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SYNOPSIS

The project 'ENCOUNTERING CHERNOBYL – design interventions in the city of Pripyat' introduces seven design interventions in the city Pripyat that was evacuated after reactor 4 at the Chernobyl nuclear power plant exploded in 1986. The area has since the accident become a tourist destination and the intention with the seven design interventions is to enhance the visitors' experience. Through a research of the area's history and a theoretical discussion a vision for the areas future has been defined. The vision is to emphasise the social and environmental consequences that has followed the accident. To transform the vision into a design proposal we have made an analysis of the area's structural and phenomenological features and by that extracted three themes to use in the design process. The seven designs are presented in seven enclosed booklets.

PREFACE

The project 'ENCOUNTERING CHERNOBYL – design interventions in the city of Pripyat' concerns development of new designs for Pripyat, the neighbouring city to the Chernobyl power plant area. The project is made by Daniel Bejtrup and Dina Brændstrup from the 2nd of February to the 2nd of June 2010. It is made in relation to our Urban Design Master's thesis at the faculty of Architecture & Design at Aalborg University.

'ENCOUNTERING CHERNOBYL – design interventions in the city of Pripyat' consists of two separate parts; the first part is the report that draws up the scope of the thesis, the background, historical information, theoretical basis and analysis needed to develop future designs. Together with the thesis statement and the problem definition, it sets the framework for progress of the project. Finally a reflection puts the project into perspective and discusses the designs in relation to the problem definition and areas of interests in the project.

The second part of the project is the design presentation that consists of seven booklets each representing a design placed in Pripyat. Together the seven design booklets portray the whole area of interest in Pripyat and can be put together to display a map.

References are indicated by the Harvard method and all the used references are listed in the back of the report together with a list of illustration. Illustrations not listed are own photos and illustrations.

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INTRODUCTION

In 1986, reactor 4 of the nuclear power plant exploded causing an immense radioactive spill contaminating more than 200.000 km² across Europe. Three days after the accident, the inhabitants of Pripyat were evacuated due to the radiation levels in the area. The evacuation operation was extended a few days later, to include the villages and towns within 30 kilometres of the power plant, leaving the established Exclusion Zone deserted.

24 years have passed and today most people who were adolescent or older in the year of the Chernobyl accident have a somewhat big or small memory of the explosion that caused the biggest radioactive contamination ever seen. The word Chernobyl rings a bell in most minds and the by far most attached stories to the word are the sad stories about cancer-diagnosed children and the anecdotes of various mutated animals with three heads and other deformities. But the accident that are categorised as the biggest ever man-made disaster has also caused big consequences both socially and environmentally.

The narratives surrounding Chernobyl are many and this is placing Chernobyl and the city Pripyat on the international map of tourist attractions. When tourist visit the area it is important that they leave with a greater insight to the consequences of a nuclear disaster. To tell and understand more thorough the occurrences of the accident and its aftermaths, other sides of the incident should also be exposed. This is why we choose to work with this somewhat controversial topic; enforcing a place of great human tragedy as a tourist destination.

In the following section our design approach of the thesis, working with Chernobyl and the city Pripyat, is explained together with putting the controversial project of Chernobyl into an urban design perspective, answering the question of why this project is relevant in the present field of urban design. Finally the source criticism of this project is presented, due to the great amount of publicity from various stakeholders with different interests the accident of Chernobyl has generated.

OUR DESIGN APPROACH

In our understanding, urban design concerns the development, appearance and functionality of cities, settlements and in particular the shaping and uses of urban space. But what is an urban space and why is it interesting to develop a project in an abandoned urban environment like Chernobyl? Urban space and urban design can be many things and in recent years urban design projects are often conceptualized as transforming urban environments to fit the new *experience city*. The term, *experience city*, is a way of working with how we perceive, explore and experience the spaces around us. A more sensuous approach to how we as urban designers make people sense the place and provoke them wonder and reflect about what they see, feel, hear in the urban space. As this is an urban project, we do not intend to work with the design in a detail that is focused on construction nor technical and structural solutions. The focus of the project is to make designs that enrol itself in a larger context concerning the whole city of Pripyat and its history with a basis in storytelling and a sensuous experience.

When talking about the *experience city* and experiences in the urban space in general, we think and also put to test in this project, that the urban space should offer something besides just fun. Our project in not based on 'fun' in the traditional meaning but are on the contrary focusing on how to get visitors to gain a social insight, knowledge and accomplish a learning and educational perspective. These perspectives are all important aspects in the field of urban design and the making of urban spaces. Especially the open sense of place and the wish to inspire people to an un-expected and un-controlled experience are possibilities when designing in the field of an abandoned urban environment. [Marling, Kiib& Jensen, 2009: 13]

In this project we work with these perspectives and possibilities of the experience city in Pripyat, the neighbour city of the Chernobyl power plant in Northern Ukraine. In recent years visitors have started coming to the area – and the question rises. Should the area be opened further or what should the approach regarding the visitors be? We have chosen to keep the place in its condition where the decay of the abandoned city will continue. Also the urban design should encourage the visitors to gain a social insight, knowledge and accomplish a learning and educational perspective.

SOURCE CRITICISM

The available information about the Chernobyl power plant, the accident and its aftermath is extensive and plentiful – books, articles, WebPages, documentaries, pictures, maps, etc. Since the accident, the Soviet government and, later, the Ukrainian authorities, including various international associations, research groups, journalists, affected private people and other stakeholders, had a big interest in controlling and contributing to the available information about the cause of the accident and its consequences.

The present openness of the accident, reports of recent research results and plans and recommendations for future initiatives in the affected areas, all provide good collective coverage of the sequence of events. The many aspects are told from various sources with different conjectures, agendas and standpoints. However, the facts and numbers about health related issues, death tolls, evacuated and affected inhabitants and workers and the quantity of the radioactive spill varies significantly according to the source. It thus shows the variations of myths, misunderstandings and disagreements that permeate a storyline of this character.

Throughout our research and by way of interpretation we have attempted to clarify such accounts of the incident, and the contradictions between the sources.



PROJECT FRAMES

The project sits in the restricted area surrounding the Chernobyl nuclear power plant and the city of Pripyat. In the following chapters the conditions of the area will be explained: Taking departure from Pripyat, the building of the power plant and the ensuing consequences; the geographical location and historical development will be described. Finally, the chapter will conclude with various recommendations and plans for the future of the Chernobyl area.

UKRAINIAN TERRITORY: 603.700 KM² INHABITANTS IN UKRAINE (2007): 46.7 MILL INDEPENDENCE FROM SOVIET: 24TH OF AUGUST 1991 [Store Danske 1]

30 KM EXCLUSION ZONE AREA: 1600 KM² CHERNOBYL POWER PLANT AREA: 3.6 KM² PRIPYAT AREA: 3 KM²

Belarus

Pripyat

Chernobyl power plant

Kiev

Ukraine

CHERNOBYL POWER PLANT AND PRIPYAT



The map on the left side page shows the 30 km Exclusion Zone in northern Ukraine and its proximity to Kiev. Chernobyl power plant and Pripyat are outlined corresponding to the outlined areas on the zoomed-in satellite image above.

SITE LOCATION

The former nuclear power plant Chernobyl and its neighbouring city Pripyat are located in northern Ukraine in Eastern Europe, in the Kiev Oblast region. More specifically, the location is approximately 100 km north of the capital Kiev and about 20 km south of the Belarusian border. The power plant and the city were built on the bank of the Pripyat River, a tributary of the Dniepr and 15 km northwest of the city Chernobyl.

Large areas of woodland and marshes, locally described as '*Polesie*' - meaning forestland, characterize the northern Ukrainian area. Across the area, smaller towns and villages are dispersed and the area has a very low density – within 30 km of the power plant the population was between 115,000 -135,000. In Pripyat, 2.5 km away from the power plant, 50,000 lived, making Pripyat and the Chernobyl power plant an important urban node in an area dominated by nature. Pripyat, with its excellent lines of communication - such as railway, highway and river port – allowed it to be easily reached by commuters in neighbouring towns and villages, attracted by its many functions, public amenities and opportunities for work.

As a result of the accident in the nuclear power plant in 1986, approximately 500,000 inhabitants from the area, towns and villages were evacuated (this also includes the contaminated areas in Belarus) and 140,000 of them could never return to their homes. A Ukrainian Exclusion Zone within a 30 km radius from the power plant was made. The zone adjoins with the Ukrainian-Belarusian border, and is still prohibited to enter without special permission.

[Eskesen, 2006: 197], [Leontiev, 2005], [WNA]



Birds eye views of Pripyat and Chernobyl nuclear power plant.



Construction pictures of Pripyat (top row) and Chernobyl nuclear power plant (bottom row).

THE BUILDING OF PRIPYAT AND CHERNOBYL POWER PLANT

In the seventies, during Soviet's rule, a strategy of peaceful atomic energy was promoted by the Soviet government and several nuclear power plants were built nationwide – one of the biggest being the Chernobyl power plant.

When the accident occurred in 1986, the Chernobyl power plant complex consisted of four finished nuclear reactors, two other reactors under construction and a 22 km² artificial lake providing cooling water for the reactors. Reactor 1 and 2 were built between 1970-1977, while reactor 3 and 4 were completed in 1983.

In 1966-1967 16 different locations in the Kiev, Vinnitsa and Zhitomir regions were investigated, and according to some sources one of the original plans were that the power plant was to be built only 25 km from Kiev. Various authorities expressed concerns of placing such a powerful complex close to such high-density area, and the investigation outcome was finally to build the complex about 100 km north of Kiev on the riverbank of the Pripyat River near the Kopachy Village.

Prior to the construction of the power plant complex, the city of Pripyat was founded in February 1970. The city was built from scratch and the planning of the city, its urban structure and typologies was an example of the socialist city planning in the country. It was the ninth city of its kind in Soviet know as an '*atomograd*' primarily inhabited by scientists, construction workers, other power plant employees and their families. The city had an annual increase in population by 1500 and had a population of approximately 50,000 at the time of the accident, a number that was expected to reach 75,000-78,000.

[ChNPP], [Leontiev, 2005], [Wiki], [WNA], [Yaroshevsky, 2008]







Operational workers in the control room of reactor 4.

THE ACCIDENT

The nuclear reactor 4 was finished in December 1983. Three months later, it had already produced one million kWh even though all its components were not fully tested. Prior to the explosion, the KGB had received information about the poor quality of parts of the equipment and errors in the third and fourth reactor.

Until this day, there are two explanations for the accident that happened in reactor 4 on the night of April 26th 1986, when an unstoppable chain-reaction blew open the reactor, leaking radioactive material into the environment, causing one of the biggest man-made catastrophes of all time.

The accident occurred during a test to determine how long the turbines would supply power, if the main electrical power supply stopped. While doing the test most of the safety features including the cooling system were turned off. If this had not been done the cooling system would have been able to contain a lot of the steam, and thereby preventing the explosion. The other problematic condition was the design of the reactor. The reactor was designed without any limitation vessels that encapsulated the radioactive material.

Two workers died immediately after the explosion, while 28 firemen and workers cleaning-up died of radiation sickness and cardiac arrest within the three following months. It appears that both the poor quality of the reactor, and the

crucial decisions made by the operators and supervisor, on that given night, were to blame for the accident.

On the following days, the possible danger of the accident were kept a secret to both the Pripyat inhabitants and the power plant workers, who continued their work shifts on the other reactors. After two days, on the 28th of April, the explosion was made public when Radio Moscow announced that there had been an accident at the Chernobyl power plant.

On the following days, the 50,000 residents of Pripyat were evacuated to reduce their exposure to radiation. Furthermore, 116,000 people from within a 30 km radius were evacuated a week later. All the people evacuated were later relocated. In the following years, 210,000 more people were moved and relocated, because of contamination levels in their areas. Beside people living in Ukraine, people from Belarus and the Russian Federation were also relocated, giving the total amount of 500,000 evacuated of whom 140,000 could never return to their former towns and villages.

The Exclusion Zone, within a 30 km radius of Chernobyl, was established. Even though habitation is prohibited within its boundaries, around 1000 people have unofficially returned in the recent years to live there.





Building of the sarcophagus encapsulation reactor 4.



Liquidators are cleaning up after the explosion.

Most of the evacuated inhabitants from Pripyat and the smaller towns and villages were re-housed in Kiev, while others were evacuated to other regions of the country, Moldova or the Baltic States. A year after the fallout, a new town, Slavutich, was built 50 km from the power plant, to house the people from Pripyat who were still involved in the work and cleaning of the plant.

During the evacuation, a major cleaning-up process began. More than 200,000 people attended in this job and these liquidators were summoned from all over the Soviet Union. Up to around 600,000 liquidators were involved in the following years.

Their main tasks were to put out the fire and to get rid of the contaminated material scattered all over the power plant. Most of the material was thrown back into the ruined reactor, but a big part of it was buried in the nearby area or covered with solid.

To seal the remains of reactor 4 and the contaminated materiel now lying in the reactor, a concrete construction,

known as the sarcophagus, was built in December 1986. The sarcophagus was constructed of more than 300,000 tonnes of concrete acting as a radiation shield. The sarcophagus, containing more than 200 tonnes of radioactive material, was built in haste, causing it to be neither durable nor strong.

Due to a major energy lack in the Soviet Union, reactor 1 and 2 started operating again five months after the accident. These were functional before the sarcophaguswas completed. Furthermore, during that period, the construction of reactor 5 and 6 was resumed. The construction work was paused five months later to be fully stopped in 1989. The third reactor was put in reuse in 1987, one year after the accident. In 1996 when reactor 1 and 2 finally stopped, reactor 3 was the only remaining running reactor. The entire power plant was finally closed down in December 2000.

[Eskesen, 2006: 196-197, 200-212], [Chernobyl.info 3], [RT 1], [UNSCEAR 1], [WNA], [Yaroshevsky, 2008]



Water is dispersed from a helicopter in the attempt to put out the fire in reactor 4.





THE RADIATION

The fallout of reactor 4 released a level of radiation one hundred times bigger than the one caused by the atom bombs dropped over Nagasaki and Hiroshima in Japan during World War II. The radioactive contamination deriving from Chernobyl affected more than 200,000 km² across Europe, northern Ukraine and southern Belarus being the worst afflicted.

There are various meanings and expert's opinions about how much of the reactor fuels were released in the explosion. Most estimates are between 3.8 to 20 per cent of the approximately 200 tonnes of uranium (U-235), while some other sources claim that only 5 percent of the uranium is left within the reactor today.

Several radioactive fission products, developed from the splitting of the uranium nucleus in a nuclear reactor, and approximately 40 different radionucleides were released because of the accident. Amongst these, the ones of most consequences are iodine, caesium and strontium. On short-term perspective, iodine has the most harmful impacts, whereas caesium and strontium have more severe consequences on a longer term.

lodine (I-131) has a half-life of 8 days and can be absorbed in the thyroid gland that produces essential hormones for the various body functions. The human body is not capable of distinguishing radioactive iodine from inactive (natural) iodine, and cancer or other illnesses can occur in the thyroid gland. To prevent this, natural iodine-tablets can sate the thyroid, making the body reject the radioactive iodine quickly. Neither caesium (Cs-137) nor strontium (Sr-90) is part of the natural metabolism, but the isotopes' chemical resemblance with natural substances, which living organisms cannot live without, make them dangerous for the human health. Strontium, with a half-life of 28 years, can be mistaken for calcium. It is accumulated in the bone structure and can result in leukaemia and various other cancer illnesses. Caesium has a half-live of 30 years and can be confused with the potassium found in all living cells. It plays a big part in regulating the ion-balance of the cells and becomes concentrated in the muscles. Caesium is currently the most widely dispersed isotope and its contamination level is usually the one reproduced in maps.

