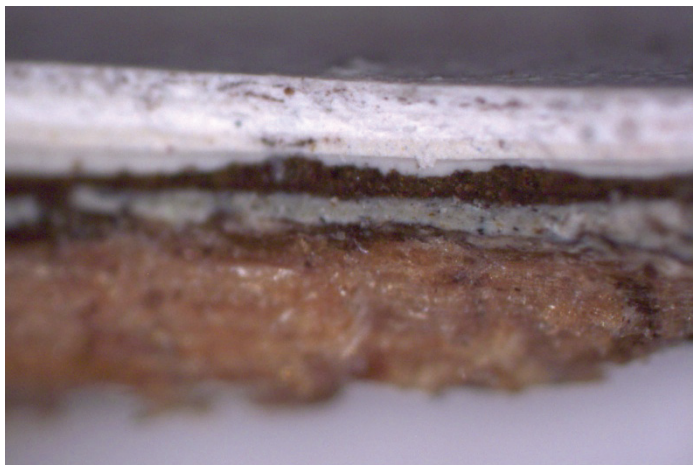
Yellow
Brownish yellow

White

White
White

Red
Light red
Wood

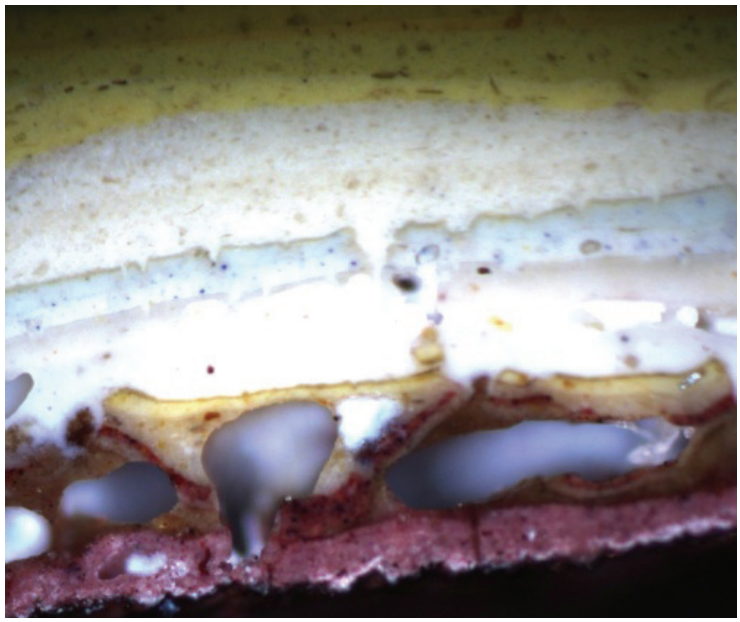
Cross section of sample from corner, north façade



White
White
White
Ev. grey
Brown
Grey
Wood

C:II; Bommarstorp 1:11, Jämshög parish, Blekinge

Cross section of sample from board at the northern facade



Yellow

Yellow

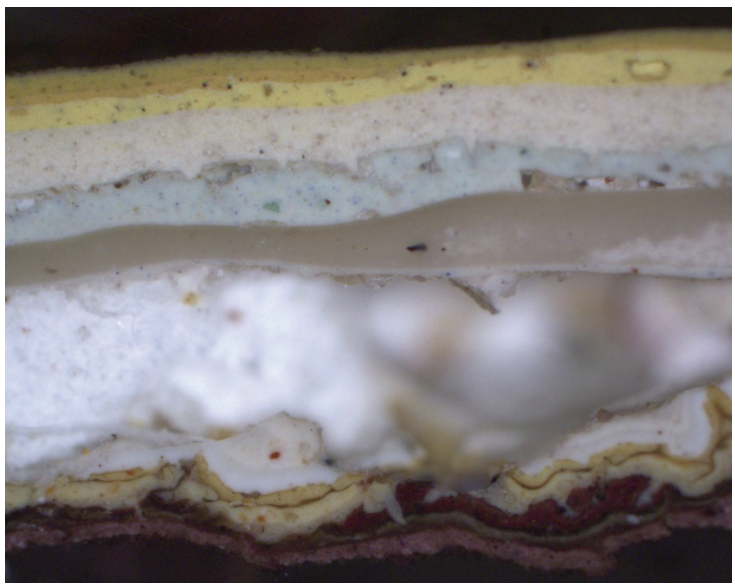
White
White
Light blue

White

Yellow

Rred
Light red

Cross section of sample from board west facade



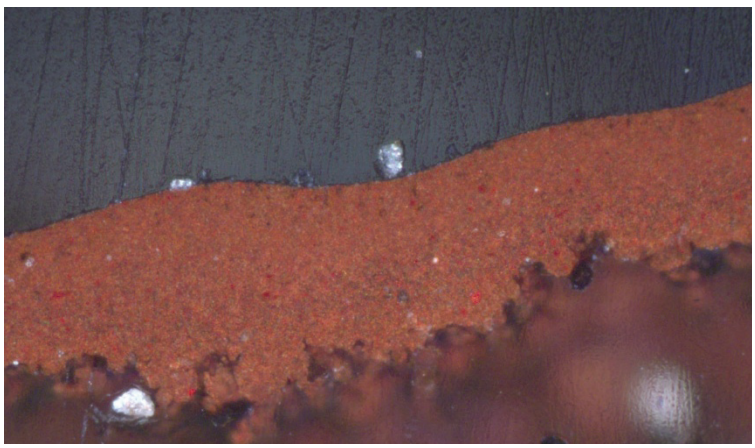
Yellow
Yellow
White

Light blue
Grey
White

Yellow
Yellow
Light brown
Red
Light brown
Brown
Light red

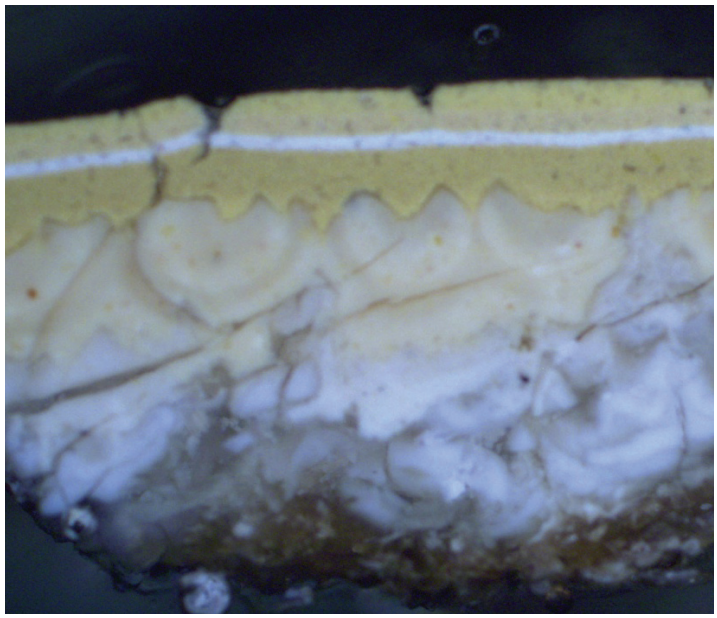
Back of sample from board north facade; red as the innermost layer and brown and light brown behind.

Cross sectrion of sample from the dwell curb with red distemper.



