

Norwegian University
of Life Sciences

Masterthesis 2017 30 stp
NMBU- Norwegian University of life sciences
Faculty of Landscape and Society
Institute of landscape planning

An oasis of wellbeing

Designing a backyard in Bergen city centre, with
tools from Feng Shui, Colour Theory and Sensory
design

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Masters Landscape Architecture

Title

Title: An oasis of wellbeing

Tittel: En oase of velvære

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Pagenumber:126

Edition:4

Keywords: Wellbeing- Bergen- oasis- Backyard- people- Urban Places- restoration - colours- Feng shui- sensory garden

Preface

The master thesis is written at NMBU- the university of life sciences at the institute of landscape planning. The master thesis held 30 credits and is a closure assignment of the 5 years of studying landscape architecture.

The master thesis theme is based on the interest on how different environments affects people both positive and negatively. With a natural sensitivity for the built environment and how cities become denser, more efficient and demanding, the choice of my master thesis was an easy one. I saw the need to highlight the importance of designing places that initiate wellbeing and restorative benefits that can give a break to a busy city life. In this assignment, my goal was to adapt more knowledge about different design principles that can create a feeling of wellbeing. Among them, Colour theory, sensory gardens and Feng Shui.

The choice for testing out different design principles fell naturally on the city I grew up in, Bergen. Living a place for a long time gives the opportunity to see what the city lacks and with this knowledge, design something that the city truly needs. As I grew up there, my friends and I often missed a sheltered small place, free of charge, to sit quietly and undisturbed by the city's noise. Bergen, is a beautiful city with lots of cultural activities and surrounded by mountains of nature. But unfortunately, the city lacks vegetation and has few parks within walkable reach. Therefore, I chose to redesign one of the few backyards empty in the city centre.

On my behalf, I would like to give thanks to all the supportive people that was by my side during this master. First and foremost, many thanks to my main supervisor, Deni Ruggeri who supported my choice of topic and for his helpful advices during the semester. And many thanks to my co supervisor; Helena Nordh for all the time and guidance given. Many thanks to all the people and students who gave inputs and help when needed. Last but not least, thanks to family and friends who kept my motivation strong.

Abstract

Bergen is a city of rich history and culture. It consist of sacred/ listed buildings and places, and is surrounded by nature from the seven mountains. But despite its richness, the inner city lacks vegetated areas for relaxation.

The area Vågsbunnen, in Bergen has gone through a severe transformation throughout the years of being a city. From being underneath water to one of the most popular meeting spots in the city with trading, craftsmen and being a seaport. From being all burned down to rebuilt, the city has left a great history.

Today the city takes great pride of the history, its old buildings and its wellkept streets is a proof of Bergen`s history and culture. Therefore, many areas is listed and untouched like the backyard in Vågsbunnen. The city is quite well built and there are not many areas that has a need of change, but still the city lacks something different to be complete. Among the lacks, the city needs more sheltered vegetated areas for relaxation.

In Vågsbunnen there is one of the biggest backyards in Bergen. Today it works as a parking lot. the adjacent streets may come across as dark, grey and narrow. Therefore one of the main strategies would be to open the backyard up for both people and more vegetation. To make this area in to a new meeting place. Some of the sub strategies would be to change the place through pleasant colours, shapes and vegetation.

The thesis therefore focus on three topics; sensory gardens, colour theory and Feng shui in the aim to fulfil an oasis of wellbeing in the city. “An oasis of wellbeing” has been used as an example of how all kinds of cities can transform available places like backyards into vegetated areas filled with colours and shapes. All through using alternative but also basic design approaches.

Sammendrag

Bergen er en kulturhistorisk by som rommer både bevaringsverdige bygg og vernede plasser. Byen er omringet av natur fra «de syv fjell», men på tross av all dens prakt, mangler byen vegetasjonsrike områder for avslappning.

Området vågsbunnen har gjennom historien som by, gått gjennom en stor transformasjon. Fra å være under vann til å bli ett av de mest folksomme gatene i Bergen med handel håndverkere og en travel havn. Men også fra å bli brent helt ned til bygd opp igjen, har dette medført en stor arv og historie til byen.

I dag er Bergens innbyggere svært stolte av historien og den rike kulturen. Byggene og de velbevarte gatene og plassene er ett symbol på Bergen's historie og kulturarv. Dette er grunnen til at de fleste steder og gamle bygg er uberørt og gjerne merket som fredet eller bevaringsverdig som for eksempel bakgården i Vågsbunnen. Byen er svært godt gjennomført og det er få områder som trenger store forandringer, men det er fortsatt behov for flere avskjermete parker eller steder som fungerer som «pusterom» i byen. Vågsbunnen er allerede ett avskjernet sted med smale gater, men kan virke grå og mørk. Og kan derfor trenge mer vegetasjon som for eksempel ved hjelp av en oase.