The isotopes americium (Am-241) and plutonium (Pu-239) with a half-life of 24.000 years were also released during the explosion, but their radioactive impact on human beings is low.

Even though the radiation level is still high in the Exclusion Zone today, it is not dangerous for people to stay in the area for shorter time periods. When visiting the power plant area for one day, the level of radiation you are exposed to correspond with the dose you will receive on a transatlantic flight. To avoid building up an unsafe dose of radiation, the workers on the Chernobyl site, the control post guards, the tour guides, the researchers and other people working regularly in the area work in shifts, two weeks on and two weeks off. It is hard to calculate the overall dose of radiation to which the local people is exposed to over time.

[Chernobyl.info 1], [Chernobyl.info 2], [Eskesen, 2006: 189], [Evans, 2007: 164], [Hansen, 2006], [IAEA 1], [Store Danske 2], [WNA]



Map of the caesium-137 contamination level in Ukraine, 1997.







THE CONSEQUENCES

As mentioned on the previous pages, the explosion in reactor 4 caused a big spill of radioactive material, causing a radioactive contamination in not only the nearest context but also in big parts of Europe.

In the next chapter, the social and environmental consequences will be described to clarify the interesting postaccident occurrences and to further investigate the strategies and designs for the area. The health consequences for the inhabitants, workers and liquidators will not be touched upon in this project, as well as the socio-economic consequences.



An old gym in a school in Pripyat not used since the accident.





THE SOCIAL CONSEQUENCES

Prior to the evacuation of the contaminated areas in Ukraine, the inhabitants were told to leave their homes for three days. They have still never been able to return to their towns and villages, and the 330,000-500,000 people who were relocated lost their homes, their belongings, their everyday life and social networks within a few hours.

This rapid and drastic change and the uncertainty that followed the accident caused big traumas for the many involved. The Danish radiation expert JørnRoed from Risø DTU, National Laboratory for Sustainable Energy were in charge of a big Chernobyl research project in 2002 and has a clear opinion of the radiation consequences:

'The radiation damages are very limited, and only a few people have died. On the other hand a lot of people have become mentally ill. Nearly half a million people from the Chernobyl area has been relocated, and many have been misinformed about the health consequences. And the many financial aid programs have meant that the affected often – because of envy – become pariahs in their new hometowns...the psychological problems are bigger than the medical. People are worried and very stressed about the future...' [Aarup, 2002] – (our translation from Danish, see original quote in appendix a)

What should bee noted is that Jørn Roed is a 'coloured' voice by his work at Risø DTU that looks positively on radioactive technologies and 'continues to expand the opportunities and use of nuclear technologies for the benefit of society.' [Risø]

But also the Chernobyl Forum, constituted by amongst others various UN international organisations (see the information box for all members), reached the same conclusion in their

2006 report: 'the mental health impact of Chernobyl is the largest public health problem unleashed by the accident to date' [Chernobyl Forum, 2006: 36]. This shows that in relation to the numbers affected by mental problems, the radiation damages creating physical health problems are limited.

Since the accident, people have been presented to contradictory information, leaving them worried and uncertain of what health related problems will arise in the future. Many were only exposed to radiation levels comparable to or a few times higher than the natural background level and therefore worry for no reason.

Many of the relocated citizens also have troubles becoming fully integrated in their new hometowns. Due to the various economical support, pensions and health care privileges they receive, they experience jealousy from their unaffected neighbours and feel excluded from the local communities. Unemployment issues and a general decline amongst the younger population in the region, due to voluntary migration, are not enhancing the situation.

A small number of people refused to leave the contaminated areas in the first place, and during the next few years, up to 350 illegal 'self-settlers' have joined them. The 'self-settlers' are mainly elderly citizens who, despite restrictions, move back to continue their lives. The Ukrainian government permits the illegal doings and mail and food is distributed to them once a week.

[Aarup, 2002], [Chernobyl Forum, 2006: 35-36], [UN-SCEAR 1]

CHERNOBYL FORUM

IAEA – International Atomic Energy Agency WHO – World Health Organization UNDP – United Nations Development Programme FAO – Food and Agriculture Organization of the United Nations UNEP – United Nations Environment Programme UN-OCHA – Office for the Coordination of Humanitarian Affairs UNSCEAR – United Nations Scientific Committee on the Effects of Atomic Radiation World Bank Group Belarus the Russian Federation Ukraine



The inhabitants of Pripyat had to leave all their belongings behind due to the radioactive contamination.

THE ENVIRONMENTAL CONSEQUENCES

The release of radionuclides contaminated more than 200,000 km² across Europe and influenced the environmental and ecological systems of the affected areas. The local weather situations, wind and rain, were decisive for the extent of the depositions, and caused various situations.

High levels of radiation were absorbed in primarily open surfaces like roads, roofs and soil/lawns. Animals and vegetation also had a high absorption levels. The radiation level in the air of the affected areas returned to background levels. The contamination in open water systems declined due to dilution, physical decay and absorption of the radioactive particles in sediments and catchment soils. Closed water systems with no outflow as well as undisturbed soils continue to have a high level of radioactive contamination.

The Ukrainian Exclusion Zone and certain southern areas in Belarus were terribly contaminated areas and ever since the accident, extensive studies, research and monitoring of the affected ecosystem have been made.

The initial environmental consequences in the Exclusion zone were of a visual character. An example was the 4 km² pine forest area between the power plant and Pripyat. All the trees died as a result of the high absorption of radiation and their colour turned red-brownish, hereby the name 'Red Forest' which it is called today. Big parts of the Red Forest were cut down and buried in big radioactive waste deposits in the area and these deposits remain highly contaminated. The discovery of dead animals and the short-term reproduction cycle stoppage, for some species, lead to believe that the environment would suffer immensely.

Many feared for the environmental conditions within the Exclusion Zone, but it seems that nature has adapted to the conditions better than anyone expected. *…nature has healed itself from acute radiation effects. The zone itself has become a unique sanctuary for biodiversity'* [IAEA 2]. Even though there still is a higher radiation level than normal in the area various sources concludes that the outcome has

been far more positive for the ecological impacts. '...the sum effect for the flora and fauna in the highly radioactive, restricted zone has been overwhelmingly positive in favour of biodiversity and abundance of individuals.' [Baker & Chesser, 2000]

Many existing animal populations have multiplied, other rare and endangered species, as the moose, the roe deer, the Russian wild boar, the stork, the wolf, the lynx and the river otter has returned to the area. Other species, like the Przewalski's horse and the European Bison have even been introduced.

As mentioned in the previous quote, the primary reason for this development is the human absence in the area: *'radioactivity at the level associated with the Chernobyl meltdown does have discernible, negative impacts on plant and animal life. However, the benefit of excluding humans from this highly contaminated ecosystem appears to outweigh significantly any negative cost associated with Chernobyl radiation.'* [Baker & Chesser, 2000]

The result of the limited human interaction in the area is made clear by Dr. Victor Baryakhtar, Vice President for the Ukrainian Academy of Sciences: *'Northern Ukraine is the cleanest part of the nation. It has only radiation.'* [Baker & Chesser, 2000]

Even though the environment apparently has, in its own way, coped better than expected, there are many conflicting opinions about the extent of the effects of radiation on the animals. Some researchers claim to have found evidence of *'more deformities, including discoloration and stunted limbs, than normal.'* [Kyivpost], whereas others declare that the animals *'can adapt to their circumstances...evidence of DNA mutations (was found), but nothing that affected the animals' physiology or reproductive ability.'* [Mulvey, 2006]

[IAEA 1], [Mulvey, 2006]



Helicopter flying over part of the forest affected by the radioactive fallout - the Redforest.



Different wild living species residence in the Exclusion Zone. Here a group of the Przewalski's horse near the Chernobyl power plant.



The development steps of the new confinement shelter built to cover reactor 4 and the old sarcophagus. [Vinci]

TODAY AND THE FUTURE FOR THE EXCLUSION ZONE

Though many things have remained exactly as they were left, other changes have happened in the Exclusion Zone today 24 years after the explosion in reactor 4. From the beginning of this post-accident period nuclear scientists and researchers have had a full scale case of radioactive-disaster to research, investigate and chart radioactive behaviour, while environmentalist and social scientists have had the chance to do research, surveillance and studies on the area, its vegetation and animals and the people who were somehow affected by the accident.

Today 7000 people are working within the Exclusion Zone. While 3000 works on the remains of the power plant, maintaining the structures, cleaning up, etc. the other 4000 works mainly in the city of Chernobyl as police, check point-guards, fire fighters, researchers, scientists, guides and service employees. Except for the police, the fire-fighters and the guides who work in 14 days shift, the other employees work from Monday till Thursday and return to Kiev for a three day weekend.

Even though it is illegal to live within the borders of the Exclusion Zone 350 people are today living there in some of the smaller villages. The inhabitants are primarily elder people who had a strong wish to move back to their former villages and they were given a special permission from the Ukrainian government to move back in the 80s. Also some of the present inhabitants choose to never leave in the first place. An example of this is a couple in their 90s who are living in the Zone 1, the most contaminated one.

The recent development in the Zone concerns the condition of reactor 4 and the sarcophagus that was build around it shortly after the accident in 1986. In 2004 the Ukrainian authorities decided to commence the big work of stabilizing the old sarcophagus in danger of collapsing. In the same year the development and design plans for a new confinement structure inside which a subsequent dismantling of the old sarcophagus could happen began and in 2007 a plan for the new construction was approved. The construction work of the new arch-shaped shelter has been delayed several times due to findings of heavy contaminated radioactive material in the ground around the complex. But in 2012 the 105m high (equivalent to a 30 storey building) and 150m long structure, spanning 257m with an 18,000 tonnes metal-frame, should be completed, encapsulating the old structure. The red-white striped chimney that make reactor 4 recognisable from distance will be dismounted before the new cover, and the accidents greatest symbol will be forever gone. After the encapsulation the work of dismantling the old sarcophagus will begin, a procedure that will take place inside the new structure. The dismantling is done to remove the risk of the old sarcophagus collapsing and this work is expected finished in 2015.

The new confinement shelter has an estimated lifespan of hundred years, a time horizon that should provide enough time to solve the issues about how to treat and where to dispose the heavy contaminated material. In 2009 the president of Ukraine, Viktor Yushchenko, agreed to a programme concerning a gradual dismantle of the power plant, making Chernobyl an 'ecological safe place, clean of radioactive contamination' [RT 2] in about 50 years time. The plan involves various step in dismantling the different reactors in the power plant complex, and '...also the whole contaminated area known as the Chernobyl zone will be cleaned out step by step.' [RT 2]. Right now the Ukrainian authorities have no concrete strategy of what should happen with the radioactive waste, and if no better solution is found maybe the area will become official disposal zone for the waste.





In 2006 the Chernobyl Forum made a summary report concerning among other things their recommendations for future initiatives in the Exclusion Zone. One of their suggestions is to redefine the Exclusion Zone, '...the three governments should urgently revisit the classification of Chernobyl-affected zones, as current legislation is to restrictive, given the low radiation levels that now prevail in most territories.' [Chernobyl Forum, 2006: 50]

A redefinition would make the less affected areas accessible and open to limited use by the public though an ongoing control of what activities are allowed in the particular re-use areas are required: 'In some of them, prohibition of agriculture may be needed for decades to come for radiological reasons. Accordingly, these re-used areas are best suited for an industrial site rather than an agricultural or residential area. '[Chernobyl Forum, 2006: 52]

Their recommendations according to research in the area declares that there to date exist a broad knowledge about the radionuclide's procedure and influence: 'Various ecosystems considered in the present report have been intensively monitored and studied during the years after Chernobyl and environmental transfer and bioaccumulation of the most important long term contaminants, 137Cs and 90Sr are now generally well understood. There is therefore little need for major new research programmes on radioactiv-ity...' [Chernobyl Forum, 2006: 49]

On the other hand they suggest to continue the research and monitoring on the area with a fauna and flora perspective: 'To further develop the system of environmental protection against radiation, the long-term impact of radiation on plant and animal populations should be further investigated in the highly affected Chernobyl Exclusion Zone; this is a globally unique area for radio ecological and radiobiological research in an otherwise natural setting. Such studies are, except for very small-scale experiments, not possible or difficult to perform elsewhere.' [Chernobyl Forum, 2006: 49-50].

In recent years Chernobyl power plant and Pripyat have gained the role as a top tourist attraction, internationally known as a ghost-city experience. The tourism started officially in 1998, before this year only accompanied journalists and scientists were allowed to enter the Exclusion Zone with special permission.

Today everyone can visit the Zone; as long as the visit is planned minimum three days in advance. Nearly 8000 people visit the power plant and Pripyat every year, a number that is expected to rise in the years to come due to the fact that the building of the new confinement shelter will decrease the radioactivity level in the area. The busiest period runs from April till October/November when the access is not complicated by heavy snow. The yearly visitors are divided 50/50, where half is Ukrainians and Russians who wish to revisit their homes and neighbourhoods and explore a typical/special example of a former high status socialistic city. The other halves of the visitors are international tourists who are drawn by the apocalyptic atmosphere in the



A lonely tourist minibus near the Chernobyl power plant.
area. This share of tourist covers backpackers, weekend travellers and people who specifically come to Ukraine to see reactor 4 and Pripyat with their own eyes.

Alexander Sirota, a Ukrainian journalist, photographer, filmmaker and editor-in-chief of the pripyat.com webpage states: 'for me it is not important why they come, but what effect it has on them' [Yaroshevsky, 2008]. He lived in Pripyat when the accident occurred and returns frequently now to capture the essence of the deserted city. And even though the word Chernobyl engender thoughts of disaster, tragedy and ghost atmosphere the area is also a great display of Soviet history, socialistic city planning and living standards not forgetting the beautiful nature of marshes and woodlands that characterize the northern Ukraine.

In order to obtain the permission that is still required to enter the Exclusion Zone a lot of paperwork has to bee done. This is a procedure that can be done privately through the Ukrainian Nuclear Safety Department whom have an administration office in Chernobyl. But due to the seemingly complicated and time-consuming process foreign tourists mostly consult a travel agency to get the trip organised, whereas the Ukrainian and Russian tourists have the language advantage and knowledge about the country's organisational procedures.

Several travel agencies located in Kiev organise the trips to Chernobyl and in the high season busses are leaving Kiev daily to go on a one-day trip to the area. The cost for a oneday trip is approximately 160 USD where a maximum of 15 people can join. It is possible to visit the area alone or just with a few people and even to stay more days where you sleep in the city of Chernobyl. The cost for these inquiries rises quickly. The travel agencies organise the trips through the Ukrainian Nuclear Safety Department. The profited money are shared between the two, were the far biggest share goes directly to the travel agency. So the Chernobyl area is not benefitting from the tourist money flow that used differently could have been used to upgrade the area or other local aids.

The Chernobyl Forum also treated the topic of tourism in their 2006 gathering and as a third thing to point out from their recommendations is that they want to *'Explore the possibilities for promoting specialized ecological tourism and for maximizing the contribution that these areas can make to the preservation of international biodiversity.'* [Chernobyl Forum, 2006: 57].

By this statement they recognize that Pripyat and Chernobyl will continue to be tourist attractions. An important asset for the area that could be combined with the unofficial announcement as nature reserve that the area has: *The territories could be used to fulfil the three countries' international obligations on the protection of biodiversity.* [Chernobyl Forum, 2006: 57].