C: III; Ekne gård, Jämshög 8:4, Jämshög parish, Blekinge

Cross section of sample from the southern façade board



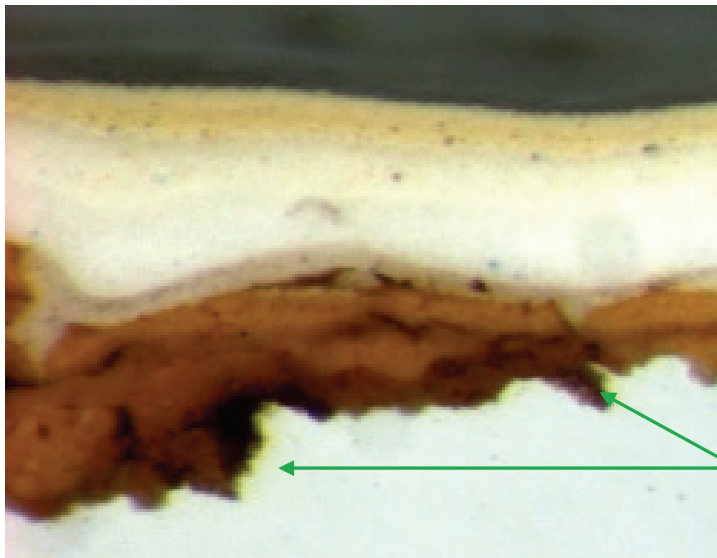
Yellow
White
Yellow

Light yellow
Brown
Light yellow

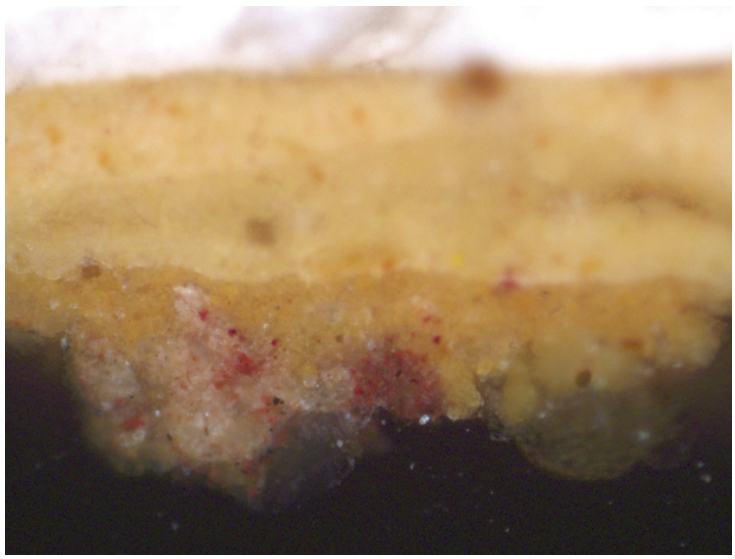
White

C: IV; Erikstorp 1:24, Jämshög parish, Blekinge

Cross section of sample from the west façade panel.

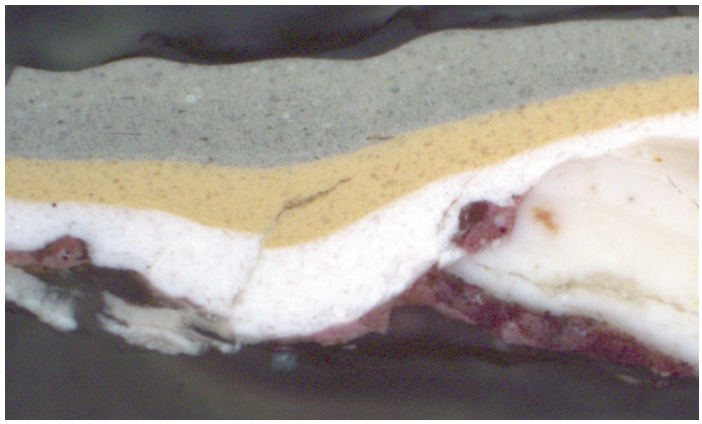


Detail of the red pigment in the sample above



C: V; Hemmingsmåla 1:3, Jämshög parish, Blekinge

Cross section of sample from board at the southern façade



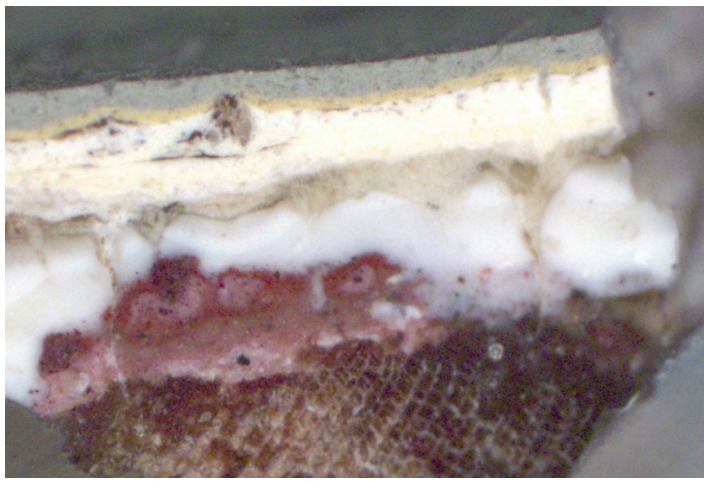
Grey
Yellow
White

White

White

Light red

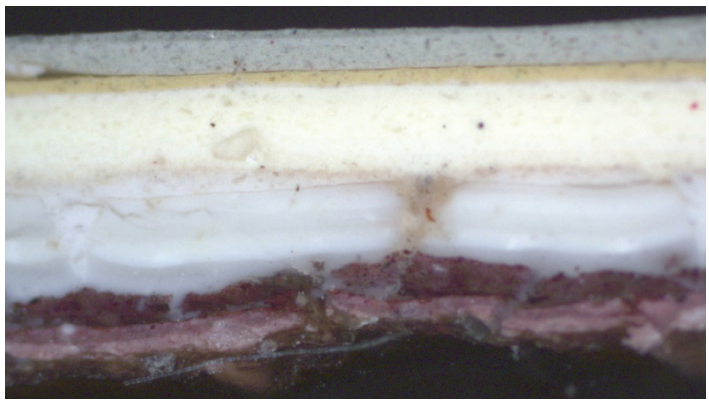
Cross section of sample from board at the east facade towards the yard.