I Vågsbunnen eksisterer en av Bergen's største bakgårder. I dag står den ubrukt med unntak av litt parkering. Derfor blir en av hovedstrategiene å omgjøre bakgården til ett sted for mer vegetasjon og folk. Noen av del strategiene blir å endre stedet ved hjelp av behagelige farger, former og vegetasjon.

Masteren's problemstilling fokuserer derfor på sansehager, fargeteori/psykologi og Feng shui. Alt i håp om å skape en oase av velvære i byen. «En oase av velvære», har som mål om å være ett eksempel på hvordan de fleste byer kan forandre ubrukte plasser som bakgårder om til vegetasjonsrike områder, med farger som kontrast til byens «harde kanter». Dette med hjelp av alternative men også grunnleggende design prinsipper.

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Background and Relevance

Nowadays more people experience stress by different reasons. One of the factors that can add on the stress is cities becoming denser and increasing in size (Un-Habitat 2008). Overcrowded cities, pollution, noise and lack of sheltered, green areas has shown to increase stress and mental disorders in city dwellers. Which means that people must be more flexible to their environments; find more tools to calm down and compensate. According to Ulrich (1993, 32) stress is “The process of responding to events and environmental features that are challenging, demanding or threatening to well-being” (Marcus & Sachs 2013). With stress present, cortisol is produced in the body. Cortisol has shown to decrease the renewal of braincells, especially among people suffering from depression and fatigue (Patrik Grahn & Ottosson 2010). Stress over long term can be damaging on people’s health; giving heart diseases, diabetes, cancer, and mental illnesses such as depression (Marcus & Sachs 2013). A study from New York shows a link between poor maintained environments and depression (Un-Habitat 2008).

Luckily there are many ways to deal with and even decrease stress. One of them is through an urban garden where people can escape from the city’s disturbance. An urban garden with sensory and supportive qualities through vegetation, colours and shapes that can stimulate and awaken the senses, thereby inspire and support to wellbeing (Souter-Brown 2014). A place filled with healing elements of vegetation and colours, is not always that easy to find in a crowded city. The goal of this assignment is to make a place with these qualities in a backyard in Bergen city centre.

Often sensory and supportive places is used synonyms with healing gardens that is usually made for health institutions and groups suffering from illness such as dementia, cancer and other diseases. But it is also important that healing gardens are designed and located in cities so that everyone can benefit from them (Souter-Brown 2014). Luckily there are some researchers like Gayle Souter Brown who has been considering how to incorporate sensory design principles into cities and public places. And Patrick Grahn who has been studying what an urban garden should contain to meet the standards of sensory and supportive design (Patrik Grahn & Ottosson 2010).

According to Clare C. Marcus, healing and sensory design can promote overall wellbeing (2014). Our surroundings should therefore awaken all our senses; vision, smell, tactile senses, and hearing. 90 % of what we sense is perceived through our eyes. The eyes give information to the brain which from there affect our emotions on different levels (Mahnke 1996). Therefore, what we surround ourselves with has a tremendous impact on our wellbeing.

In a garden, we can experience many different scents, textures, shapes, colours and even different tastes. But vegetation is not only what we see in an urban garden (Marcus & Sachs 2013). We also surround ourselves with the floorscape, sealing, facades, the exteriors, as Catherine Dee says (2001, p. 36) “the form, character, proportion, scale and microclimate of a space, and their relationship to other spaces all affect human use and experience”.

In landscape architecture Wellbeing is highly influenced by different architects like William Whyte, Jane Jacobs, and Jan Gehl, which focus on many good aspects of landscape architecture such as the arrangement of different forms and functions of the cityscape. They all have observed the city and tried to understand what people need to feel comfortable in a city environment (Gehl & Svarre 2013).

But the field of landscape architecture rarely emphasis the relevance of colour to a location through exterior and facades. Colour is often mentioned in context where colour has a function, like separating different zones in the aim to navigate easier through an area (Kaplan et al. 1998). Or marking and highlighting for example pavements and stairs, so that everyone can pass safely through an area without stumbling. In literature about healing and sensory gardens some mention the effect of each colour in planting choice relating to mood, blue calming, red stimulating. In the book, *Therapeutic landscapes*, Marcus and Sachs (2013), encourage a further investigation of another field Feng shui. Feng shui is not either been given enough attention when it comes to design, promoting wellbeing in landscape architecture. Therefore, it would be interesting to look further into how landscape architecture can benefit and get inspired by other disciplines like colour psychology/theory and Feng shui to address a broader viewpoint of sensory and supportive design.

Like beautifully quoted by Gayle Souter Brown (2015, p.78):

Design, whether landscape, urban or architectural, is a synthesis of art and science. A consequence of adopting the WHO's definition is that health cannot be owned by one specific discipline, be it medical, social, business, planning, or environmental sciences; the complete collaboration and interaction between the full range of research and teaching/learning/practising teams is required to move a community towards well-being.