[Brogaard, 2009], [Chernobyl Forum, 2006: 31, 49-50, 57], [Jensen, 2009], [RT 2], [Vinci], [Yaroshevsky, 2008], [Zabarin]



Tourism is a growing industry in the Exclusion Zone and thousands of people visits Chernobyl power plant and Pripyat yearly.

SUMMARY

Dramatic and unforeseen changes have dominated the marsh and woodland area in northern Ukraine since the Soviet government made the decision to place the nuclear power plant complex here in 1970 creating what should grow into a middle size city and making the region know for generating nuclear power. The power plant was a proud symbol of the technological progress continually growing bigger, providing electricity to the rising demands of the Soviet population.

The 26th of April 1986 the worst scenario happened when reactor 4 exploded and caused the biggest man-made catastrophe of all time, contaminating more than 200,000 km² across Europe. The disaster literally made the visions, dreams and future perspectives for the region explode – creating a new situation for the area, a situation with no short-term future perspective for civilization.

The government evacuated all humans within the 2500 km² Exclusion Zone, leaving only animals in this deathly area. By surprise the animals have benefited from the situation and a big diversity of both rare and endangered species are now living in the area – making it visible that the human presence is a much bigger threat to them than radioactivity.

50,000 inhabitants were evacuated from the city of Pripyat abandoning their homes and losing everything. Today the relocated inhabitants have problems of becoming fully intergraded into their new neighbourhoods and suffer from psychological health issues due to the contradictory information given to them by authorities and various associations.

The evacuation of the Exclusion Zone made a new narrative rise; an opportunity for a 1:1 scale laboratory to research on the aftermath of the nuclear fallout and an abandoned area of empty towns overgrown by nature with wild animals living freely.

This new role of the area has made it a destination for tourism. Yearly more than 8000 visitors enter through the Exclusion Zone checkpoints eager to see this special and different tourist attraction. This number is expected to rise particularly when the radiation level will decrease.



The characteristic reactor 4 of the Chernobyl power plant dominates the horizon.





VISION

In this chapter we will present our visions for the future of the area of the Chernobyl power plant and the city of Pripyat. The chapter will discuss how the areas new role as a destination for tourism should be worked in order to enhance the visitors' experience of the area and how best to convey the areas narrative. Lastly the chapter will sum up our visions for the future and set the frame for the following analysis- and design process with a thesis statement.

World's Most Unique Places To Visit

Chernobyl offers a holiday in hell Times Online, 2009 [2]

10 Most Amazing Ghost Towns - Oddee, 2008 [3] New Sight in Chernobyl's Dead Zone: Tourists - New York Times, 2005 [4]

Top Secret: World's Most Controversial Places - Trifter, 2009 [5]

Top 10 travel destinations for geeks

The World's Creepiest Places

Chernobyl - Dangerous, Exciting Holiday!? - ScienceForums, 2006 [8]

Dead City Tourism: Abandoned Places of the World - traveldealsreview.net, 2009 [9] Chernobyl's ruins mutate into hot tourist draw - San Francisco Gate, 2005 [10]

In deadly, dying Chernobyl, an odd slice of life: Tourists - Atlanta Journal-Constitution, 2006 [11]

Tourists flock to the dead zone of Chernobyl - Telegraph.co.uk, 2004 [12]

Chernobyl a spooky vacation destination

Turning a nuclear tradegy into a new tourism hotspot

Chernobyl a Hot Tourist Attraction - Los Angeles Times, 1991 [15] Chernobyl - one of most popular extreme tourism destinations - Squidoo [16]

U.N. calls Chernobyl a hot destination for eco-tourism - Tolede Blade, 2002 [17]

Your Ticket to Calamity, Lunch Included Bloomberg.com, 2008 [18]

THE VISIONS FOR THE FUTURE

FROM DISASTER SITE TO DESTINATION

The post-accident inscriptions redefine the role of the Pripyat and Chernobyl power plant area of as one of the world's top 'ghost-cities' and 'unique creepy places' you should not miss. This makes a new use present in the area; the tourism. Yearly 8000 people stand outside the power plant complex to have a glimpse of reactor 4 and its characteristic red and white striped chimney followed by a visit to the deserted city Pripyat were they wander the empty streets and explore the abandoned buildings.

When compared to the annual visitors for two well known tragedy-tourist-spots, Auschwitz-Birkenau Memorial in Poland with 1.3 million visitors in 2009 [Auschwitz] and Ground Zero, New York with 3.6 million visitors in 2002 [Blair, 2002], the number of visitors visiting the power plant complex and Pripyat is remarkable small. Though the number of visitors to Pripyat and Chernobyl will properly rise due to both the decrease in radiation levels in the years to come and the greater commercial coverage caused by the approaching 25th and 30th anniversaries of since the accident it is not expected that the amount of tourist will ever rise to the levels of Auschwitz-Birkenau Memorial or Ground Zero.

The vast visitor numbers mentioned previously illustrates that it is not unique for the Chernobyl disaster to attract spectators. Throughout time people have been drawn towards accidents whether it is a minor accident on the roadside or a catastrophe involving a great number of lives. Tourists are travelling the world to witnesses the remains and aftermaths of disasters and accidents, visiting graveyards, concentrations camps, battlefields, places of terror attacks and many others. Some disaster sites have a strong historical narrative portraying vividly the actions and functions that once took place in the specific site, whereas other disaster sites experience a dramatic change of narrative once an accident has occurred. These places change their narratives due to the sudden incident and become star attractions overnight.

The area of the Chernobyl power plant complex and Pripyat experienced this change of narrative once the explosion in reactor four occurred. The two went from being the main city and the primary workplace of the Kiev Oblast region one day, to being the centre of global awareness the next. The memories of what was once there and the imaginations of the life that used to constitute the place permeate the atmosphere while at the same time the site tells the story and realities of the consequences of human progress.

What is unique about the Chernobyl disaster and its scope is precisely how it is a result of the human technological advancements. This accident cannot be 'blamed' on a natural catastrophe, an enemy, terror or an act of evil. The occurrence in Chernobyl is widely accepted to be a dark but unfortunate side effect of human progress and a common employee's bad and arrogant decision – but no evil intentions.

Various news headlines - all telling the same story, going to Chernobyl is something special – put in either positive or negative words, but indeed something intriguing. Sources to the headlines are listed on page 136 according to the numbers indicated in the square brackets.

THE IMPORTANCE OF TELLING THE STORY

The growing interest for the area of Chernobyl is a good thing; it is important that the story about the accident is told in order to make people reflect upon the possible negative repercussions of technology.

Human-induced accidents with the scale of the Chernobyl accident are no longer a rare sight, and they are to some extent becoming prevalent in our society. There has been a shift in the type of accidents, meaning that some accidents are no longer limited to impact a specific population or a defined area, but are threats to all humans around the world in an undefined time period. [Sørensen & Christiansen, 2006: 26]

The German sociologist Ulrich Beck commented on this shift of accidents when he first published his book *Risikogesellschaft*, in English *Risk Society*, in 1986 (notable as its completion coincided with the Chernobyl accident). In his work Beck introduced the term *Risk Society* to the international understanding of the global development, a theory proclaiming that we have moved from an industry society to a *Risk Society*. One element of the *Risk Society* is to be understood as the presence of the unintended and unforeseen aftermaths, the risks, that follows the scientific and technological progress of the industrial society. [Sørensen & Christiansen, 2006: 20-24]

The new risks in our society are, according to Beck, phenomena like ozone holes, the greenhouse effect, gene technology, the global terror, the danger of radioactive contamination and other similar occurrences whose scope could bring unpredictable and immeasurable consequences. [Sørensen & Christiansen, 2006: 28] What is common for these types of accidents is the fact that they are only visible through scientific theories and knowledge – no persons has the ability to grasp the scope of a radioactive fallout, we can only sense it indirectly through science, though measuring instruments and calculated data. [Sørensen & Christiansen, 2006: 31]

An additional point that for Beck is crucial and decisive for the description of our society as a *Risk Society* is that the Chernobyl accident helped to put the consequences of the worldwide technological progress on the agenda of the social debate. Therefore accidents in themselves are not enough, the *Risk Society* occurs only when these accidents are queried and debated, and when the technological development is questioned. [Sørensen & Christiansen, 2006: 21]

Using the Chernobyl case to illustrate, inform and enlighten the aftermath of a radioactive accident could, in the spirit of Ulrich Beck, strengthen the understanding for the common man and get people involved in the global debate of the consequences of our technological advancements. Disasters such as that at Chernobyl give us a chance to grasp and understand the scope of what could happen in a somewhat 'worst case scenario' and make them take a stand.

Furthermore, the French philosopher Paul Virilio talks about the importance of communicating the aftermath and consequences to the wider public. His approach to the matter differs slightly from Beck's persuasions hence he talks about accidents caused by the accelerated human technology in the combination with either human mistakes and errors or the nature's unexpected course.

According to Virilio's theory accidents like gas emissions, giant leaks in oilrigs or radioactive fallouts like Chernobyl are something we in a society of accelerated knowledge and technology will come to see again and again. Virilio puts it in the words of Hannah Arendt: '*Progress and catastrophe are the opposite faces, of the same coin*' [Virilio, 2003: 40].

Virilio focuses on communicating the accident in his exhibition from 2002-2003 'Unknown Quantity'. In this he showcases pictures and movies of different major accidents. Through this he starts the discussion about the importance of learning from the accident, the unavoidable consequence of escalating technological progress. 'The principle of responsibility to future generations requires that we expose accidents now, and the frequency of their industrial and post-industrial repetition.' [Virilio, 2003: 6]

To be able to improve the future, preventing accidents accelerating in number, scale and frequency, it is important to educate and inform about our experience so far. Virilio warns that 'Whence the urgent necessity of reversing a trend that consists in exposing us to the most catastrophic accident deriving from technoscientific genius, in order to kick-start the opposite approach which would consist in exposing the accident – exhibiting it – as the major enigma of modern progress.' [Virilio, 2007: 23-24]. Paul Virilio does not suggest here a halt to technological developments, but aims to enlighten and provoke a discussion about the fact that it will bring along accidents.

The explosion on the Chernobyl power plant was a consequence of the high demands of electricity and the use of nuclear power to satisfy this need. This primary focus on production resulted in a neglect of safety the precautions. The importance of telling this story is both to start a discussion about power supply and the consequences of a lack of focus on safety. In the case of Chernobyl, the biggest nuclear power plant in the Soviet Union, there is also an issue about that the greater the technological conglomerations, the scale of populations affected by a possible accident will increase.



The area has changed several times over time, from forest- and marshland to home of the Chernobyl power plant and the city Pripyat. An explosion changed the complex to a ghost-town and now the area is about to change once more.



ENHANCING THE NEW NARRATIVE

- BY USING THE OLD NARRATIVE

When telling the story about a technological disaster, it is central to take into consideration to whom the story is told and how it is told.

A lot of people were and are affected by the accident. They lost their homes and livelihoods, some lost their loved ones and some sustained serious illnesses. Before Pripyat was full of positivity. Its former narrative indicated that it was a great city situated close to the power plant ensuring jobs for many of the inhabitants. Both the city and the power plant were status symbols for all the workers and their families. But not all people had positive feelings towards nuclear power. The negative feelings towards nuclear power plants were compounded in the fear of the consequences of a possible accident. Unfortunately the worried were right and the discourse of the area has changed. Today the name of Chernobyl is well known globally, but now the name is connected to disaster, contamination, illness, losses and ghost stories.

Our focus in this project is to enhance the story of human losses and environmental change caused by the nuclear explosion. In order to enhance the site's new role as a destination, it is inevitable to use the old narrative. The old narrative plays a big role in defining the area today. You could say that the city and the power plant represent a monument for all those that once lived there, and today one of the area's special characteristics is the lack of activity and the absence of human life.

The new design and interventions in the area should be addressed to both former inhabitants, their families and former workers as well as people without any personal involvement in the accident who have an interest in learning more about the occurrences. We do not know how former inhabitants will feel about their old town being further exposed and exhibited to tourists, but our design should take their strong feelings and memories about the area into consideration, and be sensitive to the tragedy that has affected so many people's lives.

Our project puts focus on how the everyday life in Pripyat took place in the public just as well as in the private sphere. We have chosen to implicate buildings with both public functions and private apartments in our design to enhance the experience. Furthermore this also enhances the story for the descendant of the former inhabitants, and helps to sustain the picture of the city and the everyday life in a worthy way.



Mailboxes in a staircase in one of the many apartment blocks.

VISITING THE AREA

Today it is possible to visit the area and this should continue. It is important that people go to the area in order to sense the atmosphere.

The factual understanding about the accident that night in April 1986, what and how it happened, its proportions and its aftermath with all its related information, can be obtained in many ways and through many medias. Reading, watching documentaries, visiting exhibitions, getting it told from others, surfing the internet or panning around in a 3d model on a computer - all of this can be done from anywhere in the world. The available information is the controlled parts of the story; it has been selected and edited by others - but does it show the whole entirety? Regarding the available information, we suggest that the exciting Chernobyl-museum in Kiev will be improved on various points. This is to build up a better communication about the facts of the accidents and its aftermath, and to address both a native and an international audience. We will not work with the museum aspect in this project, but only put focus on the sensuous impressions that the architecture, the spatialities and the nature leaves when visiting Pripyat.

In order to fully grasp, how terrible a catastrophe the accident of the Chernobyl power plant was, to get a "bodily" and sensuous experience and to come closer to an understanding of the human losses caused by the accident, we find it of great importance to actually go to the area. It is not enough that people see pictures and read about the facts; they need to get the tragedy 'under their skin'.

We find that the most moving part of the Chernobyl story is the evacuation of all the inhabitants from their homes and their loss of everything. Also as tragic are the changes the accident has had on the environment, how the city has transformed and the new clash between the build environment and the wild growing nature. These are stories with information that should be perceived by human perception.

In order for people to have an emotional experience it is crucial that they visit the area. This wish is supported by the French phenomenologist Maurice Merleau-Ponty who describes how we interact with the world through our body, how our mind relates to its environment through the body. *'Consciousness is being-towards-the-thing through the intermediary of the body'*. [Marleau-Ponty, 1962: 138] According to Merleau-Ponty it is important that our body is actually present in any given location in order to relate to the context, environment, atmosphere etc. It is only this that will shape an individual's emotional understanding.

The English architect Gordon Cullen also writes about how we perceive the world through our body. Cullen explains how it is through the vision that most parts of the environment are apprehended and how when we are looking we place our personal values into what we see. 'In fact (...) vision is not only useful but it evokes our memories and experiences, those responsive emotions inside us which have the power to disturb the mind when aroused. It is this unlooked-for surplus that we are dealing with, for clearly if the environment is going to produce an emotional reaction, with or without our volition, it is up to us to understand the three ways in which this happens' [Cullen, 1971: 9] The three ways of understand how an emotional reaction happens are referred to by Cullen as: Vision, Place and Content.