Grey
Yellow
White
White
Yellowish brown
White
Red
Light red

Wood

Cross section of sample from board at the north facade



Grey
Yellow
White
White
Light brown
White
White
Red
Light red
Light red

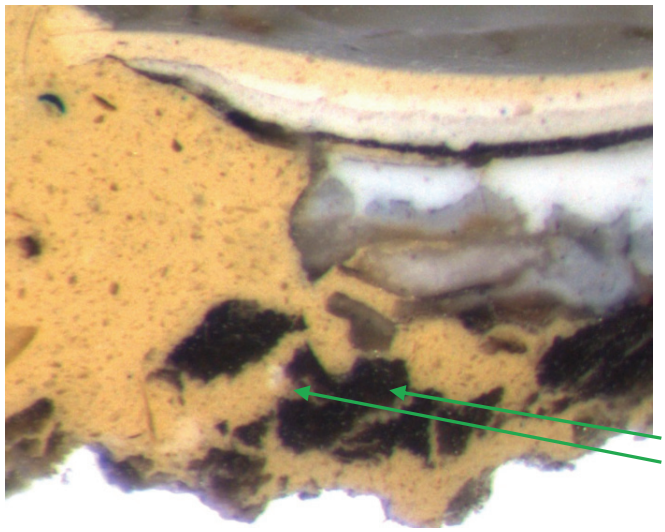
Cross section of dsmple from board at the south facade

Grey
Yellow
White
White
White

Light red

C:VI; Håkantorp, Gränum 10:17, Jämshög parish, Blekinge

Cross section of sample from northern façade panel



Yellow
White

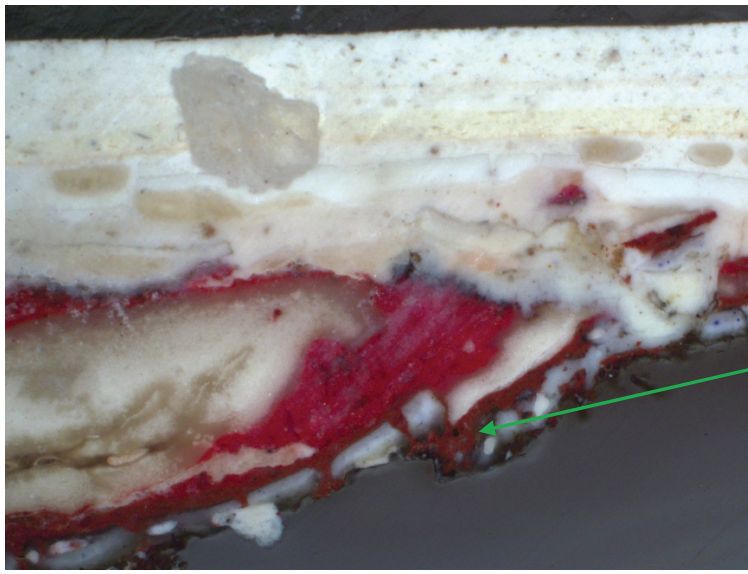
White

Grey

Yellow
Particles of
black and
red

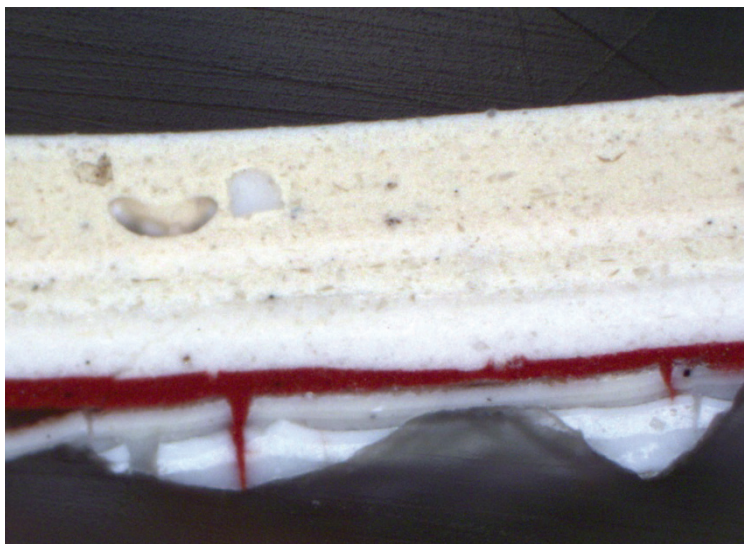
C:VII; The vicarage, Jämshög parish, Blekinge

Cross section of sample from corner



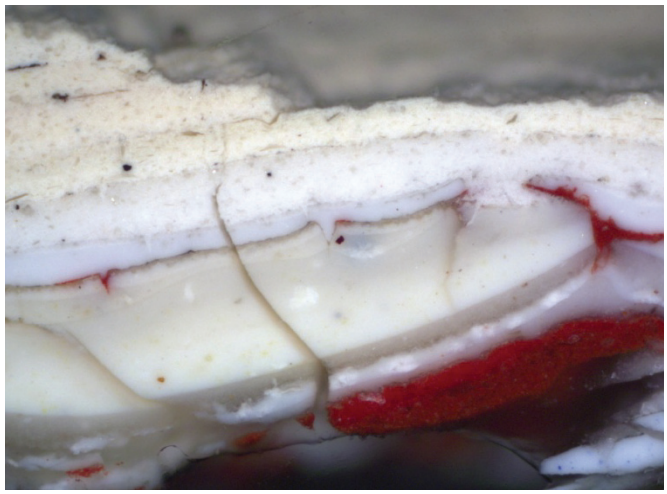
White
White
White
Yellow
White
White
White
Strong red
White
Red

Cross section of sample from board at top of gable, southwest



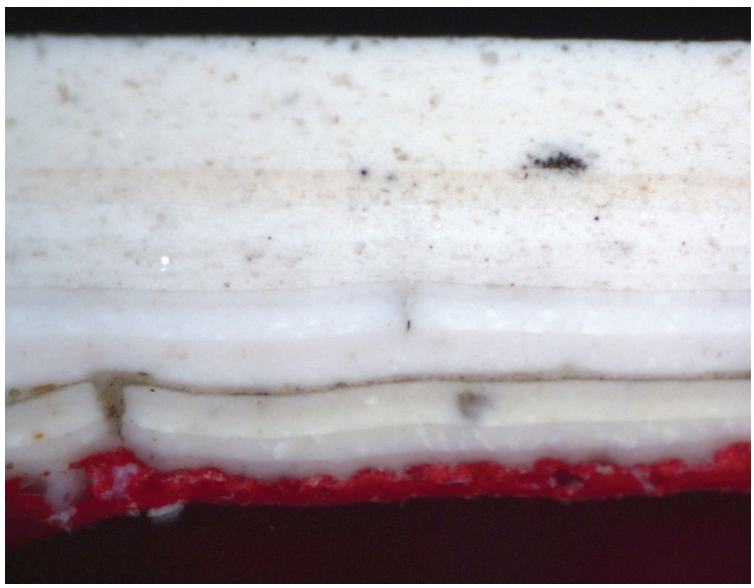
White
White
White
White
White
White
Strong red
White
White
White

Cross section of sample from moulding at top of gable, southwest



White
White
White
White
White
White
Strong red
White
White
White
The same red layer has passed through the white at the bottom

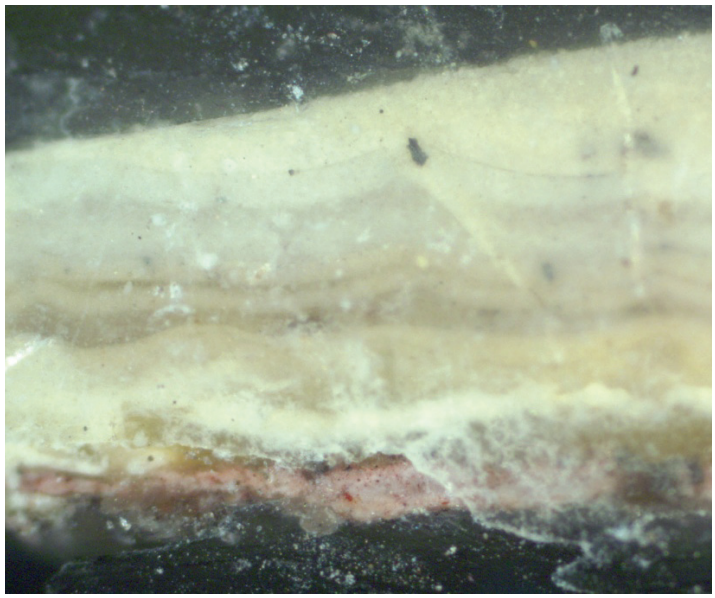
Cross section of window framing, east façade



