

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

2012

*Building site Report
Øster Parkvej.....
8270 Højberg Århus*



Group number 2
Asia, Daniel,
Paulius and Ahsan



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Contents

Acknowledgement.....	3
Title page	4
Introduction.....	5
Description of the house (Øster Parkvej ... 8270 Højbjerg Århus).....	6
Questions.....	8
The building site	9
Inspection Report 1	11
.....	12
Inspection Report 2	12
Inspection Report 3	14
Inspection Report 4	16
Inspection Report 5	19
.....	20
.....	21
Conclusion	22
Source list	23

Acknowledgement

We would like to express our appreciation to Building site manager Tomas and the construction company as well as craftsmen who gave us the golden opportunity and allowed us to follow their site and that they spend some time on answering some useful and helpful questions and give us information regarding the project and we were always welcome to visit the site and take pictures. The information helped us in doing a lot of research and we learned a lot about the construction and the building site, how things are handled instead of just learning plain theory at home. Secondly we would also like to thank our group members who helped each other a lot in finishing this project within the limited time.

Kontakt Kort og adresse Søg live **VIBE-HUSE**

Firmsprofil **Forside** Boliger til salg Byggegrunde til salg Boligudlejning Erhvervsudlejning Vibe-Arena Tidligere projekter

Drøm med fornuffen i behold **Vibe-Huse**
naturlige valg østjyske - især
i Hinnerup- og Århusområdet

Velkommen til VIBE-HUSE
gælder det byggeri.....



Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Title page

Title: Building Site assignment

This report is made by: Group number 2, Asia Jankowaska, Daniels Fedoreks, Paulius Macys, Ahsanullah Hafizi

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Introduction

During the second semester we were given a project to follow a building site with a minimum of 8 visits the purpose of the visits were to see how a process of construction on a building site works in real life. In each visit we had to observe the work on the construction site then describe our observations and filling out the inspection report which was one of the bases of the main focus to write the report.

We choose a building site which was hopefully starting from beginning, and we had to follow as much of building process as possible. The building site manager and the craftsmen were always welcome to answer our question about the process of construction in our visits.

The site was located on Øster Parkvej Højberg 8270 Århus. The focus of this task is the construction process for a single-family house in the year 2014. The task will compare the practical information accrued on the site with theoretical knowledge we have from the classroom. By checking detail drawings and pictures we take of the project and assess whether they are consistent with the work of The tasks analysis, selected structures and details, so as to evaluate whether they comply with current requirements and standards for the area. As an extra level in the project we will continuous look after the site condition and the workplace and communication among craftsmen and their management. The report will be structured around the following problem statement and the eight visits with Construction Company VIBE-HUSE. For each visit will be issued a building site report form, which contains information relating to the current area of focus and general observations.

Building site visit Report

Constructing Architect Education

2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014

Group number 2. Asia, Daniels, Paulius and Ahsan

Description of the house (Øster Parkvej 8270 Højbjerg Århus)

The house we were following were about to start from the beginning of the building construction process VIBE-HUSE construction company is building a total of 42 new rental units, the construction is row houses of 93 m² in two storey plan consist of 2 bedrooms a private garden with patio and shed of approx 5m² and a carport, the house has one extra toilet on the ground floor.

Ground floor plan has entry of 3,4m² where the shaft is also placed, a kitchen of 9,5m², a living room of 22,6m² and a storage room of 2,9 m² under the stairs to the first floor.

In the first floor there is two bedroom of 15,3m² and 14,8m² the bedrooms has nice a good wardrobes there is a corridor of 2m² and a bathroom of 4,5m² with shower, toilet and wardrobe.

Bellow is the plan of ground floor and first floor where we can see the windows placement, external and the internal walls.

The house is build for rent and the monthly rent is 7.450 kr. Exclusive warm, electricity TV license etc. the deposit of the house is 22.350 kr. This house was already rented. If anyone is interested in renting one of these houses they can write their name in the waiting list.