The three terms are all dependent on the body being present in a given environment, in order to understand it emotionally. When Cullen talks about *Vision* he talks about it as the series of views that occurs when we move in space. This *Serial Vision* is how autonomous beings choose their experiences in a context and this shapes how their path is chosen. [Cullen, 1971: 9]

The second term *Place* is how the body reacts to its position in the environment. A big factor in understanding ones position in a given space is related to understanding the elsewhere. Cullen introduces the notion about HERE and THERE, words he relates to being in the world and comparing ones position with all the surroundings. In a place as Chernobyl and Pripyat the body not only relates to the near visible context but also draws on our individual experiences of what is missing and changed compared to normal cities – placing Pripyat in a larger perspective. [Cullen, 1971: 9-11]

The third and last term Cullen outlines is *Content*. This is the 'fabric of the city: colour, texture, scale, style, character, personality and uniqueness' [Cullen, 1971: 11] which constitutes a large part of the sensuous images of the city. The mental images of how you as an individual witness the city are made by juxtaposing all its elements and characteristics. Here a dualism between 'THIS and THAT' arises [Cullen, 1971: 12]. The body relates to the city's fabric and compares this to the whole, perceiving every detail and characteristic in relation to others. In order for the body to do that it is important that it is present with the fabric to compare and relate. [Cullen, 1971: 11-12]

Gordon Cullen with these approaches focuses on how human vision is pivotal in understanding an area like Chernobyl and Pripyat. However he neglects to mention the other senses in this context. In his point about Content he raises the topic about surfaces and textures, but he fails to talk about the sounds, the smells, the taste or even the rhythms of a city, just as he do not consider the relation between people in the space - all things that implies being in an environment and being effected by the atmosphere.

When people are physically present in an area, the aim of the new design should be to enhance their experiences and simultaneously tell the intended stories. We will like to create a basis for the course of the experiences and to enhance these. However we do not wish to control people's interpretations or use of the area. The design must be fluid enough to allow the meaning of the area to arise from the interaction between the visitor and the design.



Grey concrete and orthogonal lines are very domination in the house facades in Pripyat.

DESIGNING THE AREA

The focus for the design will be in the city of Pripyat. This is the area within the whole Exclusion Zone where the environmental and social consequences from the radioactive contamination is best displayed.

When Pripyat is used for tourist purposes it has to be taken into consideration how the area should continue to change and appear. New design interventions will inevitably modify the areas atmosphere. In the following we will discuss our visions for the use and appearance of the area.

Visitors to the area all have various interests and 'turn on's' as they experience their unique understanding of an area. But due to the size of the city it is impossible to see it all, people are bound to miss aspects of it. The design should be open offering an extra value to the area – an opportunity of enhancing their experience in the area, but still having the chose to choose their own path. The design may not make people feel forced into missing something and thereby making them feel that their experience is reduced.

The post disaster atmosphere of Pripyat in relation to its pre-disaster existence must be taken into consideration in the design. It is important that the area does not turn into an amusement park, removing focus from the tragedy. It should mark respect to those people who were somehow involved in the disaster. We do not imagine the area to be a museum in the classical sense, by trying to preserve the area as a relic to the disaster- we think it is important that the passage of time is visible in the area. The decay gives a distance to the accident, showing that life goes on. It could be considered to start a preservation process in the area, to put a stop to the decay or even to renovate the area and make it stand as original. In our opinion this would not create a reliable image of the accident's impact, but only show how life was in a socialist planned city before the accident occurred.

Time is a very important factor. The once so proud growing city and power plant was stopped in time, allowing unintentional uses take over to transform the city. The city and the power plant complex would with out a doubt have looked different today if it were not for the accident. The fact that the nature is returning, letting the area slowly return to its past state dominated by marshes and woodlands, will eventually mean that the physical evidence of the Chernobyl and Pripyat era will become less visible, leaving only ruins. By letting this happen it underlines the grasp of the accident and its proportions. But still when the area is almost unrecognisable, when the decay is uttermost, the story of the past will still linger in the area.

'Thought in this way at place can be constituted by acts and memories than by physical form, like a battlefield can be an important locus, without there being a single trace left after the war.' [Hvattum, 2010: 42] – (our translation from Danish, see original quote in appendix a)

When approaching the design of a place it is important to consider your approach concerning the *sense of place*. Mari Hvattum, professor of architectural history and theory at the Oslo School of Architecture, explain how a balance between using the old narrative and introducing a new narrative is important and states that the two approaches can work coherently: *'The alternative to graphical determinism is thus not space-lessness, and 'local attachment' does not mean that the architect on any account should mime the eternal, natural conditions'*. [Hvattum, 2010: 43] – (our translation from Danish, see original quote in appendix a) So by introducing new elements in the area the essences of the place in not lost - just modified.

The new elements introduced in Pripyat, are designed in order to tell and emphasize a story. When story telling, it is impossible to aim for objectivity. The designer becomes the conveyor of the experiences, which implies a certain perspective on the translated stories, an agenda. When we, based on an analysis and an empirical perception of the area, make a design it is clear that our opinions will be a part of the design. Though we are using our design skills to catch the attention of the visitors by emphasising specific elements and areas, it is important that this is done in a balanced way. Our intention is not to twist the present reality, but to emphasize and to some extent exaggerate the current situation in order to pin point an aspect of the consequences of technology. In this, our aim is for a design that shows more facets of the consequences and enhances experiences, while still allowing the visitors to shape their own opinions.



A street and a courtyard in Pripyat before and after the accident. It is clear here how the area have changed over the years.

THESIS STATEMENT

Pripyat has gone through a lot of changes and is currently in the process of changing once again. The city has become a destination for tourism after the accident that night in April 1986. Opening up the area, in order to exhibit and tell the story of the accident and its aftermath is a positive act. It is important that this story is told to make the visitors understand how the area has changed, what impact the accident has had on thousands of peoples' lives and through this make the visitors shape their own opinion of the possible consequences of technology.

The focus in the design of the area will be to communicate the story of human losses and environmental changes caused by the nuclear explosion. This should be done based on modifying the areas old narratives or even introducing new ones.

The story should be told to people who are interested in learning more about the Chernobyl accident- to heighten their insight into the story and its content. In doing this, it is

unavoidable to make some changes in the area; this must be done with respect to the former inhabitants, especially when making changes to apartments – which are necessary to do in order to encourage the visitors to relate to the area, by making them draw on experiences from their own life.

To portray the areas atmosphere in the best possible way people have to go to the area – to get an emotional experience and induce a bodily reaction to the area. To emphasise people's experience in the area they must have the possibility to walk freely, to shape their own unique perceptions of the area. The design must therefore be open, refraining from defining paths or hierarchy of attractions but all the while giving visitors the opportunity to experience distinctive places that hopefully evoke understanding.

Time is a very important factor in the area; the decay reflects the aftermath of the accident. The passage of time must be implemented in the design in order to portray how the area is changed and will continue changing.

How can the city of Pripyat be designed and programmed in order to emphasize the social and environmental consequences of the accident while enhancing the experience of the visitors?

It is our thesis that by working with design interventions in Pripyat it is possible to

- Create the premises for understanding the everyday life lived in the area, both in public and private correlations.
- Visualize and expose the environmental changes in the city.
- Educate and communicate the characteristic and nature of radioactive contamination.
- Enhance the emotional and bodily experience for the visitors emphasising the emptiness and the memories that constitutes the city today.

ANALYSIS

An analysis of the site is carried out to bring a deeper and thorough comprehension of the different elements, characters and situations in the chosen area. This is important in order to answer the question of the thesis statement and to qualify the future design of the site.

The analysis has primarily been made on Pripyat since we find that the city is the location where the aftermaths of the radioactive fall out are most present and the city's atmosphere tells the consequences and impact on human life and the environmental changes. Also the area around reactor 4 and the power plant complex are encased by various safety precautions, laid out by the Ukrainian government, making it difficult to access, explore and register. The analysis has been made through digital (Internet) and academic material, where books, articles and pictures have been important for the understanding and reading of the area. Also a 2-day study trip to the Chernobyl Power Plant and Pripyat has helped to build up a deeper understanding and interpretation of the area.

In the following the analysis is presented. The analysis is distinguished in two parts, first the structural analysis and second the phenomenological analysis. The analysis ends with a summary made in order to bring out the important notions of both the structural- and phenomenological analysis.

STRUCTURAL ANALYSIS

The structural analysis introduces the specific location of Pripyat, its relation to the Chernobyl power plant complex and the overall distinctive features the city is placed in – the landscape and its skyline, the structures and the infrastructural network in the area. Also the spatialities, the orchestration of the town, the road networks and its buildings, their functions and programs are mapped and illustrated as part of the structural analysis to get a topological understanding of the city.

The data used in this part of the analysis is gathered through investigations and readings of plan material, maps and aerial- and satellite photos. The main sources for this work have been Google Earth and the webpage pripyat.com where various maps and city illustrations are available.

The collected data and information is represented in the following pages through commentated maps and diagrams.



OVERALL DISTINCTIVE FEATURES

The map on the next page shows how Pripyat and Chernobyl power plant complex are situated in the middle of forest areas and marshes, two nature types that characterize the region. Before the accident in 1986 the space between the city and the nuclear complex were partly covered with pinewoods being coherent with the still existing forest. This later became known as the red forest due to the change of colours that happened to the trees after the wave of radioactive contamination was hitting it directly and killed big parts of the forest immediately. Since then big areas of the red forest has been cut down and buried creating a big void between the two built conglomerations, today only filled with sparse vegetation. [Zabarin]

After the evacuation of the area the nature has had free rein and over time been growing uncontrolled into the deserted areas. In some points it seems like the big forest areas are stretching into Pripyat connecting to the city's both planned and wild growing dense vegetation, making the old strict edge of infrastructure and urban elements vague.

Another dominating element in the area is the water, an element visible in both the marshes, the Pripyat River and in the artificial cooling lake subsidizing the Chernobyl power plant.

The Pripyat River is approximately 710 km long and is a tributary of the Dniepr River. It connects with Kiev to the

south and runs through southern Belarus before returning into Ukraine again. [Wiki 1] The river runs through a flat landscape and it is characterized by meanders, bends in the watercourse that are created by erosion of the moving water in the outer curves and sediment in the inner curves of the river. [Wiki 2]

Contrary to the natural curved lines and the beautiful nature of the river and the marshes, the 22 km² big cooling lake, that was dogged out at the same time as the construction of Chernobyl power plant, lies straight and bombastic in the landscape as a horizontal witness of the former industry in the area.

Other signs that humans have impacted this primarily nature dominating area are evidently the presence of both Pripyat and the power plant complex. The two clearly follows their own organized grids of functionality and homogeneity.

Due to the flat nature of the landscape, the overall outlines are most visible when you watch the area from above ground, for example from one of the high-rise apartment blocks in Pripyat. Overlooking the area from here the various nature and build features are clearly distinguishable from each other. The silhouette of the Chernobyl power plant with emphasis on reactor 4 is standing out on the horizon as an icon for the terrible disaster and its aftermath.



Panoramic views from a 16-storey housing block in Pripyat with hatches and markings of the skyline and the specific nature features. Notable is how the surrounding forest areas broaden into Pripyat.

The built structures in Pripyat and Chernobyl power plant differ from the overall nature features - the forest, marshes and the river. The areas hatched in red are very the Red-forest were before the cutting of the dead trees.

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The area around Pripyat and Chernobyl power plant provides many green and recreational nature facilities.











THE CITY OF PRIPYAT

The city of Pripyat was founded in February 1970, prior to the construction of Chernobyl power plant. Since the city were to be built on a blank space the aim was to plan and build up a city providing all the housing, programs and amenities that would compose the ideal socialist visions.

'The Soviet socialist city was intended to bring into existence a new and higher form of society: one in which collectivism would supplant privatism.' [Bater, 1984: 142]

To create such city the Soviet planners saw a limited city size as one of the answers: 'the best balance between economic provision of urban services and potential for creation of a sense of community, if not a communal ethos, was in a town of 50.000 to 60.000 inhabitants.' [Bater, 1984: 140]

As in other socialist cities in the Soviet Union Pripyat was developed with using the mikrorayon (micro district) as the basis for creating smaller neighbourhoods within the city as a hole. A mikrorayon is a gathering of housing complexes, that usually had somewhere between 8000 to 12000 tenants. [Bater, 1984: 147] In Pripyat's case the mikrorayons were arranged in a combination of blocks and living towers raging from five to 16 stories with standard apartment units, giving all inhabitants the same living conditions.

The orchestration of the housing complexes in Pripyat was implemented in order to make a dense city and thus save land to create urban environments and plenty of green areas, a great number of sports and playground facilities for the inhabitants to enjoy and to bring about a sense of community. [Bater, 1984: 140]

Also regarding other functions and programs that constitute a typical socialist city, Pripyat can be described in the general terms. The city has perimeter thoroughfares with public transport offering a limited journey to work. There was a spatial equality in the distribution of the day-to-day requirements within the mikrorayons meaning that day-care, school, grocery shopping and other consumer and cultural services could be reached within a short pedestrian journey. [Bater, 1984: 141, 147] Also the city offered access to educational and health services. Lastly the public spaces and in particular the city centre were giving and ideological and symbolic role. [Bater, 1984: 142]

The close proximity to both railway station, river port and highway network made Pripyat an important node in the Kiev Oblast region, due to the convenient travel options from the smaller towns and villages.

When the fall out of reactor 4 happened, Pripyat was as well as the nuclear power plant complex expanding, and as soon as in 1988 a vast number of further public facilities were expected completed.



The different types of apartment buildings in Pripyat.



The various public buildings, squares and outdoor spaces in Pripyat.

FUNCTIONS



The various facilities and functions in Pripyat are showed in the map above.



DENSITY AND SCALE



The distance circles illustrate the pedestrian proximity that influenced the city – in general you walk 80 meters per minute if you walk directly from A to B.





500 m

Pripyat: 3 km² - 300 hectare

Chernobyl power plant: 3,6 km² - 360 hectare

New York: the lenght of $1^{\rm st}$ Avenue between East $1^{\rm st}$ Street and East $9^{\rm th}$ Street is 670 metres.

Duisburg Landscahftpark: 0.2 km² – 20 hectare

VEGETATION



It is clear to see that Pripyat was built in the middle of a very green region.



Despite the high density Pripyat is and feels like a green and open city. Approximately 80 percent of the outdoors areas in the city are green or recreational spaces. Different green facilities as the city forest, the city park, the big open courtyards and the hundreds of trees planted along the roadsides provided spaces for relaxation, sports, entertainment and play – added to this is the surrounding nature; the lake, the marshes and the woods described earlier.

Due to the many trees and wild growing vegetation the changing seasons has a big influence on the appearance of the city. This is especially visible today where the nature has spread even more and where no other elements are colouring the city.





Section d - 1:2000

The sections through the central part of Pripyat show the change of spatialities in the city - the public squares, parks and the semiprivate courtyards. It is clear from old pictures and birds eye photos that the nature was planned, tamed, controlled and organised, all to create a nice setting for the public amenities as well as the social housing in each mikrorayon. The sections show a representation of the present vegetation in the area, and how the original vegeta-

tion types - the promenade, the park, the city forest, and the trees in the courtyards - are still readable though some types are more wildly disperse than others now. Though Pripyat was a dense city population wise, the open spaces between the buildings are big and spacious providing a horizontal opposite to the vertical housing blocks ranging in 5, 9, 10 and 16 stories.





THE SHOWN

This mapping is a gathering of three different informations that combined gives an image of what is in focus when researching and visiting Pripyat, both from a general point of view and from our point of view.

Prior to our visit a registration of private pictures uploaded to Google Earth was made. Which locations and which sights do the users find important enough to share with the world? These are represented by the aggregation of dots, where the darker colour shows a greater quantity of different pictures. Here it is clear that the main central square, the ferris wheel and the view from the 16 storey building west of the central square are of great interest.