White
White
White
White
White
White
White
White
Grey
White
White
White
Strong red

C:IX; Malmbergska gården, Jämshög 8:42, Jämshög parish, Blekinge

Cross section of sample from board south façade



White

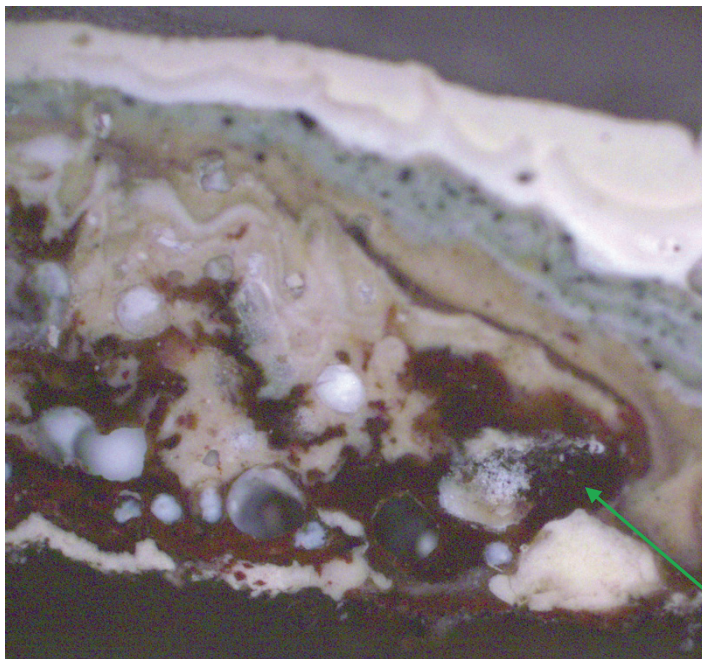
White

Light brown
White
Light brown
Brown
Yellow
White
Light brown
Yellow
Yellow
Light red

Cross section of sample from board north façade

White
White
Light brown
Light brown
White
Light brown
White
Light brown
Brownish
Light brown
Brown
Yellow
Yellow
Red
Light red

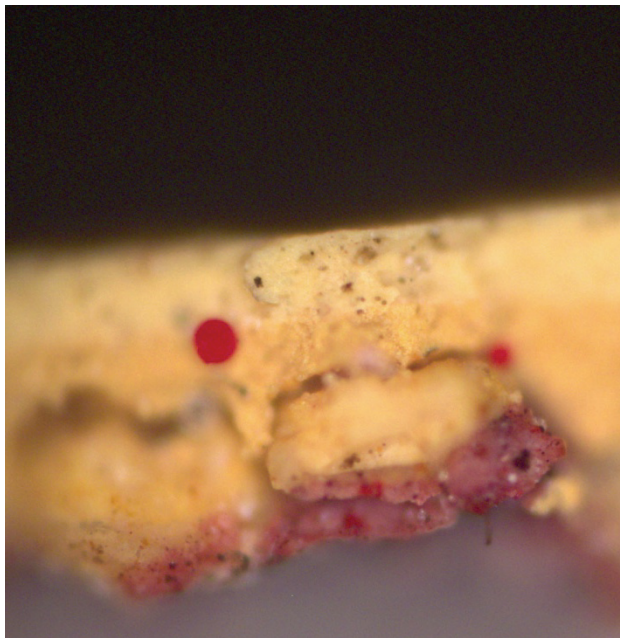
Cross section of sample from cornice



White
White
Light brown
Grey
Grey
Yellowish brown
Brown
Light brown
White
?
?
?
Red
Black?