Building site visit Report

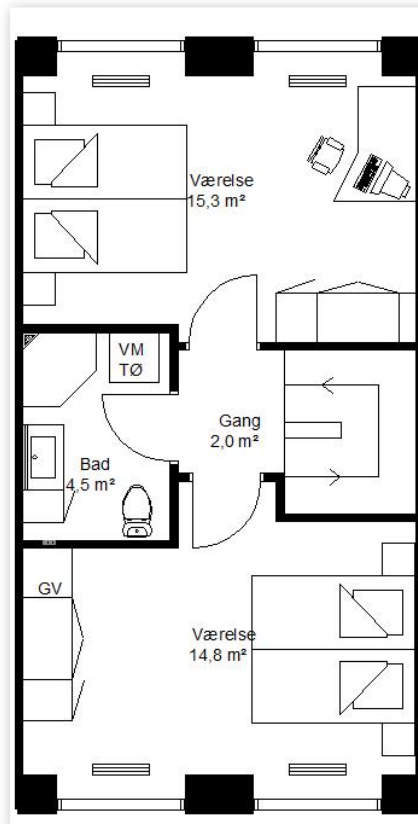
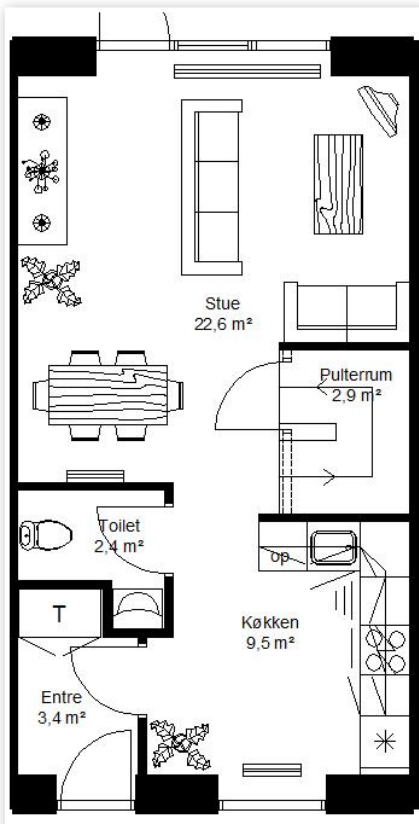
Constructing Architect Education

2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014

Group number 2. Asia, Daniels, Paulius and Ahsan

Grundplan - Stuen

Grundplan - 1. sal



The same house which was already built and rented by VIBE-HUSE Construction Company.

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Questions

Building site

How is the personal safety condition on the building site done and are they according to the rules in force?

Is it safe to walk on the construction site?

Ground floor terrain constructions

How is radon protection problem solved according to the rules in the constructions?

Service installations

How are installations performed, when hidden in the floor, roof or wall constructions?

External wall constructions

How is the quality of the project ensured in the performance of the work on site?

Roof constructions

How damp proof membrane is placed and assembled in the construction, and is this according to the regulations and directions given especially between external walls and roof

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

The building site

When building material arrives at a construction site, it is very important that they are stored correctly in relation to the applicable rules of the Building Regulations 2010 (BR10) 4.7. Applies to both placement and cover. The layout of the site is very important for safety In Danish Working Environment. ``Building sites must be laid out so as to avoid causing nuisance to nearby plots or the public and private road and footpath areas. Access to sites must be appropriately surfaced and maintained.``

On the construction site on Øster Parkvej ..8270 Højbjerg Århus the craftsmen have good management. The site is always nice and tidy and gives a good first hand impression. During a conversation with construction manager VIBE-HUSE Tomas we informed that all craftsmen gang, which is inside of their buildings work will be carefully instructed in how the building sites should look like during and after execution of their particular area. It has been incredibly beneficial to the process and has saved a lot of time said construction manager,

We think that the construction site has been very clean and the employers are very experienced they were respecting the BR regulation. All their materials for the building were covered professionally according BR 2010 and protected from moisture, rain, dust etc



Building site visit Report

Constructing Architect Education

2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014

Group number 2. Asia, Daniels, Paulius and Ahsan



The pictures are illustrating the company's quality work according to BR10. The site looks very clean and clear, the materials are covered and protected from damage of rain, dust, etc. We can see that there is a wide area and the materials are placed far from the building area, from roads, and footpaths. The open and wide area can protect the neighbours from noises which come from the building site.

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Inspection Report 1

Case: Family house: Øster Parkvej (?), 8270 Højbjerg Århus	Case no.:	Page:1	Of
Contract / Work: Foundation		Doc- no.100:	
Area / location: Foundation		Date:10- 03-2014	

Weather and situation on site: Fine clear weather 15 degree
Materials observation: Casted concrete with leca blocks mounted on top
Observations: Leca blocks are put on top of the casted concrete. We see space is made for door or window. the radon protection membrane is not placed yet, the building site manager said that next week they place the radon protection membrane.
Process status: Around 70% finished.
Date and sign. (group):

Conclusion of inspection and follow up:
The construction seems to be correct according to the demands of a foundation; the radon protection is not placed yet. In next visit we will observe radon protection and ground supported floor
The construction site was clean and well structured.
Date and sign. Asia

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

They have used a leveling measurement, as we learned to use in 1. Semester, to figure out where the house's corners roughly will be and then they have excavated the dirt, to get it in level. There weren't much to see otherwise, so we just had a short visit.