Additionally two routes are drawn into the map, representing the routes we followed on the first and second day of our visit to Pripyat. On the first day we joined a group of 15 people letting the guide decide where to stop and to some extent what to see. Comparing the route from the first day, with the Google-picture representing dots, it is clear to see the correlation between the two. It is also logic to conclude that the tourist agencies mostly follow the fixed route that they show to their one-day guest. What should be noted is that their chosen points of interest are truly appealing to a wide audience, including the eye-catching icons and the impressive emptiness of the public buildings. The role of the guide was in our case quite limited. At a location stop he quickly explained what we were about to see and was happy to answer question but did not guide us inside the buildings. This approach was perfect for this specific group were everyone were eager to explore themselves, drifting around following what by chance caught their attention.

The second day only the two of us were in Pripyat together with the guide and a driver. The drifting approach was continued from the day before, but the second day we decided what to see and where to stop. We wanted to investigate areas and buildings that differed from the experiences gained on the previous day – things that also were under-represented on the Google Earth pictures. We had a deeper look into the more private side of living in Pripyat and visited many private apartments and walked through a couple of courtyards, trying to grasp the feeling of living here and what the former citizens had lost and left behind once evacuated.

The limited time in the city was a condition that shaped the experiences and had an influence to what extent we got to seize the city as a hole. Many more days could easily be used to explore the rest of the city and its nature, buildings and special features. Besides the limited time the heavy layer of snow is off course also an obstacle that decreases the accessibility in the area on this time of year.





Pictures attached to Google Earth

Our route on day 1 (7th March 2010) By car By foot

Our route on day 2 (8th March 2010) By car By foot





Dubord and Jorn made different psychogeographycal maps of their drifts through given spaces, most well-known is their map of Paris, 'The naked city: Illustration de l'hypothése des plaques tournantes en psychogeographique' from 1957.
PHENOMENOLOGICAL ANALYSIS

A phenomenological approach is used in the second part of the analysis, where topics like the arrival to the site, the change over time and a bodily- and sensuous experience of the site are studied and attempted clarified.

When analyzing the city, we will have Gordon Cullen's three themes in mind; *Vision, Place* and *Content*. Cullen's *Serial Vision, Here and There* and *This and That* are three important factors in understanding peoples emotional reaction of the spaces of the city. In contrast to Cullens primary focus on the vision, we will in our registrations try to capture the reactions of our others senses as well.

One of the methods used to register the city of Pripyat is the phenomenological '*drifting*' method drawn from the Situationists (l'Internationale situationniste), an artistic association with Guy Debord and Asger Jorn as some of the leading figures. The movement existed from 1957-1972 and worked for one thing with mapping and experiencing places and cities through a dérive; a drift through the city. [Nielsen, 2001: 44]

Dubord's Theorie de la dérive was published in 1956. Through this he clarified that 'the drift should not be confused, then, with "classical notions of the journey and the stroll"; drifters weren't like tadpoles in a tank, (...), but were people alert to the "attractions of the terrain and the encounters they find there," capable as a group of agreeing upon distinct, spontaneous preferences for routes through the city.' [Sadler, 2001: 77-78]

This means that when experiencing a city or a place the drifter should follow the elements; objects, signs, colours, shapes, patterns, spatialities, views, settings etc. that he find fascinating and alluring. The found and pursued elements then generate the route through which the given space and place is experienced. It was important for the Situationists that the registered and analysed elements and factors were 'affecting their mood, behaviour, and choice of route as they wandered their "drift" (dérive) through the city.' [Sadler, 2001: 20] It is clear that 'the determinants of drift, apparently, were alternations in emotional and ambient "intensity"; "the appealing or repelling character of certain places"'. [Sadler, 2001: 90]

After the registered drift through the visited part of Pripyat, the analysis is carried out by putting the visual, the spatial and the bodily experiences into words, and by using a hermeneutic analysing method to analyse series of photos taken in the area. Here the separate components within the photos and the entirety of the pictorial material are looked upon alternately to seek a better interpretation of the collected material and to relate this to the context. This sets the essence of our individual experience, the atmosphere and the impressions side-by-side with the entity of the city.

GOING THERE

Going to Chernobyl and Pripyat are only possible by vehicle and the distance from Kiev is traversed in approximately two hours. The photo collection to the right documents the change of scenery along the road driving from the second control post ending up at the last control post at the edge of Pripyat.

"...out of nothing on this straight long road the second control post appears. We are getting closer, now the action is near – I'm alert! Two uniformed guards check the car and its content – us. One is leaning down and gazing through the window comparing my face and eyes to my passport he holds in front of him. "No passport – NO GO!" was the literal message we got when ordering this trip, but we're clear to go!

Driving through the snow makes a special hollow sound, a sound that is intensified by the total silence everywhere. We are out of the city, that's for sure and travel through the abandoned land.

The scenery changes along the sides of the road – the horizon stays the same. By turns we pass areas of marshes and forests ranging in size. The naked branches allows us glimpses of the smaller abandoned villages we leave behind on our way to the prime destination – reactor 4 and Pripyat, this ghost city we've heard so much about. Windows are broken and the wooden structures are starting to fall apart, while trees are moving in slowly – through the windows, through the walls, through every crack, demanding their former territory back.

Unexpectedly, in front of the car a group of wild dears are crossing the road. They run fast, like fleeting shapes giving an instant reminder of the life that after all is growing in the deserted area. "You guys are lucky!" the guide tells us... but I feel a touch of disappointment; the dears are impossible to catch on camera.

...sitting in the backseat of the car looking out the window on the continuous landscape my mind wonders off. Suddenly a sound breaks the absolute silence accompanied by the running motor. A sound of sirens rises in the car when the guide reaches for his cell phone. This unexpected foreign sound makes my fluttering thoughts jump back to now! – Sirens! Accident! Explosion! What sight will meet my eyes in just a few minutes?

To the right an iconic structure all of a sudden stands out from the tall trees that until now have been dominating the ice blue sky – the first sign of the power plant complex. How close are we?! Soon the car stops, we get out and stand in front of it!! The symbol of the biggest man-made disaster ever seen is right in front of us. Everything about the structure, its shapes and the whole appearance of reactor 4 meets my expectations – this is how a true nuclear reactor looks like! I imagine how smoke came out of the candy striped chimney when electricity production was at its peak... and how the chimney was shrouded by smoke when the whole reactor was burning after the explosion in the very early hours that night in 1986... and that in a few years no one can ever see the chimney again once it is taken down and the reactor in sealed by a new structure. Now I feel lucky! - lucky that I got to see this tragic yet thought-provoking icon before it's too late.

Reactor 4 is the only part of the whole power plant complex we can observe – an invisible wall of prohibitions and rules shields of the rest. 'We have devices here that'll destroy your camera if you try to take a picture from this view', the guide proclaims shortly. We don't believe him... but still I put the camera back in my pocket, somehow scared and intimidated by the Ukrainian authorities....

Back in the car again we continue to the final stop - Pripyat. An old sign indicate our direction. It is still standing white and proud pointing the second pride of this region, the ideal Socialistic city, a role model for later Soviet developments and frequently visited by Soviet politicians.

Light poles appears in strict rhythms on the road - a rhythm the trees are deliberately avoiding. We are here. I see the final control post out of the windscreen, and behind this the main promenade of Pripyat leading to the heart of the city – I want to go in. I want to explore. I want to see for my self. I want to be the only one in this empty, silent city...'

































TIMES CHANGING

These pictures are made by placing old images from Pripyat into the city's setting of today, 24 years after the accident. In the old pictures life is still pulsating in Pripyat and the assembling of the then and now pictures illustrate the change that Pripyat has gone through – from a lively dense to an empty abandoned city. According to the geographer and sociologist John Urry places are primarily constituted by the common actions made here by people over the years. [Hvattum, 2010: 42] These pictures provide a glimpse of the daily life situations and try to grasp the former atmosphere in Pripyat in the public squares and the semiprivate courtyards as well as special events like concerts and demonstrations.











16 APARTMENTS

On the following spread a photo collection taken in 16 similar apartments is presented. In the 16-storey housing block west of the main central square two pictures were taken in identical apartments on each storey. The pictures were taken from the hallway into both the living room and the kitchen. The collection emphasizes the uniformity seen in all apartments throughout Pripyat where the intention was that everyone should live under similar conditions. But in this homogenised world were all the kitchens (except two!) are kept blue, the private touch emerges in the colour and furniture choice seen in the living rooms – showing that this collective minded city after all was inhabited by different individuals.

This photo registration is inspired by the exhibition The Room Project by Annette Merrild exhibited at Kunsthallen Nikolaj in Copenhagen in 2007. Through her project she visited housing blocks inhabited by the middleclass in different countries and photographed their rooms from the same angle. The portrayals was taken without presence of the inhabitants and showed their homogenous yet cultural different living-frames. [Nikolaj, 2007]































OUR EXPERIENCES

The following series of photos tell the story about our experiences, our impressions and our findings on the visit to the Chernobyl Power Plant and Pripyat in the beginning of March 2010. With the photos and the accompanied quotes we have tried to capture the atmosphere as well as our personal encounter with this abandoned area, the city emptied of human life and first row witness to the biggest man made disaster ever seen.

'I look at the guide waiting for him to answer my question, but he is busy lighting a cigarette..."You're in Soviet – everything here is relative..." – he smiles and turns quickly away. His face shows no excitement about what he is showing to us, there is no big show, no sensation...'



'Once out of the bus the group starts acting like foxes in a hen house. The temptations are







'The nature has taken back control... and still the nature is out of control! Where human power used to reign, nature is now dominating. Branches are screening the paths and my views, forcing me to seek alternative routes.'







'I associate cities with life – movements and buzzing sounds. But there is nothing here. The deep snow that covers the ground has even deadened the breath of the earth. I draw in the silence that embraces me and starts walking down the empty road.'



'From afar every housing block looks the same. The colours, the windows and their interrelate patterns are alike... But the closer I get the human individuality and diversity shines brighter into the grey world.'

AN PARTY AND

'You hear the facts... you see the numbers rising on the Geiger counter... you see the emptiness!...and though you know that it is everywhere around you still don't see the invisible threat: the radiation – no shape, no smell, no taste, no wind, no nothing! Just the emptiness everywhere... but my body and mind start being extra sensitive, all my senses are fully alert. I fell every prickle, every itch with high intensity...'









'It seems like the time has sucked out all the colours – leaving room for only a few very persistent and bright. The naked branches, the greyish buildings, the white snow are rarely punctuated with an intense yellow or red or... But when its there, it draws attention!'



'The colours are soon to disappear completely – they are taken over by the black and white world. The few vague colours I still see stand on the wall like an hourglass running out of sand.'



'Now is a perfect angle, now the perfect light shines through the smashed windows! I'm standing in the perfect setting for a dramatic picture... or in the very centre of a disaster that affected thousands of people? Sometimes I tend to forget...'













memories from the families that used to live there."



'I push the door open to the kitchen with my foot – somewhat afraid of touching anything with my bare hands! It is clear to see that some elements are missing here... why are they removed? Are they not contaminated? Between the remaining things I imagine the missing parts and start an inner illusion about the daily life that once took place in this kitchen.' 'The icon! The image of what caused the disaster stands out on the extensive horizon lit up by the blue sky – the red and white stripes on the chimney have faded, just like the memories of the structure itself will in the years to come when the reactor is fully covered – becoming memorably only through photographs.'

2011

it in










'The crackled wallpaper makes me wonder how long before the wall themselves will start to collapse. The patterns of the wallpaper are like an ominous prediction of what will eventually happen with the whole city – but it looks beautiful!'



SPECIAL FEATURES

Every place, every city has its special features. The collage visualizes details, patterns and characteristics that tell something specific about Pripyat. When extracting what distinguish Pripyat from other places it is clear to see that some of the special features were deliberately planned, some has emerged in the aftermath of the disaster, while others are present as a combination of the two. The dominating grid of the city, its roads, buildings, windows and the rhythm of the light poles – everything is in contrast to the wild growing nature, under no control, but slowly taking over the city. The black window-openings of the empty houses. Houses where you can walk freely between all the doors coming again and again and again, around every corner – the whole city lies at your feet, everything is open – making the difference between inside and outside diminish. The blue colour is a dominating reminder of the past, leaving an imprint in your mind, but fading away as the decay of the build is doing in the city, making it shift into something new. The whole area screams of order and chaos – order versus chaos – what is dominating?





ANALYSIS SUMMARY - BASIS FOR THE NEW DESIGN

This chapter will draw out the essence of our analysis in order to set up some themes and tools to inform our new design of Pripyat.

Before visiting the area we had a preconception of what the area would be like. These preconceptions were mainly based on our research and analysis made prior to the study trip, but they were also to some extent based on the general stories and anecdotes told about the place. Visiting the area and analysing the observed characteristics and other gathered research showed that the question of the thesis statement was still relevant; the two discoveries that made the biggest impact on us were the total lack of human life and how nature was reclaiming the area

The most surprising discovery was our emotional reaction to the place. The vandalism in the area was of a greater extent than imagined; there was an extreme sense of the emptiness. The visitor is left with a surreal sensation of a life that once was but is now lost. It is this personal connection that makes the place so eerie; the empty homes, the desolate squares and streets.

The invisible presence of a higher radiation level than normal also made a bigger impact than foreseen. Even though we had read that it was perfectly save to stay in the area for a short time period, the fear of it was still occupying our minds not knowing what was safe to touch and questioning if it was safe to inhale the dusty indoor air.

Above many of the important findings we record in this thesis, the experience of actually being in Pripyat had the biggest influence. It made the issues of the site 'real' and genuine

As per the thesis statement we will emphasize the social and environmental consequences of the accident and enhance the experience for the visitor. This should be done through working with a design that should be comprehended by human perception, giving visitors a sensuous and bodily experience.

By enhancing the social consequences we will focus on the fact that the citizens of Pripyat had to be evacuated from the city within a few hours, loosing not only their homes and their personal belongings, but also their everyday life and social networks. All the confusion and misinformation that followed; about when and if a return to Pripyat could be possible and what health impacts the radiation had. These stories and emotions should be enhanced in the design, to bring visitors closer to an understanding of the human losses.

Emphasising the fact that nature has taken over should be done in order to illustrate the environmental consequences from the accident. The area has a high level of radiation compared to other places and this should be illustrated. The radiation is absorbed differently in the different surfaces and materials and is influenced by the weather; all this is now integral to the place.

The Ukrainian Exclusion Zone that was made due to the accident is a huge area with great bio diversity. The animals living in the zone including Pripyat should still live in peace from human activity. In our design we will focus on Pripyat and thereby inadvertently interfere with the native animal population. Today tourists visits Pripyat and 7000 workers live in the city of Chernobyl, a fact that apparently has no impact on the animals survival or procreation. The size of the Exclusion Zone area gives the animals plenty of space were they can live freely and undisturbed by humans. Of course the wild animals should still have access to Pripyat, an aspect that will enhance the visitors experience.

From the analysis we have drawn some themes that can help strengthen the future design. The three main themes with their sub-themes are presented below.

THE INVISIBLE THREAT

The radiation is a threat in the area – but it cannot be seen. It appears in other ways, being present in the back of your head all the time (where to go, what to touch, do I inhale contaminated air), and can only be illustrated as a number on a Geiger counter. The invisible presence of the radiation and the fact that you do not know what impact it will have on your body makes you in some way afraid. The uncertainness about the radiation was a big part of all the confusion and misinformation the former inhabitants experienced.

Disorientation – after the accident the former inhabitants and workers of the power plant were presented to conflicting information leaving them worried, disorientated and with the feeling of being misled. The design should work with the feeling of being disorientated.