C:X; Norra Röhult 1:66, Jämshög parish, Blekinge

Cross section of sample from board at the west gable



Yellow

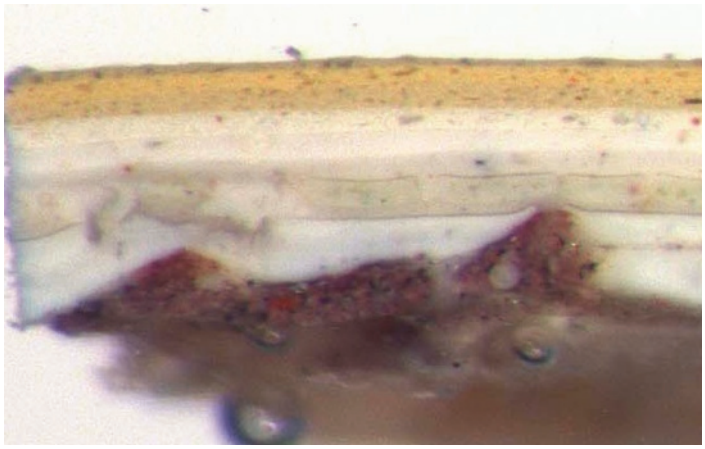
Yellow

Yellow

Light red

C:XI; Nybygden 1:23, Jämshög parish, Blekinge

Cross section of sample from the northern faced panel

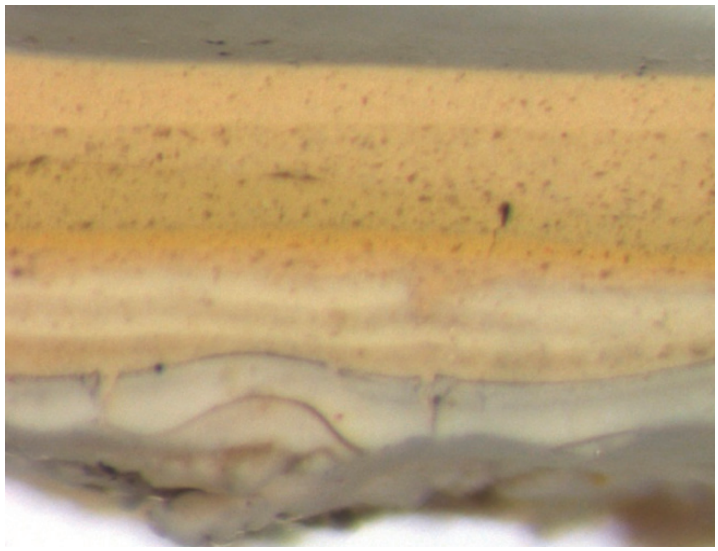


Yellow
Yellow
White
White
White
White
White

Light red

C:XII: St. Rösiö, Jämshög parish, Blekinge

Cross section of sample from the northern façade board



Yellow

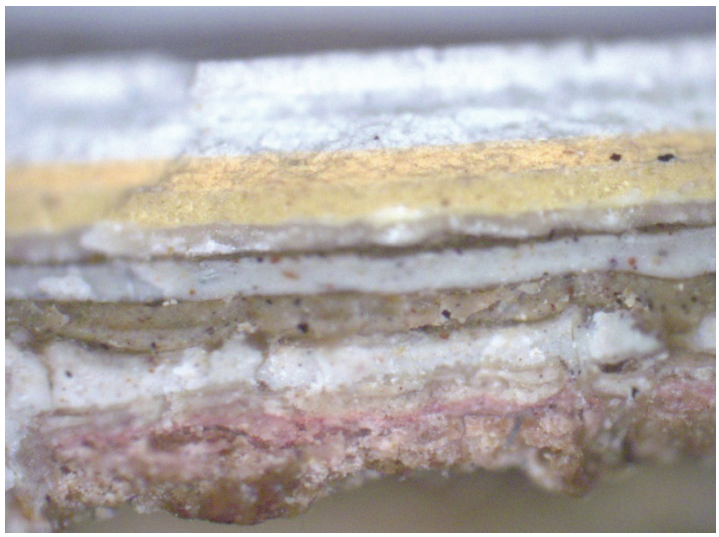
Yellow
Yellow

Yellow
White
White
Ev. Light brown
White

Karlshamn

C:XIV; Skottsbergska gården, Karlshamn, Karlshamn parish, Blekinge

Cross section of sample from the street façade board



Grey
Grey

Yellow

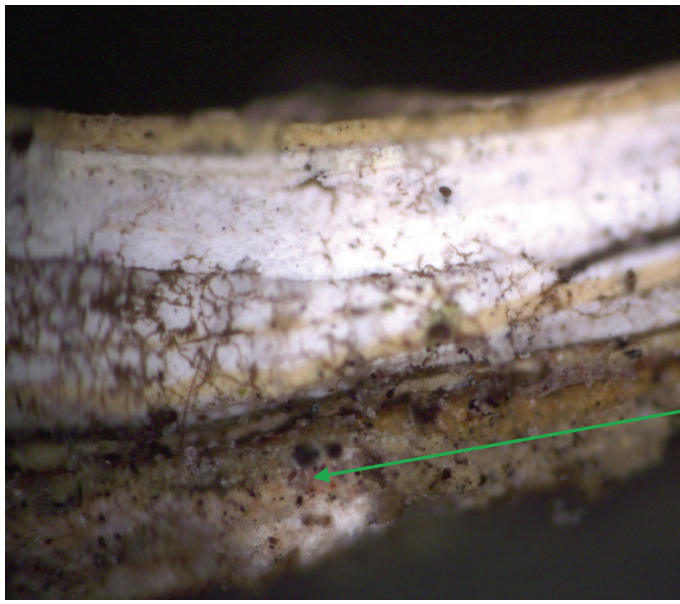
Grey
Grey
Brown

White

Light
red

C:XV; Ronneby 1, Karlshamn, Karlshamn parish, Blekinge

Cross section of sample from the east street façade board



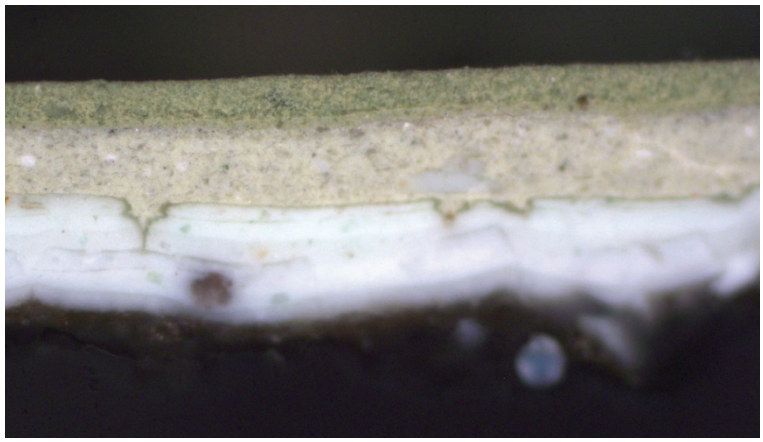
Yellow
White
White
White

Yellow
Light brown
?
Yellow
Small remains
of red
Light brown

Gammalstorp, Ysane and Mjällby parishes

C: XIX; Ekeberg, Ysane 3:2, Ysane parish, Blekinge

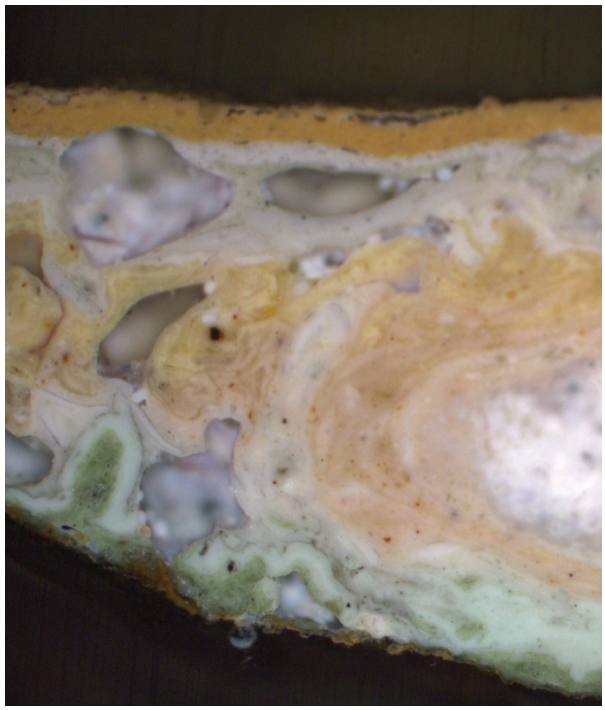
Cross section of sample from the north façade board



Green
Green
Grey
White
White
White

C:XX ; Ekengård, Ysane 3:3, Ysane parish, Blekinge

Cross section of sample from façade board



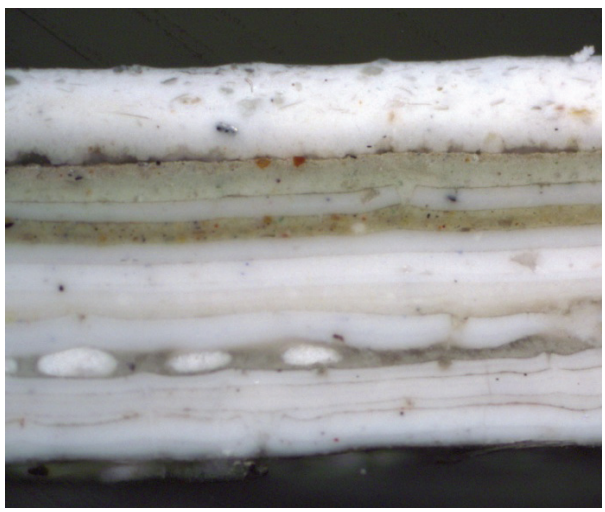
Yellow

White
White

Yellow

White?
Green

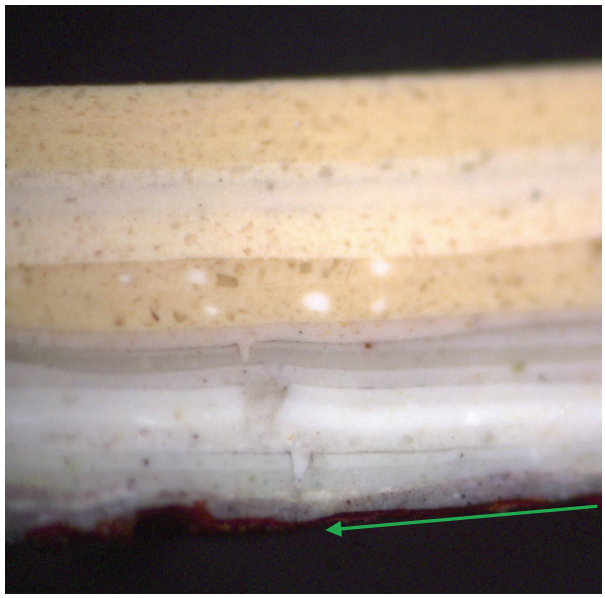
Cross section of sample from window framing