The foundation has the same width as the wall above will have and it will have symmetrically placed on to of foundation. We can see the placement of a perimeter drain and a inspection chamber. They donnot use the capilliary breaking layer because they tested the ground and apperantly it donnot have water at all. The perimeter drain is done and it is covered by soil and it is necessary to connect the inspection chamber with the perimeter drain.

Everything in the construction is done according to SBI and building regulation foundation. In figure 8 SBI page 13 says. Regarding external wall foundations, frost-free depth is usually 0.9 m below the surface.

The foundation is made according to SBI When I read the SBI direction 189 page 11 it was matching the foundation of this building.

We can see on the pictures the spaces for the windows and door the insulation and the installation pips. The terrine construction will be done next week.



Case no.:

Page:1

Of

Doc-no.:

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Area / location: Terrain construction/ground supported floor	Date:24-03-2014
--	-----------------

Weather and situation on site:
Its sunny and clear weather today about 15 degree
Materials observation:
Terrain construction
Observations:
Observation of the terrain construction, when we come to visit the site and terrain construction already the concrete were coated on the terrain and everything under concrete was hidden but we asked the construction manager he explained the radon protections placement and the installation pipes. Everything was according to building regulation, there was not floor heating in the house the manager said that they don't have floor heating because the insulation of the house is thick and they were building the house according building regulation 2020 and said that the insulation of the house is more/ thicker than normal and if they have floor heating then the construction will be very tight and will be very warm. instead they use radiator for the construction which is cheap and simple
We saw the connection of leca blocks insulation, casting concrete, Redon protection, technical installation pipes, ventilation pipes, drainage pipes, damp-proof membrane placement everything was the same as we were thought in the school. The picture 1 and 2 illustrate the terrain construction with coated concrete and radon protections placement.
Process status:
The process of terrain construction is almost 95 % finished
Date and sign. (group 2):

Conclusion of inspection and follow up:
damp proof membrane is placed above all openings in the outer leaf, so it is constructed that wall construction shouldn't be damaged by moisture and also that any ingress of water can be lead out again
Now the concrete deck is finished, when it is dry they can start the next face, which will be brick work up the internal wall.
Date and sign. Paulius

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan



The pictures illustrate the terrain construction with casted concrete, radon protection placement, destruct heating pips, drainage pipes, ventilation pipes, insulation thickness and leca blocks to the level of the coasted concrete on the terrain.

The ground supported floor is resting directly on the ground. Ground supported floors is insulated against ingress of moisture and loss of heat. Also they are sufficiently sealed in order to prevent the ingress of air containing radon (from the subsurface).

In the inspection report it is mentioned that they had a radon protection around the foundation, after reading in the SBI I can conclude that they have placed it according to the guidelines, so when they cast the concrete it will be bended down and it can lead out radon gasses that might come up from the ground.

Inspection Report 3

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Case: Family house: Øster Parkvej (?), 8270 Højbjerg Århus	Case no.:	Page:1	Of
Contract / Work: Installations		Doc-no.:	
Area / location: 1st floor, Floor area installations		Date:11-04-2014	

Weather and situation on site: Clear weather 15 degree
Materials observation: Electrical cables, and radiator pipes
Observations: The cables are placed on the ground see picture 1. The cables are inside a pipe so in case of damage or problem can be easy to replace the cables. It looks very clear and clean the pipes are tight together to be saved and protected from messy till the floor construction is finished.
Process status: They will put wooden frame on top of the cables so the cables will be hidden under the flooring.
Date and sign. (group 2):

Conclusion of inspection and follow up: The installation work looks fine and the site manager said that it's going as planned so far. The cables are placed in the floor and we think it's a good solution then placing it on the ceiling, because it's easy place it and doesn't take much time.
Date and sign. Daniels



Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

The picture illustrates the installation of radiator. As we can see that the radiator is placed under the window and the pips are covered that the water is not getting cold till it reaches the radiator, we can see 2 pips which connected to the radiator the hot water comes from one side and go out again from another side.

Here we can see the electricity installation of sockets and switches for the house the wires are covered to prevent from damage and in case of changing the wires it will be easy to change the sockets and electricity installation for the house was also according to BR10 where it says 1 socket for each 4 square meter.