CLASH BETWEEN LIFE AND EMPTINESS

There is a strange atmosphere in the city where the total abandonment is clear in the lack of human life and activity. The roads and squares are dimensioned to accommodate a larger number of people and therefore seem incredibly empty when not in use. The fact that somebody used to live in the city should be evident in the design, to make it easier for the visitors to comprehend the extent of the accident and the effect it had on everyday life, an everyday life that could have belonged to anyone of us.

Alone – making people feel alone will enhance the understanding of an empty city.

Voyeurism – by exhibiting private homes the visitors can relate to the loss of the former inhabitants. The invasion of privacy, a privacy that has long since been lost, heightens the visitors personal connection to the place and therefore their experience and understanding of the ramifications of the accident.

Subtraction - when something is clearly missing, we start to fill the blanks, using our imagination to rebuild the past.

CHAOS IN THE ORDER

The city is built with a grid like structure. Both vertical and horizontal, the repetition and homogeneity permeate the area. All these rules are broken by nature, as it encroaches on the city breaking this human controlled order. Nature is reclaiming the city.

The passage of time – the passage of time since the accident is very clear in the area. It is visible in the appearance and expanse of the vegetation, and also in the natural decay of the entire built environment. The new design must work with this overt expression of time continuously, meaning that nature will continue to take over, changing both the natural and the built environment in the future.

Whilst making our new design in Pripyat we will aim for a design that will continue to allow the future visitor to meander and drift freely around the area as they do today. Presently visitors are primarily accompanied by a guide but have the freedom to wander around by themselves. This allows the visitors to create their own personal experience of the area. The things they see vary, depending on the time they spend there, the weather and their curiosity.

Enhancing the experience through our design should give the future visitors the possibility to find and explore the spaces we find important, unique, interesting or just beautiful – places where we got a rich experience. These are the places where we will make an intervention. We will work with an open design, i.e. we intend, through our design, to give the visitor the possibility to explore our intervention, without forcing them to take a fixed route through the whole city. This gives the visitor the possibility of using and viewing our design if they want while at the same time letting them decide and shape their own experience. Our design should be constructed in a way to make the visitors believe they have found all the areas of interest independently.

Through the analyses it is concluded that the central part of Pripyat is the focus area of the new design, since it is an area within walking distances to many of the most important places the town holds. Furthermore this area shows many of the different aspects of a city like Pripyat; the big public buildings, the main city square, the city park, the more private part of the city; the courtyards and apartments as well as the possibility of getting on top of one of the highest buildings in Pripyat.







Plan of the focus area in the centre of Pripyat – 1:5000 (



THE 7 DESIGNS

In the following the ideas of how the designs are relating to the themes, derived from the analysis will be described. All the designs are open and we cannot predict the whole extent of the interaction between the visitor and the intervention. When working with an open design a lot can happen and the experience vary from person to person depending on their own history and feelings. Here only our intentions about the experience, the visitor should have with the installation, is described. The designs are presented and explained further in the enclosed design presentations.

VIEWING TOWER

The first design that appears when arriving to the area is the staircase constructed within the high-rise building. This staircase invites to climb the stairs in order to get glimpses of the other designs and to reach the top of the building to get a view of the area. The stairs leads the way inside, through stories and outside the building exposing different experiences and views into the surrounding city. The theme **Disorientated** is incorporated in the design, with different dead ends in the walkways, loops and the choice to leave the walkway using a self-made alternative path. By gradually reaching the top of the building, getting more views of the city an understanding of the size and the emptiness of the city begins, emphasizing **The Clash between life** and emptiness. The length and width of the walkway may separate the group of people on the walk. By turning around corners or talking a detour the idea is that people at some point will feel **Alone**. By walking outside the apartments looking in or suddenly finding yourself in the middle of an apartment the theme **Voyeurism** is implemented. By **Subtracting** walls people will enter the apartments in a new way giving possibilities to relate to the old design of the building. **The passage of time** is present in the journey by seeing the decay of the apartments and the views of the town and how nature has taken over.





HOLLOW

From the outside visitors have no clue what to expect when entering the 9 storey building that houses the Hollow intervention. They will properly question why to enter the building through a hole in the middle of the sidewall and feel **Disorientated** about where the walkway leads? The emptiness of the house can be overwhelming and the goal is that visitors will stand in the empty space feeling **Alone**. In the building they are forced to start using their imagination in order of rebuilding the houses inner. **Subtraction** is the theme used to let people get a small grasp of many homes are now gone. The theme **Chaos in order** is also present since the house does not show the expected when entering it – the opposite in fact.

CUT IN HOUSE

The theme of the Cut in House design is the *Clash between life and emptiness* by illustrating the emptiness of the apartments in relation to each other showing the amount of homes. The apartments are cut open towards the surroundings - displaying it's inner by *Subtracting* parts of the block. This will give an 'x-ray' look into the apartments and a hopefully a feeling of *Voyeurism* while looking into people's former private homes.





TIME BOULEVARD

The Time Boulevard is displaying *The passage of time* by using trees to make a fade from present time to 1986 displaying how the nature and vegetation has changed and will continue to change in the coming years. The *Chaos in order* is shown in the display of how nature has controlled the grid laid out of the build and how it has changed over time to follow its own system. Also the *Clash between life and emptiness* is illustrated here, but in a somewhat reverse way. Here the emptiness and order between the first rows of trees represents the life that once was, whereas the seemingly uncontrolled densification of trees is embodying the human emptiness of the city.

HOTEL

The Hotel is designed in order to incorporate the *Clash between life and emptiness* where lights from the apartments turns on at nighttime. The feeling of being *Alone* and the emptiness of the city is challenged with the design. Spending a night in an old apartment may make people feel like they are trespassing; here the theme *Voyeurism* is present. The hotel rooms are encapsulated by iron in order to make people *Disorientated* about *The invisible treat*. Is this necessary? Am I safe in the room? What about outside the room? When looking at the hotel rooms from the outside the same kinds of questions are hopefully triggered.





NUCLEAR TREES

There can be some **Disorientation** about why new trees are growing inside a building and out of its roof, but the theme most present in the design is **Chaos in the order**, where the building is taken over by trees – growing outside the order laid out in the building's design. The trees grow up a pattern derived from the core in reactor 4. This pattern draws the mind towards the radiation accident in the area keeping in mind **The invisible threat**.

LIGHTING WALL

The Lighting Wall contains 50,000 orbs, a reference to the amount of people that were evacuated from the city. The **Clash between life and emptiness** is present trying to make visitors understand how many 50,000 are. The grid and pattern of the orbs is a play with the **Chaos in the order**, and the orbs will illustrate the changing level of radiation in the air and the surrounding materials by light and sound and thereby show **The invisible threat** making people's body relate directly to radiation.



REFLECTION

This project is about how to enhance the experiences for future visitors to Pripyat and introduce them to the social and environmental consequences that the accident at Chernobyl power plant entailed.

In the following text we will summarise and reflect upon the key findings of the project as well as present and critique the seven design interventions.

STATEMENT VERSUS INTERFERENCE

Throughout the project we have purposely refrained from judging the merits and dangers of technological progress that both Beck and Virilio alert us to. We want to emphasize and present the consequences that follow the worst-case scenario of technological progress – to display the impact on humanity and the environment.

Likewise, we have tried to refrain from political colouring or personal bias towards the ethics of atomic energy.

This being said, naturally our design will be imbued with a certain subjectivity. In the designs we emphasise some emotions that could be categorised as negative. For instance when we try to emphasise the feeling of disorientation we draw on some emotions that we believe the evacuated inhabitants had. When we cut in walls or roofs we create unreal images of the city. Nevertheless, we still believe that the interventions leave room for ones own interpretation, without enforcing a certain standpoint. We have created a scene that hopefully urge the visitors to reflect upon what they see and give them the desire to learn more about the aftermath of Chernobyl and its impact on those involved.

Despite the previous statement about attempting to refrain from personal prejudice and judgement over the causes of the accident, we have with the design interventions tried to show the layers of the accident, its impact on human life and the environment in Pripyat objectively without hidden agendas or messages.

It is easy to demonise atomic energy in this situation of course. This is a situation showing nuclear power at its most sinister and destructive. Therefore is it naive of us to think that we have created an objective and fair design? Or even if this is the case that visitors come open minded enough to appreciate it? Are there ANY good things to display about the atomic energy industry in this particular case? With so much already published about the Chernobyl disaster how can we possibly effect the average visitor's perception of it? It is difficult to answer the questions, but through the design interventions we have tried to set the frames for people to create their own opinions, despite their preconceptions. Maybe by learning, experience and acknowledge the impacts of the accident, a new awareness evolve making people aware of the aftermath and effects of atomic energy use.

THE THEMES

In our seven design interventions in Pripyat we have worked with the three themes derived from the analysis; The invisible threat, Clash between life and emptiness and Chaos in the order together with the individual sub themes. The presences of the themes in the interventions are visible to different degrees.

The themes are used as tools to implement the thesis statement in the design interventions. Each theme represents the fulfilment of emphasizing the social and environmental consequences, which is the main focus in the project. But could other themes be used to fulfil the thesis statement? It is difficult to answer, but through both the structural and phenomenological analysis we have found that the themes are essential elements when using physical interventions to make mental awareness. In order to emphasize the experience of the area and the aftermath of the accident, it can be useful to take point of departure in existing elements; thus the invisible threat stress the fact that the area is radioactive, the clash between life and emptiness underline the development and social consequences and finally the chaos in the order emphasize the aftermath and environmental effect.

THE DESIGNS

By introducing the designs we interfere with the existing layout of Pripyat. But how are the designs seen in relation with the existing context? When creating something new in an abandoned city, we interfere to some extent with the present atmosphere and decaying process.

If our interventions are to be realised, the viewing tower project will be visible when arriving to the area. It will then immediately be clear to everyone that this structure stands out from the old city fabric. This marks a change in the area, a change of the role of the city. The protrusion stairs illustrate the fact that it is okay to explore, investigate and experience the city – to drift around and create your own imaginations and stories of how life once was here. The designs encourage an understanding about the nature of radioactivity and the consequences for both social and environmental life in the area.

The design of the other interventions also contrast with the existing fabric of the city – cutting holes and cracks, adding boxes with materials not normally used in the original structures, planting trees inside a building and using light and sound effects to enhance a clear message.

What is common to most of the interventions is how we work with space as a physical form. In the Viewing Tower, the Nuclear Trees, the Hotel, the Cut in House and the Hollow we cut, remove floors, make holes, etc to add and use passive effects to enhance the message of the interventions.

In the Lighting wall we have chosen to use other effects to enhance and emphasize the message - the light and sound, which make this design, stand out from the rest. A question could easily be why we have not worked with these visual effects in the other interventions? You could imagine a sound playing of children laughing, running down the stairs, while mothers talks eagerly, when looking at the Cut in House. Or the sound of a squeaking door, a distant trampling or a wind blowing through the windows while overlooking the Hollow. Also the use of light to enlighten some buildings at nighttimes or to emphasize shadows could be used. But these are impacts we have deliberately deselected. In our opinion the use of these elements could quickly turn into an overloaded 'impact-machine' influencing your senses of what to think and feel in this particular place. Serving a soundtrack and orchestrated light setting to the visitor would for some, not leave room to make and imagine own interpretations and illusions. Using these effects could easily be interpreted as manipulative and enforcing a certain understanding of the intervention, which is not the intention. The meaning of the design should be open to the visitor's own interpretation and reflection - some would maybe have a strong bodily experience or be evoked by different feelings and some would maybe not feel a thing, but only look at the interventions as objects. Either way the experience of the visit to Chernobyl should happen in the interrelation with the visitor and the built environment/the new interventions. If sound and light are added to the interventions a subjective layer are added to it. Sound and light are very mood setting, making a free interpretation to the installation difficult. The total lack of sound and light in the area today also emphasises the emptiness. Again when the light is turned on in the Hotel rooms we try to emphasise the emptiness by showing what is not in the area anymore. This could have be done with sound as well and by trying to use elements loaded with lesser meaning than human voices or music, an example could be car sounds, wind, doors opening etc. Buy we have worked with that the light and sound present in the area should only be the ones made by the visitors - when they step on broken glass, cast a shadow or something similar - not in order to creating a specific mood. The sound in the Lighting wall is the only sound we have added in the area, and this sound is illustrating radiation and thereby using something that is present in the area today.

But do these seven interventions ruin the present atmosphere of the city, the atmosphere of the emptiness of life? In our opinion the strength of the atmosphere is precisely that is present in the whole city. It is not just a single empty neighbourhood or a block that is abandoned – a situation that could be found in cities all over the world. Our interferences are in seven of the buildings, in the majority of cases these can be seen in contrast to their un-tampered neighbours the different building blocks are repeated all over the city. Of unique buildings and structures we make a cut in the old market and restaurant building used to the Nuclear Trees intervention and we add a thin, yet remarkable in its extent, hanging structure to the arcade between the main square and the park. The interventions here are in our opinion not destroying the overall image of the buildings; you can still sense the atmosphere of the area.

THE PASSAGE OF TIME

Time is an important factor in the area, and as describe earlier the new interventions will mark a shift in 'periods' in the area. When visiting the area today it is clear that no maintenance has been done since the accident – the only change is the natural decay due to the passage of time and the growth and expansion of the vegetation – and of course the vandalism of the buildings made in the 80s and 90s, an aspect first visible when starting to explore the building more closely. Since the accident the urban fabric has been decaying and vegetation has grown wild. By putting a new mark on the timeline for the area questions rises: how will the new interventions change over time? Will the influenced buildings continue to decay just as the rest of the built environment?

We imagine that the continuously decay in the area will also include the designs. The decay of the influenced buildings should not be stopped and the new material added will also go into a natural decaying process. The iron used in the staircase and the hotel boxes will start to corrode, getting a dark red colour over time. The removal of walls and floors in the Cut in House, Nuclear Trees and the Hollow will maybe even accelerate the decaying process of these buildings. When making the interventions the safety within the buildings will of course have to be ensured, meaning that walls, floors and roofs should be re-stabilised if needed. This would so to say slow down the decay process construction wise for some years; where as the decay of the appearance will continue.

This talk leads to another question about the future of the area – the exciting urban fabric and the new interventions. It is interesting to think about how these will appear in 10, 20, 50 years time? When the decaying progress continues we can now only guess about how long time the buildings will last. No maintenance and a possible radiation impact on the building materials will shorten the life of the urban fabric, meaning that maybe in 20 years from now most of the buildings have partly or fully collapsed, leaving only ruins dangerous to enter and only to study from the outside. This possible future scenario will thereby also include our new interventions, a development that is in our opinion attractive, since we like the idea about that this new role as a tourist destination will only be for a certain time- it puts a sense of temporary to the design, an aspect that characterise the whole area and its history of changing functions. In this way, it becomes a unique experience to encounter Pripyat while you can still enter the buildings.

How to experience the city of Pripyat

Today when people are arriving to Pripyat they know they are arriving to a city, but the question is what kind of city and what kind of space - this for someone, can be a surprise. The visitors quickly have to create a relation to the spaces around them and maybe start to question the spaces – what is the intention? And how is this space relating to the next I am entering?

At present this task can be quite challenging especially when you think about the limited time that visitors often have in the area. Implementing a new design in the area only adds to this challenge and adds to the quantity of experiences you have to manage to see in the given time.