White
Grey
Grey
Light brown
White
White
White
White
White
White
White

C:XXII ; Ysane 11:12, Stensborg, Ysane parish, Blekinge

Cross section of sample from façade board



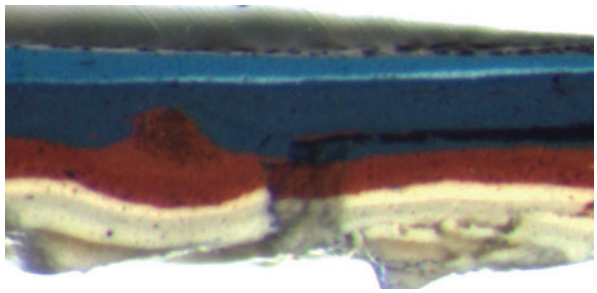
Yellow

Yellow
Yellow

Yellow
Light brown
Light brown
Light brown
White
White
White
Red

C:XXXVI ; Istaby 9:28, Västra Torsö fishing village, Mjällby parish, Blekinge

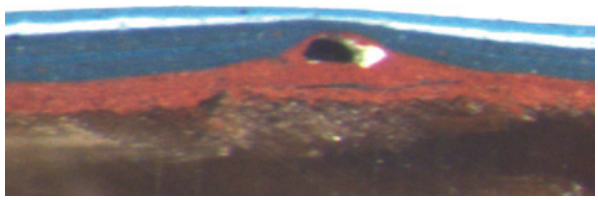
Cross section of sample from the western façade upper part of board close to cornice



Blue
Blue

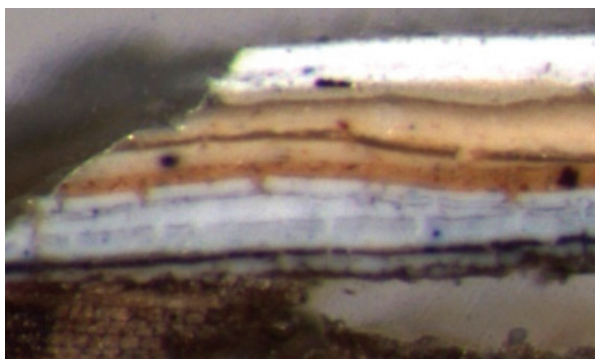
Red
White
Grey
White

Cross section of sample from the west facade lower part of board



Blue
White
Blue
Red

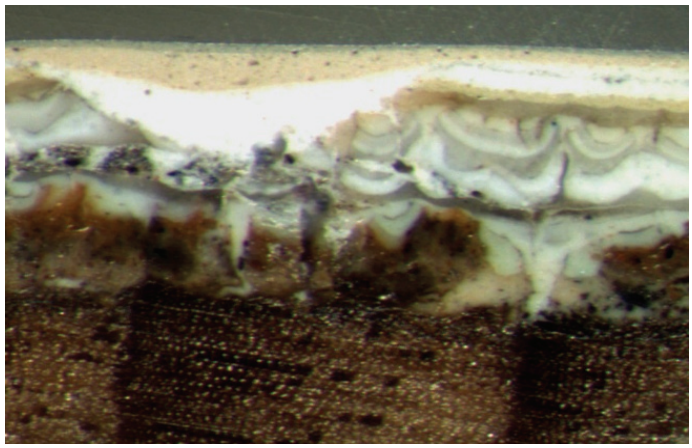
Cross section of sample from cornice, south



White
White
Light brown
Yellow
Orange
Light blue
Light blue
Light blue
Grey?

C:XXXVII ; Istaby 11:7, Istaby, Mjällby parish, Blekinge

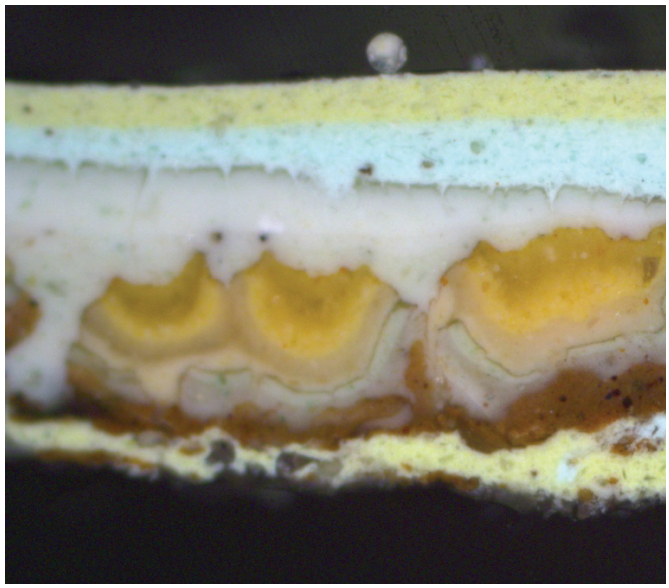
Cross section of sample from west façade board



Brownish grey
Yellow
White
White
Yellow
Grey
Light grey
Grey
White
Grey
Grey
Ev. Red
Wood

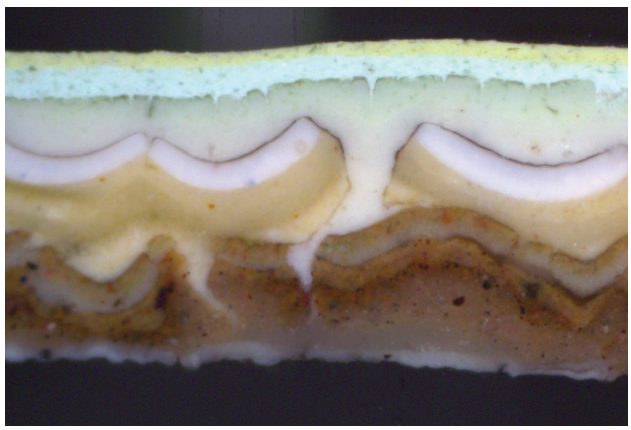
C:XXXVIII ; Istaby 14:2, Istaby, Mjällby parish, Blekinge

Cross section of sample from façade board



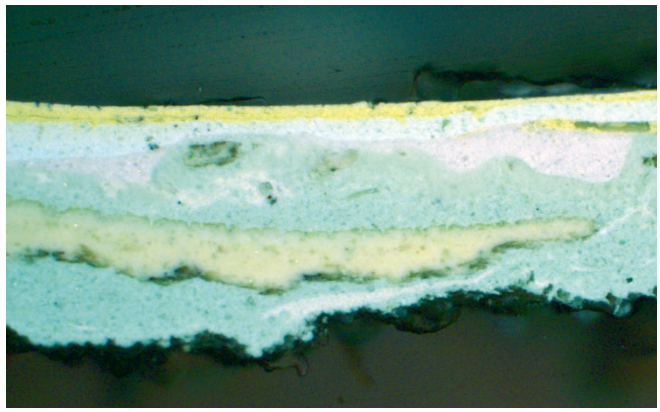
Yellowish green
Light green
White
White
Yellow
White
White
Yellow
Layer from the top