The shaft is placed in the entrance of the ground floor where all installations are connected to the shaft and the pips are divided to different parts of the house, the shaft base is in the ground floor and there is only a small hole in the first floor partition where the pips for radiators and wire for electricity comes out.

Her we can see that for the first floor we don't have shaft only a hole where the pips come and then the hole is covered by mortar. When the installation is finished all the installation cables and pipes will be hidden under the flooring.

Inspection Report 4

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Case: Family house: Øster Parkvej (?), 8270 Højbjerg Århus	Case no.:	Page:1	Of
Contract / Work:		Doc-no.:	
Area / location: External wall constructions		Date:29- 04-2014	

Weather and situation on site:
The situation of weather on the site looks like it's cloudy and can be rainy later.
Materials observation: Thickness and size of the external wall and its layers.
<ul style="list-style-type: none"> • Inner leaf – concrete 100mm • Mineral wool insulation 300mm • External leaf – Brick 108mm • Wall tie after every 4 brick courses.
Observations:
We observed the construction of external wall, we saw the inner leaf which was prefabricated concrete and joined together.
We saw the mineral wool insulation of 300 mm which was placed in the middle of layers between concrete and brick external leaf.
We saw the wall ties were prefabricated made in the concrete and the distance between the wall ties were only every 4 brick courses.
Process status:
Process of the external construction is not finished yet the brick layers are working actively.
Date and sign. Ahsan

Conclusion of inspection and follow up:
We conclude that the walls are build according to building regulations.
The wall are able to transfer the loads.
The wall has fulfilled the requirements for heat insulation.
The wall is protected against moisture damages.

The first picture illustrate the concrete inner leaf of 100 mm which is the load carrying part of the construction it lays on the foundation over the damp proof and radon protection they use expand prefabricated concrete



Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan



Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Inspection Report 5

Case: Family house: Øster Parkvej (?), 8270 Højbjerg Århus	Case no.:	Page:1	Of
Contract / Work:		Doc-no.:	
Area / location: Roof constructions		Date:	20.05.14

Weather and situation on site:
Clear weather 15 degree
Materials observation:
Rafters , trusses, diffusion open membrane, distance list, 45x95 battens ,roofing tiles
,
Observations:
We saw roof construction. It is two side slope roof. Covered with tiles and supported by trusses , roof is without insulation, because ceiling is with insulation
Process status:
Roof construction is 80% finished
Date and sign. (group):

Conclusion of inspection and follow up:
The roof is made from wooden rafters , which are supported by trusses , the trusses are in W form. On top of the rafter there are diffusion open membrane and after that there are battens , and after battens there are distance list which is covered with roofing tiles.
Date and sign. Daniels, Asia, Paulius, Ahsan

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan



The pictures shows the external part of the roof where we can see the slops, which has created a attic the damp proof membrane is a diffusion open. The membrane is stretched and tight to two sides of gables to to protected it from blowing of the wind and water d it allows moisture go out.



We climbed up to the attic we saw inside of the attic above the ceiling, here we can see the trusses and rafters which carry the load of the roof,mineral wool is placed on top of the ceiling.

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan



These two pictures are taken from inside. Here you can see a plastic membrane, wooden joist, and electrical installation. On the bottom of the joist will be fixed ceiling cladding.

Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Conclusion

During second semester we have followed building site, it has been a good learning experience, because we saw firsthand how a building site works and the whole process from the excavation to the finished product it was a good experience because we were learning it in the class as theory and didn't know how it was in real life. We had 5 problems we had to solve and we did it with the most efficiency we could. We had to answer a question from each part of the building (ground supported floor, walls, roof, foundation and installations) and file an inspection report. And we feel that we did a good job answering those questions. We got to know how the house is built we gained more knowledge about materials and so how they are used in real construction. It is quite different learning in school about them and being there on the site, seeing how they are placed and used. We could touch the material and see how they actually look like. We could ask the workers about advantages and disadvantages of materials and they told us how long it takes to build the house. We eventually find out that building a house according to Building regulations is very important because all the rules are mainly to protect and guarantee safety for the house owners. During our visits we saw that the house construction was constructed as we were taught in the school and according building regulations.



Building site visit Report
Constructing Architect Education
2. Semester International. Class: 13bk2ena the Deadline: 02 June 2014
Group number 2. Asia, Daniels, Paulius and Ahsan

Source list

BR 10

SBI 189

<http://www.vibe-huse.dk/>