You could propose that visitors will naturally gravitate towards the new interventions. For this reason we have chosen not to link them together, for example we refrain from using the same colour consequently in all the interventions and try to incorporate them into their near surrounding and neighbour structures. The idea is not to provide a fixed route of seven dots that constitutes a route-of-experiences, but rather provide elements that add to the overall impression and experience of the city. We want to encourage the urge to drift around in the city and therefore the locations of the interventions are distributed in a way that lets people float around in the central area of Pripyat in their search for unique and special experiences. In this way you experience and sense both the original structure, the new story telling interventions and the interplay between the two.

LEVEL OF INTERACTION

It is also relevant to reflect on what level of interaction the different interventions demands. Most of the new interventions are straightforward to understand, what they display should be obvious for the visitor. The Cut In House and the Hollow are displaying empty apartments and the Time Boulevard is representing the nature's change in the area. But with some of the other interventions you could need prior knowledge to get the full understanding of the intervention. The pattern on the floor of the Nuclear Trees intervention derives from the



reactor core and is maybe not recognisable to everyone, similarly, the amount of the lightning and sound making orbs would need explanation to some visitors. The fact that the hotel boxes are constructed with a shell of iron for people to interpret the iron as a material being able to protect them and thereby creating a shield around them while being in the room, can also be discussed.

The interventions can be viewed in two groups. The first group contains elements easily understandable, readable and perceivable to people - The Viewing Tower, the Cut in House, the Hollow, the Hotel and the Time Boulevard draw on our experiences and knowledge from our everyday lives. The exposed apartments, the blocks and their near surroundings are recognisable and familiar to us, and an immediately relation to these can happen. The exposure of the everyday life and the housing areas in Pripyat is easy 'digestible', and the nature's behaviour in the Time Boulevard tells a clear story of how nature acts when left alone.

The other group is the interventions that demand another type of interaction – the elements and things presented in the Lighting Wall and Nuclear Trees are not familiar to many, and you have to draw on another kind of interrelation with these objects, there is demanding a more intellectual interpretation. The Nuclear Trees is in a way a metaphor, a puzzle where the pieces have to be put together in order to understand the full meaning. The floor pattern, the trees species, the holes cut in the building and the specific location of the trees within the grid of organised columns – all elements that together tell the story of the accident and its aftermaths in an excessive way. The same can be said for the Lightning wall – where the sound, the different shades of light, the order versus chaos pattern and the amount of orbs together tell the full meaning of the intervention.

In both of the groups you use your body and senses to experience, understand and reflect, but the interventions in the second group add an extra layer of interpretation in order to get the full meaning. What is important with these interventions is that regardless whether or not you have full comprehension of their full meaning you will get an experience that provokes, wonders and reflects an emotion. Whether it be the trees planted in a chaos grid inside a cut-through building, or the orbs that make the recognizable sound of the Geiger counter an experience of peculiarity is guaranteed. The contaminated, yet invisible air around you and the utter loneliness of a deserted town is covertly expressed through the interventions.

We have, as explained earlier, deliberately chosen not to make these interventions as museum objects, and no signs with explanations will be attached to the designs. But we believe that the presence of the guide and the possibility to ask him a specific meaning would be adequate. In doing this, we attempt to allow the visitor dictate what they want to interact with. The act of searching for an explanation yourself – even if it a simple task to just ask the guide – allows the visitor a sense of freedom, drive to explore and self accomplishment.

THE VISITORS

It is not a criteria for success to our project to attract large numbers of visitors to the area and it is difficult to predict when and to what extent the number of visitors will increase.

What is important is that the new designs in Pripyat should not be communicated widely as commercial interventions. Pripyat should not become an amusement park, and the aim for the new development in the area should not be to please and attract tourists whose only goal is to make a tick next to Pripyat on their to-do-list and leave from the area with a new trophy in their extreme tourism hunt. Off course this type of visitor is also welcome, since they will also get an enhance experience that hopefully will provoke them to reflect and wonder about the space, atmosphere and situations around them.

A group of visitors that will definitely continue to come to the area is the former residents of Pripyat. When proposing the new interventions in Pripyat the question that rises is; is it morally and ethically justified to display the randomly chosen apartments to the a wider public. Today it is possible to access all the former homes, but the visitors themselves have to take action and select their chosen home. With the new intervention some could argue that we put their former homes on lit de parades for all the future visitors to scrutinise and examine. Is it a callous use of sensation used to provoke emotion, thoughts and reflections? Are we exploiting the tragedy, and the people caught up in this tragedy, in order to create a theatrical show? Do we patronise and dehumanise the inhabitants instead of understanding their situation and using their storylines for a constructive reflection of the consequences of the Chernobyl accident?

We do see the controversial aspect of choosing to expose private homes and the miserable stories that are bound to these places. But in order to get the story told and communicated, to enlighten future generations about the aftermath we do not think we cross the balance point and becomes ethically and morally incorrect. The ex-inhabitants' apartments become parts of telling the whole story – factual elements like books, photos, facts, recordings, maps, etc.

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APPENDIX A

Original quotes:

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'Strålingsskaderne er meget begrænsede, og kun få mennesker har mistet livet. Til gengæld har virkelig mange fået det psykisk dårligt. Næsten en halv million mennesker fra Tjernobyl-området er blevet flyttet, og mange er blevet misinformeret om de helbredsmæssige konsekvenser. Og de mange økonomiske hjælpeprogrammer har betydet, at de berørte - på grund af misundelse - ofte bliver pariaer i deres nye hjembyer...de psykiske problemer er større end de helbredsmæssige. Folk er bekymrede og meget stressede over fremtiden...' [Aarup, 2002]

page. 50

'Tænkt på denne måde kan et sted være nok så meget konstitueret af handlinger og minder end af fysisk form, ligesom en slagmark kan være et betydningsfyldt locus, uden at der behøver være et eneste spor tilbage efter krigshandlingerne.' [Hvattum, 2010: 42]

page. 50

'Alternativet til geografisk determinisme er dermed ikke stedsløshed, og 'stedlig tilknytning' betyder ikke, at arkitekten med djævlens vold og magt skal mime eviggyldige, naturgivne forhold.' [Hvattum, 2010: 43]



INTRODUCTION

The following text presents the initial statements and intentions of our design interventions for the city of Pripyat near the Chernobyl power plant. The idea is that the design introduction tells the story of the interventions in general followed by the seven booklets introducing each design in detail.

The last 24 years Pripyat has changed from being the hometown of 50.000 people into a ghost town visited by tourists. Today the area is not visited by that many people. People come to Pripyat and Chernobyl for different purposes and with different agendas – some for research and scientific reasons, some for communication reasons like, photographers, journalists, documentarists. Others come due to an interest in either the old Soviet city planning era or an interest in radioactivity, abandoned places or something else and finally some visits the area because they happened to have heard about it from others, or thought they might as well visit when they are passing by Ukraine on their journey in Eastern Europe. The area is more frequently referred to as a tourist destination, frequent appearing on tourist-charts. The fact that Google Earth has put a high-resolution satellite photo of the area on the internet shows an interest in digital tourism and may encourage people to visit the Pripyat and the Chernobyl power plant.

Our design for the area will use this increasing but still not fully widespread interest in the area – making people more aware of the experience when they feel it is not generic. We are keeping the area close to its current state only making smaller interventions in order to tell the stories even stronger.

Pripyat is still a city in the traditional sense, when you think of its urban fabric and layout. To make the experience of the accident even stronger, we will continue to have people meet Pripyat like any other city. By doing this people will experience they are visiting a city and not a museum or an amusement park. The project's focus in not mass tourism. The intention is not to make a catalog over installations or sites not-to-miss, no guided routes through the area, no info boards to tell what you are looking on nor any events or gift shops. This is a (secret) project – people have a responsibility to get information about the area them self. The reason why is that when people are not getting the information served, but getting it from other's stories or rumors, they have to piece their own narrative together. In that way we force them to make up their mind about what they believe or not believe and maybe starting a debate or making them do further investigation after they leave. Then the design will make you relate to the tragedy with your body. The main focus of the design is to make people understand the extent of the accident's consequences, not to communicate the factual incident. Visitors

must be able to go to the area despite their degree of knowledge about the accident and still have a bodily experience. The goal is for the design to emphasize this. We recommend that the existing Chernobyl museum in Kiev is upgraded in order to communicate the facts of the accident to interested visitors.

Today when people arrive to the area they come by a small bus or car. After driving through the empty landscape, only seeing the city as a skyline, the road is only interrupted by the control posts. When they arrive to Pripyat and going through the first part of the city it will seem like nothing has changed beside the natural decay. People will first meet our design when they arrive to the center of Pripyat. This journey has a big impact on the visitor not being able to understand what is happing or what to expect. The design is using this unawareness, building on the visitor's frame of mind – making them even more confused in order of create a feeling of despair making them feel overpowered by the place. At the same time the design opens up the area, introducing all the possible experiences. The staircase climbing at the high-rice building is the first thing they meet and this is made in order to introduce the area to the visitors and make them curios about which experiences lies ahead.

While being in the area people are free to make their own experiences and explore the area however they like. Everywhere is free to be explored. You as a visitor can drift around everywhere – every building is accessible, both the private and public buildings. When people are in the area they try to relate to it and its story, getting a relation to the inhabitants even though they are gone. This understanding of the former inhabitants storyline can be difficult to grasp and the intention is that the design helps explore and present an understanding of what the city has become after the accident. The design recommends places in the city and the interventions will lead people in that direction if they choose to follow. The interventions are different designs made in order to tell the stories of the areas. The designs are made from three main themes extracted from the analysis of the city of Pripyat. The intention is for the designs to enhance the experiences of the places, both indoor and outdoor, while at the same time leave room for the special experience.

Since the area is a tourist destination a lot of people come here to get an experience, but Pripyat should be more than just a check on the to-see-list. A criterion for success will be if they leave the area with an emotional impact on their body – not just been entertained or experienced a common experience like many others.



CUT IN HOUSE

In a 5-storey apartment block south of the Viewing Tower a cut is made vertically through the building meaning that a triangular piece is removed.

Towards the road the cut is narrow – not more than the 30 centimetres wide – just enough to have a look into the crack, but not wide enough to walk through. The sight that meets you here hopefully tempts the visitor wanting to see more.

Nearby on the right hand, a smaller passage between two apartment blocks is located creating an access to the courtyard. Towards the courtyard the cut is 4 meters wide and the section of the building is visible. The cut is placed in order to cut through both a staircase – exposing the course and spatialities of its fluid rooms – and apartments – showing their different rooms, colours and other appearances.

The showcased apartments, the remaining furniture and the different wallpapers become elements that hopefully will makes you reflect and wonder about the inhabitants that were evacuated and removed from their lives due to the radioactive contamination of their city. Maybe you start imagining how former inhabitants were sitting in their living rooms, what the mothers made for dinner or how children were running up and down the stairs?

Not to been understood negatively the section through the house resembles a full-scale dollhouse where you can build up your own stories of what used to happen and what will eventually happen in the apartments.

Entering the semi private courtyard is in itself a great experience, and hopefully the visitors will drift further into the courtyard exploring the spaces created in the interrelation of the apartment buildings and the wild growing nature.



City plan – 1:10.000 🕼



The cut shows the 'skeleton' of the apartment building where the various colours and rooms gives you a chance to imagine how the area was once filled with life. As the trees continue to spread they have an easy access to take in what could become their new home.



Plan – 1:500 🟈

Roof plan – 1:500 🖉



Southeast elevation - 1:500



Northwest elevation - 1:500




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The Cut in House intervention is visible from the Viewing Tower where the missing piece stands out on the buildings dark roof. The different spatialities between the apartment blocks provide great exploration opportunities of the 'microrayon' – the neighbourhood and what are now overgrown courtyards.



The cut through the apartment block is narrow towards the street. During the day the sunlight cast a long shadow on ground between the trees indicating the missing stripe of the facade.



Panoramic view from the courtyard.



Inspiration pictures of two interventions made by the artist Gordon Matta-Clark.



HOLLOW

The neighbour building north of the Viewing Tower is the Hollow. Here all the floors and interior walls are removed leaving only the facades – letting them stand as a shell around the big open room that emerges.

When removing the floors and the interior walls you may only sense the floor plan at ground level and in the ceiling. But most impressive is the imprint of the former staircases and the apartments' different rooms.

From the street it is not clear that something has been made inside the building – nothing specific about the facades or the empty windows attracts attention – the building resembles so many of the others scattered through out the city. But one element stands out; to enter the 9-storey apartment block you have to start at the Viewing Tower, from where one of the paths of the stair constructions reaches out and grasps the apartment block. The path leads you to the new entrance cut in the south-eastern facade of the Hollow building.

The final step of entering the building is on a small stair taking you to an elevated platform at a height corresponding to the fifth floor. Here there is only room for one at a time and you stand all alone overlooking the enormous room opening up in front of you.

Hopefully the absence of the interior walls and floor plates will make you start imagining and picturing the previous composition of the various rooms and their functions, their atmosphere, their memories and their inhabitants.



City plan – 1:10.000 🕼



The crackled wallpaper and the flaked paint show the diversity of the former residents. You can glance at the ceiling, the floor and the remaining walls while the rays of the sun creates a dreaming atmosphere – letting you imagine how live once where in the house.



The experience of the Hollow intervention begins through the Viewing Tower. The pathway between the two is to some extent 'zigzagged' not to expose the awaiting sight that will meet you once inside the Hollow building.



Section a – 1:500



In the living days of Pripyat the apartment block used for the Hollow intervention had a statement in big scale letters placed on its roof. The message that stated *'Let the atom be a worker and not a soldier'*, are today a cynical reminder of what happen to the city and its inhabitants. Today the letters have been dismantled and are lying randomly on the roof.









Inspirational pictures; the Dogville movie by Lars von Trier, a gable in Barcelona and the Valby Gassilo.





HOTEL

Ten hotel rooms are made in three apartment blocks that encircle a big courtyard in central Pripyat east of the main square. The rooms are placed in 'boxes' that draws attention to themselves by the way they stands out from the facade in both colour, design and material – elements that make it visible for everyone that something has been done within the original buildings. Also from the Viewing Tower the rust coloured boxes are visible.

The used material for the boxes is iron – a material that in this correlation express the characteristic of being a shield. A shield from the invisible treats, the higher level of radiation, that is everywhere around you. By this the Hotel's rooms play with the emotion of when and where you feel secure and safe. After a long day in the area walking around with no protection, the material choice hopefully makes you ask yourself – is the present level of radiation dangerous? Can I feel safe everywhere? At least I can feel safe while I'm sleeping... even though I do know that I should not fear the radiation level in this limited time span.

The courtyard is overgrown with trees and various vegetations. No higher level of maintenance will be done here leaving the nature in control of the courtyard. Scattered places you will still find remains from the original design of the courtyard – a slide in the children's playground or a paved path.

The hotel rooms are placed in groups of two and a maximum of 20 guests can stay overnight. The visits to Pripyat are most of the time organized through travel agencies where the number of participants is in general 15- the number of people that fits into a minibus. Visiting the city as part of a group this size still gives you a good experience, since the number does not obstruct situations were you find yourself in places hopefully felling all alone. Also the opportunity to drift around on your own is still possible, and the notion of others walking around, a distant squeaking sound or a moving shadow emphasize the silence and emptiness that is everywhere present in the city.

The specific location of the ten hotel rooms seems randomly. But they are distributed in order to ensure that it is possible to view other rooms across the courtyard once you are in your own room. This challenges the feeling of being the only one in the area. When at nighttimes a single light suddenly turns on in a hotel room across the courtyard you will know that you are not alone – but still it is strange that only a few lights are turned on. If it had not been for the accident light would have streamed from all the windows.