Cross section of sample from the door



Yellowish green
Light green
White
White
Light brown
Brown
Grey
Brown
Brown

Cross section of sample from window framing,, west gable

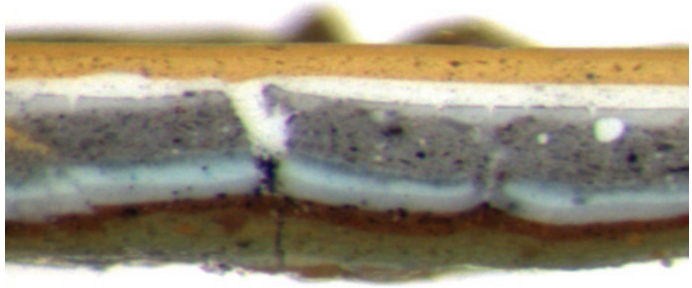


Yellowish green
Light green
Grey
Green

White

C: XXXIX; Istaby 52:1, Östra Torsö fishing village, Mjällby parish, Blekinge

Cross section of sample from the north façade, board above moulding

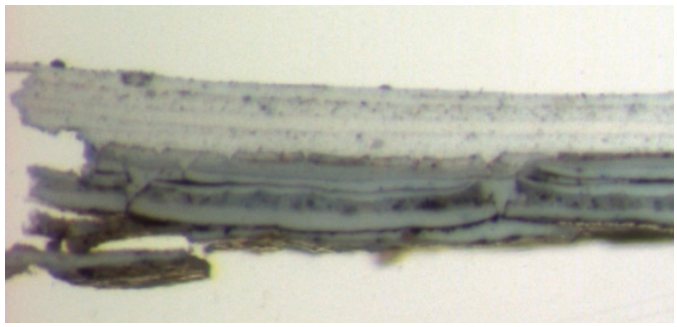


Yellow
Yellow
White
Grey
Grey
Grey
Grey
Brown
Yellow

Cross section of sample from the north façade, board below moulding

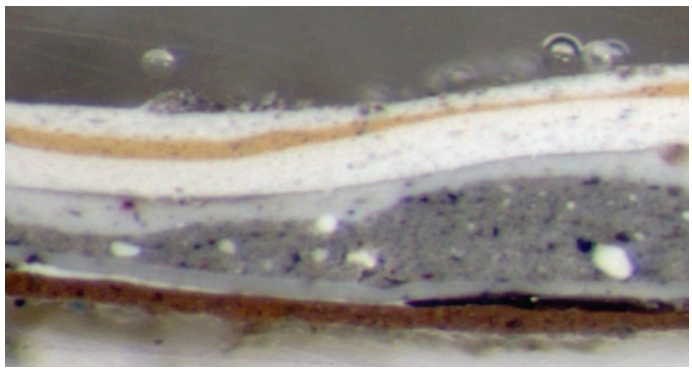
Yellow
Yellow
White
White
Grey
Grey
Grey
Brown
Yellow

Cross section of sample from corner



White
White
White
White
White
Grey
Grey
Grey
Grey

Cross section of sample from moulding

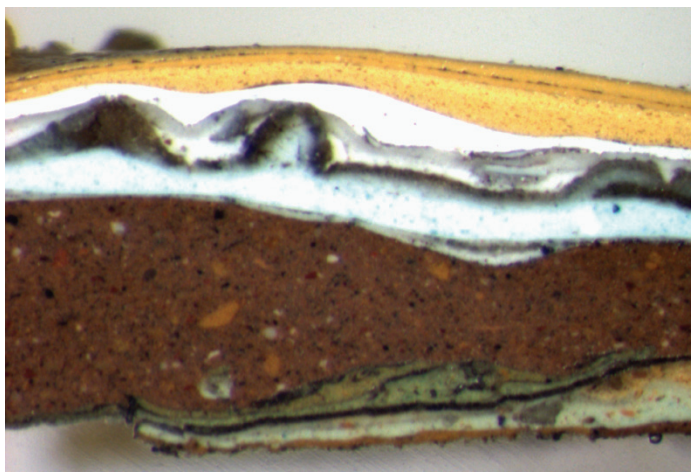


White
Yellow
White
Grey

Grey

Grey
Brown

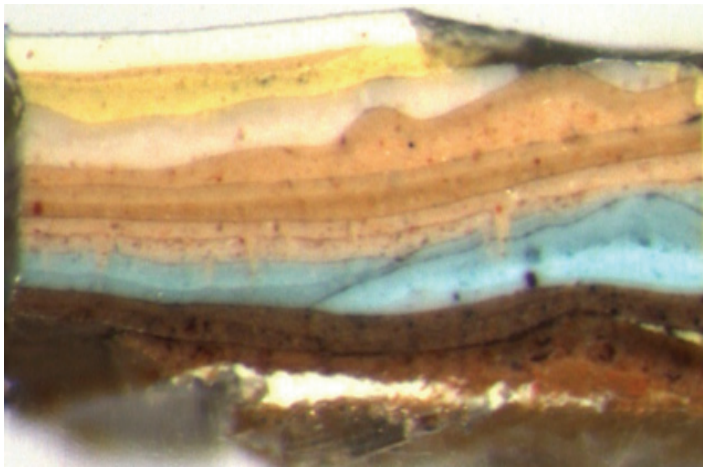
Cross section of sample from base moulding



Yellow
Yellow
Yellow
White
Grey
Light blue
Brown

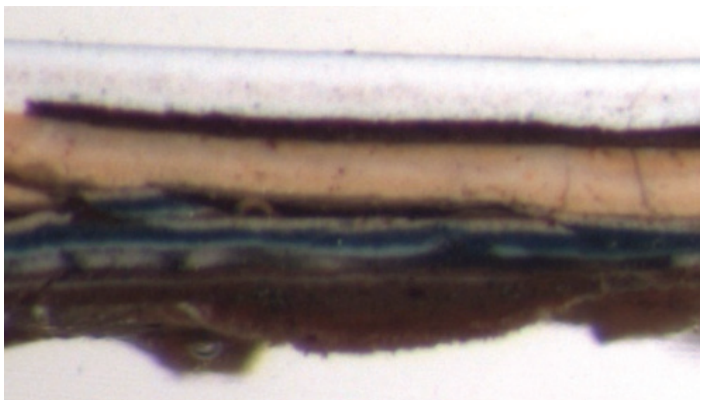
C:XXXX; Istaby 54:1, Östra Torsö fishing village, Mjällby parish, Blekinge

Cross section of sample from the north façade board



Light yellow
Yellow
White
Orange
Light brown
Brownish red
Light brown
Light brown
Light blue
Light blue
Brown
Brown