At the bottom of the corner block the former furniture store is now housing kitchen, administration and dinning facilities. Here day-trip visitors and overnight guests can enjoy their daily meals. The building is also modernised with using iron for the facades and through its big windows the visitors can have a view over the empty square and the big public buildings while eating.



City plan – 1:10.000 🕼



The corner apartment block used to house some of the hotel rooms and the new eating and administration facilities seen from the main central square in Pripyat. The hotel-boxes draw attention on the faded facade.

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Elevation a – 1:1000



Elevation b - 1:1000

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Elevation c - 1:1000



Elevation d – 1:1000





Looking out of your hotel room at night-time, one or a few more lights are turned on in the other hotel rooms. You see the light through the naked branches of the trees. Everywhere else it is black as the night. Human life is only visiting and the light that it brings resonates through the courtyard.



The vegetation in the courtyard continues to grow wildly creating a labyrinthic network of smaller passages that you have to define yourself while walking through. When you drift through the space traces of the past like children's playgrounds, different pavings and light poles remind you that once these elements were the domination elements – now the nature is in charge.



The hotel rooms are visible not only towards the exterior but also inside the staircases, where the sudden change of material indicates the new-implemented function. Here you can enter your overnight 'safety box'.





Ten hotel rooms are available to house visitors to Pripyat and the Chernobyl area. Four different apartment types provide beds to a maximum of 20 overnight guests. The section below illustrates how the new-implemented 'boxes' are placed in groups of two, always within the same column. Within this specific section of the apartment buildings, the original staircases are renovated to ensure stability. The construction of the hotel rooms are incorporated yet isolated from the original structure of the building – they are carrying themselves. This means that the rest of the building will continue to decay in its natural course.



Section f - 1:500





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LIGHTING WALL

The main square in Pripyat is situated at the top of the main boulevard and is surrounded by big public amenities; post office, culture centre and concert hall, market and restaurant (now housing the Nuclear Trees intervention) and a former hotel. On the north edge of the square at the border to the city park an arcade structure stretches between the former hotel and culture centre.

From the ceiling of this 3,5 meters high structure a hanging wall of 3000 wires with 50,000 orbs are installed. The 50,000 represents the former inhabitants of Pripyat that had to be evacuated from their homes and could never again return, and hopefully the amount, that in itself is difficult to grasp, becomes more tangible to the visitor.

The intervention puts focus on the invisible treat, the abnormal level of radiation, present in the air everywhere around you. The small orbs, that each contain two diodes, a speaker and a Geiger censor, lights up in different nuances according to the radiation level in the air and the recognisable sound of a Geiger counter crackles from the speakers. The hanging wall are 'filtrating' the air and creates a visualisation of the changing radioactive levels, exposing how different materials like cement, soil and moss absorbs different levels of radiation. The intention is that the changing light and sounds will make you wonder and reflect upon if it is safe to be here? If the radiation has an influence on you – and what influence the radiation has had on the inhabitants who were exposed too much higher levels?

Looking at the Lighting Wall from the Viewing Tower and from a distance at ground you may perceive the Lighting Wall as a more dense structure, creating an ever-changing colour play. But when approaching the openness and transparency of the structure becomes visible. The wires hangs in an organised 0.6 by 0.6 meter grid making it possible to walk through the Lighting Wall just as well as between the wires. Here you experience the changing lights and sounds and the interesting spatialities as a truly sensuous experience. The placement of the orbs on each wire is more randomly, some are organised, some are chaos – and the play between order and chaos enhance the experience while looking at or walking inside the structure.

The placement of the Lighting Wall under the exciting arcade creates a stronger definition of the space that defines the main central square. A change of direction on the square will occur and visitors are maybe now tempted to enter the city park to view the big iconic Ferris wheel and stroll between the trees through the Lighting Wall. This being said the Lighting Wall intervention does not remove focus from the other buildings flanking the main square – the cultural centre and the Nuclear Trees intervention are with out a doubt also worth a visit, just as well as drifting around the square will make you feel the sound of emptiness.



City plan – 1:10.000 🕼



The Lighting Wall hanging from the arcade emphasizes the border between square and park. During the day alternating patterns of colour appears as images of the radiation.







Plan – 1:2000 🕼







Elevation b – 1:500



The cloud of orbs is beautiful and interesting to walk inside, the spaces and shapes are changing like when looking in a kaleidoscope. Hopefully the changing colours and the crackling sounds will make you remember the severity of the accident. The intension with the colour chancing of the orbs is to make people react to radiation with their body. Maybe they try to avoid the orbs that is shining or will take a detour to avoid a group of shining orbs.





Because the wires are hanging in an organised grid an 'opening' appears in front of you when looking at the Lighting Wall from different angles. Through the openings the background – either the big square and or the city park, depending on your direction – invites you to visit to continue you exploration on the other side, once you are finish studying the intervention.





Some orbs are placed in a random grid while others are places in an organised grid. This illustrates the order and chaos that permeate the city and creates an interesting pattern.

Inside each orbs two diodes, a Geiger censor and a speaker are installed.



The arcade structure lies on the border between the square and the park.



These screenshots from a footage made in Pripyat in 2007 show the constant shift in the radiation levels according to wind, materials and your position.



White noise, White lights by Höweler + Yoon / MY Studio, Olympics in Athens 2004

Chandelier by Baxter, Milan Furniture Fair 2010

The Swiss pavillon, Expo in Osaka 1970

Pixel Cloud by Jason Bruges Studio, London 2007.



Fiber Wave by Makoto Architects, Tokyo 1998

Population distribution by Walter Christaller, 1930

Regent's Place Pavilion by Carmody Groarke, London 2009 Pixel Cloud by Jason Bruges Studio, London 2007.


MAIN SQUARE



NUCLEAR TREES

A former public building that housed the market and restaurant lies on the main square to the south. This building is important when exposing and working with the facts about the environmental consequences and changes the city and area has undergone since the accident. Making this intervention with the building is not connected to its former function, but is due to its architectural appearance and spatialities.

The ground floor of the 2-storey building is open towards the square and white columns stands in an organised grid giving character to the room. Here a pattern deriving from the nuclear reactor core is put down in a 22 by 22 meter area. The pattern, that is very recognisable, should be interpret as a metaphor for the explosion that happened in reactor 4 at the Chernobyl power plant and hopefully the visitor can link and associate this with nuclear energy production.

The Chernobyl accident and the radioactive contamination that followed are to blame for the changes and occurrences that happened to the vegetation in the area – big forest areas, in particular an area now known as the Red forest, died immediately after the explosion due to the radioactivity in the air. In Pripyat trees have grown wildly, breaking out of their organised grids on boulevards and streets since the evacuation of the inhabitants.

In order to symbolise this development, 25 trees are planted in a chaos pattern rooted in the organised lines of the nuclear core pattern. The number is in remembrance of the coming 25 year anniversary for the accident in 2011. To allow the trees to grow and sprout, big round holes are cut in the first floor and roof, which opens up the sky for the visitors when entering the building.

The planted trees are of the species Pinus sylvestris – Scots Pine, the species growing in the Red forest. These trees have a straight trunk and reach an average height of 25 meters when mature. As the tree grows the lower branches fall of and its bare trunk is topped by rounded evergreen foliage. The tree trunks create an interesting interplay with the stringent spaces created by the columns, and beautiful changing shadows decorate the building surfaces during the day.

The intervention is visible from the Viewing Tower, where the treetops stand out on the buildings roof. From the main square the trees can be seen at ground level, through the windows and of course growing out of the roof.



City plan – 1:10.000 🌘



The Nuclear Trees intervention as it appears from the rooftop of the Viewing Tower. The enclave of trees stands out from the surroundings not because of their presence, but due to their location inside a building.





Level 1







Walking into the building at ground floor the openness of the building will hit you. It seems like the trees are growing into the sky and the Viewing Tower is visible in the background.



Northeast elevation – 1:500



Section a – 1:500



During the day changing shadows are visible on the floors, the walls and the white columns. The nuclear-pattern flooring is lifted 5 centimetres of the ground floor. Its material and pattern invites you to walk into the new type of space between the columns and threes.



The grid of the original columns and the trees are representing the play between order and chaos that has dominated Pripyat since the accident. In the union of the two grids new spatialities emerges.



Reactor core, Chernobyl power plant



Red forest, Pinus Sylvestris and the groundfloor of the building.



TIME BOULEVARD

The Time Boulevard intervention is made on half of Pripyat's main boulevard that is leading from the city entrance to the main city square. Starting from the square the vegetation on the boulevard is taken back to its state when Pripyat was still a young living city. The trees planted in a straight grid are maintained just as well as the surrounding grass and path areas.

The further away from the square you get the trees and vegetation slowly starts to merge into the uncontrolled chaos that characterise the vegetation today and of the future. In this way the passage of the time since the accident and what the years passed has meant for the nature is visible.

The Time Boulevard and its means can be viewed from the main city square and from the Viewing Tower you can easily sense how the trees goes from being relatively low and organised planted to the present high trees reaching over the adjacent building roofs growing in a dense grid.

But walking along the 350 meter part of the boulevard is the most intriguing way to explore the change of spatialities, grid and densification within the vegetation.



City plan – 1:10.000 🕥



The Time Boulevard seen from the main square of Pripyat. The wild growing vegetation and trees creates a changing middle ground on the blue horizon. The appearances of the vegetation and trees change over the seasons from a somehow transparent facade in winter to various colourful looks during spring, summer and autumn.





Northeast elevation a

10 m 20 m





Section b - 1:500



Section c - 1:500



Section d – 1:500



Section e – 1:500



Pripyat main boulevard before the accident.



Pripyat main boulevard after the accider



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VIEWING TOWER

Situated in the very centre of Pripyat the 16-storey housing tower and the rust coloured stair construction are claiming attention when arriving to the area. Often when visiting unfamiliar cities and places people search for a possibility to view the layout of the place from above – the Viewing Tower provides this chance.

The Viewing Tower is the map to the area. The city and the surrounding landscape are 'opened up' while moving up the stairs giving the chance to see and sense the extent and characteristics of it all.

The course of the stairs starts at ground floor and continues all the way through the building ending at the rooftop where there is a panoramic view of Pripyat, the surrounding landscape and nature. Most impressive is the Chernobyl power plant complex, visible on the horizon.

The course of the stairs ensures that the other design interventions made in Pripyat are presented to the visitor in the hope of inducing their interest for exploring the city once back on the ground. Also other special and peculiar building and structures as the park, city forest, Ferris wheel and the public swimming pool are put in focus while using the stairs.

What is just as important as the views to the surroundings are the indoor experiences presented to the visitor while moving through the Viewing Tower. The path cuts through apartments, floors, elevator shafts and corridors opening up the indoor spaces in different ways. The course of the pathway shifts between straight passages and stairs with various degrees of steepness. The shifts between being in or outside of the building plays with Gordon Cullen's notion of Restraint and Relief making visitors experience the apartments and the rooms in different perspectives – for example it is possible to lurk into an apartment from the outside just to find one self being inside of it the next minute.

The course of the stair construction and the orchestrated views offers various experiences to the visitors and tries to provoke and challenge different emotions. Would you feel like trespassing when entering someone's former home or like a voyeur looking through their windows? Would you feel disoriented when having to choose between different routes or meeting dead ends? And how would you fell when walking on the outside of the building looking more than 50 meters down?



City plan – 1:10.000 🌘



The new stair construction winds through the 16storey apartment building engaging with both the inside and outside of the building together with the surrounding context.



Northeast elevation - 1:500

Northwest elevation – 1:500



Southeast elevation - 1:500







The entrance to the building is a bit hidden, situated on the south-western facade but then you can explore the surroundings while searching for it. The small passage, leading to the courtyard, leads to the right direction of the entrance.



Just before entering the Viewing Tower it is possible to look up and see the passages of the stairways hanging above you. Three arms are stitching in and out of the building emphasising the horizontal and vertical rhythm of the facade.



Plans – 1:500 🟈

- > The original entrance to the 16-storey building is remained and is still the setting for the entrance to the Viewing Tower. Once in the building the path continues up the original staircase to second floor.
- ✓ Climbing the original fire escape you arrive at the third floor where a path leads to the neighbour building, the Hollow.









- ∧ At fifth floor the path way cuts through the southeastern facade; here the Chernobyl power plant is visible above the urban fabric of Pripyat.
- N> Walking through the original corridor at sixth floor a staircase cuts through space in front of you, but the pathway continues going left.
 - The pathway cuts through the facade and you walk on an overhang with a two meters distance to the facade. Here is a view of the city-forest to the left and the other buildings in this direction.





Plans – 1:500 🟈


- ∧ The overhang separates into two routes leading you different ways through the apartments. The separation can cause some confusion of which way to chose, and maybe the visitor will eventually choose both routes in the urge not to miss out on something. The two directions meet again at seventh floor.
- Here a staircase is placed diagonal in the apartment letting you rise to the eight floor. Here the view will be directly oriented toward the park and the very notable Ferris wheel. When outside again the whole main square of Pripyat will be opened and the Nuclear Tree together with the Lighting Wall intervention will catch the attention.





View from the 7th floor in the Viewing Tower towards southwest.



level 10

level 9

- ∧ You walk along the facade and rises from eight to tenth floor provides a great view over the city and the nearby buildings. On tenth floor a longer flat passage may motivate to look into the different apartments you pass – creating a feeling of lurking into something private.
- Continue round the corner walking along the narrow south-eastern facade. Here a smaller platform invites to stand for a moment and have a look around. From here a cross-section in noticeable, made on an adjacent apartment bloc and a triangular part is removed.
- V Now the pathway continues directly through two apartments, cutting through walls leading inside of similar apartments, that a few minutes ago were exposed from the outside.



Plans – 1:500 🟈



- ∧ Arriving at level 11 you stand in the middle of what seems to bee a nerve centre – both in an old and new sense. The original mailboxes hang here in the space where inhabitants used to meet by chance. Today three pathways lies in front of you, two taking you through the elevator boxes and one taking you further up. Which to choose?
- Choosing the staircase to your left leads you outside the building once again on a loop actually leading you back to this spot again. From the plateau outside the walkways both below and further up on the facade are exposed.



Plans – 1:500 🟈

- ∧ At level 16 you arrive at the middle of the south-western facade where the path runs crosswise through the building and cut through the north-eastern facade.
- Cutting through the facade the path turns into an elevated platform. Here it seems like you are hanging freely while looking over the main city square and the city horizon. From here you can clearly sense the intervention made with the trees on the Time Boulevard and the various rooms in the Hotel.
- V Turning on the elevated platform you look directly at the old Soviet symbol that decorates the roof.







- The two boxes on the roof are possible to enter you can rise even higher. The lowest box has a peephole framing two buildings in the distance. This hopefully triggers your curiosity for further explorations of what is the public swimming pool and school no. 3 once you are back on the ground.
- Arriving at the top of the small new box you stand side by side with the big Soviet sign.
 No handrail and just a small surface may make visitors feel insecure while looking at the big scale spread out below.











Panoramic view from the roof towards northeast.



The railing of the stair construction follows at rhythm repeated every tree metres. The thin bars ensure a somehow transparent look of the construction where the shadows on the path change during the day. The width of the walkway is designed this narrow so that people cannot walk side by side and are forced to walk alone.



When walking along the facade the walkway shifts between touching the facade and hanging freely. This is designed in order to make people aware of the facade and its protrusion and remind people that they are hanging several stories above ground.



Interior



Exterior