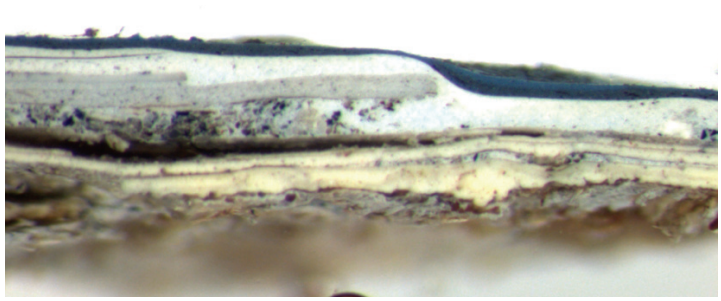
Cross section of sample from base moulding



White
White
Brown
Yellow
Yellow
Brown
?
?
?
Brown
Brown

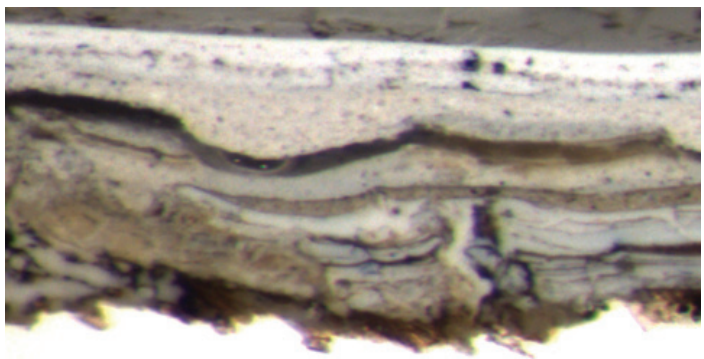
C:XXXXI ; Enaholmsv.6, Östra Torsö fishing village, Mjällby parish, Blekinge

Cross section of sample from northern facade board



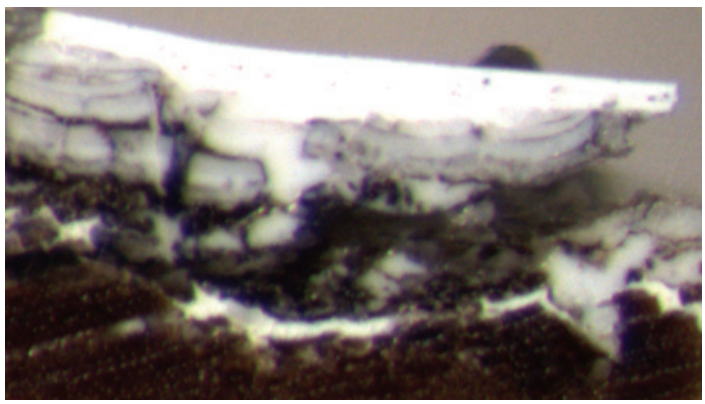
Blue
White
Grey
Grey
Grey
White
Brownish grey
White
White
Grey

Cross section of sample from north base moulding



White
White
Grey
Grey
Yellow
White
Grey
White
Grey

Cross section of sample from corner

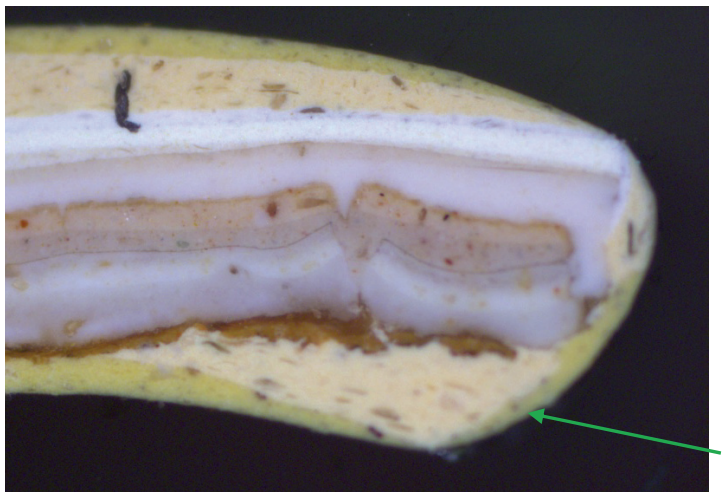


White
White
Grey
Grey
Grey

Wood

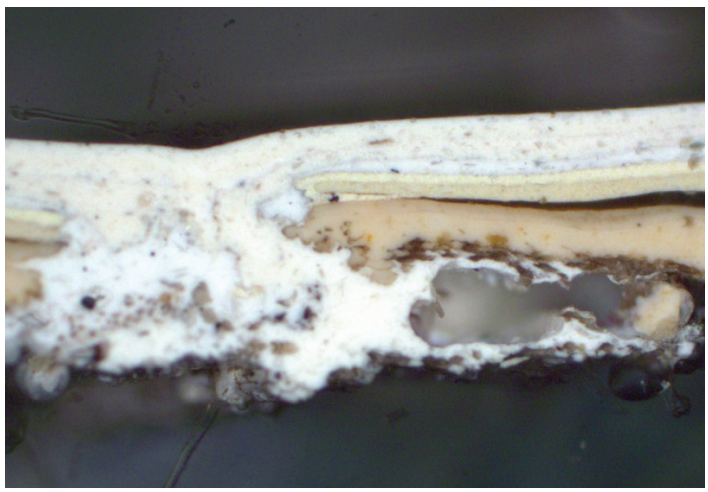
C:XXXXIII; Stiby 8:21, Kungsåsa, Mjällby parish, Blekinge

Cross section of sample from board, west facade



Yellow
Brownish yellow
Grey
White
Light brown
White
Brownish orange
Light brown
White
White
Yellow
Two yellow layers from the outermost.

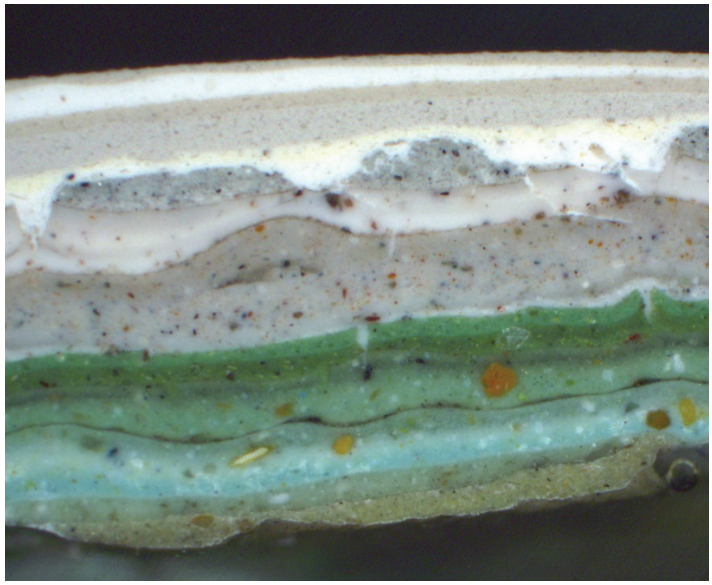
Cross section of sample from corner, southwest



White
White
White
Grey
Yellow
Brownish yellow
Brownish yellow
?

C:XXXXIV; Stiby 56:12, Mjällby parish, Blekinge

Cross section of sample from board, east facade



Light grey
White
Grey
Grey
White
Grey
White (grey)
Grey
White
Green
Green
Dark green
Green, redbrown dots
Bluish green
Green
Greyish green