To show how landscape architecture can benefit from environmental psychology, colour psychology and Feng shui, I have chosen one of the biggest backyards in Bergen to test different design principles from the different fields. The reason I chose Bergen as a location is because the inner city lacks green pockets and public places that has enclosure and refuge. Most of the public places in Bergen is characterised as open big areas with prospect. Refuge is important for restoration. Studies show that refuge is chosen before prospect, when people rate perceived sensory dimensions (Marcus & Sachs 2013). Enclosure is important to support the feeling of being in a different world without any disturbance, which is an important piece in stress reduction . Therefore, a place that is sheltered from noise, wind and other disturbance can provide a quiet oasis as a contrast to the rest of the city. Even though Bergen has many colourful facades and buildings, it is of importance to protect and sustain the image of the city with further establishment of new buildings and areas.

Thesis question

How can we design an Urban oasis with sensory and supportive design, to create a place that increase restorative experience and wellbeing?

Design aims:

To enhance and answer the research question:

- to design a place that promote relaxation and wellbeing
- to use literature about sensory gardens, Feng shui and colour theory, in the creation of the backyard
- Make a backyard that is usable in different seasons and rainy weather
- Create a place different from other places in Bergen with the focus of "being in a different world".

Method

The first section of the paper, embrace theory about Sensory garden, Feng shui and Colour theory. This chapter is therefore divided into three parts. The theory is selected based on the thesis question.

The second part presents the design location; a backyard in the city centre of Bergen, called Skostredet.

The third part views analysis relevant to the thesis question. First overall analysis that shows the relevance for the chosen location, such as noisemap, wind directions, popular destinations and walking distance to parks and meeting places. Next detail analysis that emphasis and digs into the main part of the focus area such as colour, vegetation, material and shapes.

The fourth part describe the aims to emphasize in the design strategies. Based on the analysis, challenges of the area is presented. Further more, overall strategies and strategies based on the three approaches; sensory garden, Feng shui and colour theory is shown.

The Fifth and last part shows the selected design proposal to the backyard. Design based and inspired by sensory garden, human nature- interaction, Feng shui and colour theory.

Process:

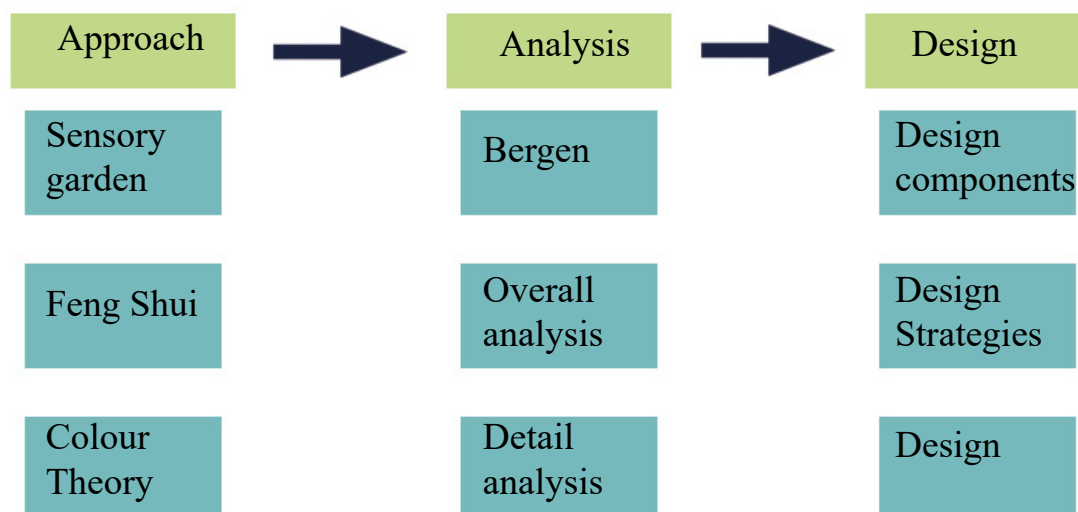


Figure 0.1- Method diagram

Appraisal

Theme of the assignment:

The main core of the thesis is wellbeing through the tools of human nature interactions, sensory garden, Feng shui and colour theory.

Within these different literatures, I have chosen to limit the thesis to relevant approaches based on the challenges and potentials of the backyard.

In the part about human and nature interactions I have focused on theories from Environmental psychology. The theories; ART, Biophilia, prospect and refuge is also intertwined in the part about sensory gardens. Sensory garden is used as a foundation of what a garden should contain to fulfill the aim of wellbeing.

In the part about Feng Shui I have chosen to mainly focus on colours and shapes. Feng Shui is a broad field of many different theories and levels. Most of the literature published are mainly focusing on how Feng shui can be used to enhance individual goals like health and fortune. But in this thesis where it is all about making a place for the public, I have chosen the most essential and general principles as design tools.

In the part about Colours I have chosen to focus merely on the emotional reaction experienced through the different colours. But also how to combine colours in harmony to create wellbeing.

Geographically:

As mentioned the area of design is limited to the backyard in Skostredet. Although the design will take the adjacent areas into account when integrating the new design. All in the aim to make a coherent structure.

Human nature interactions

Wellbeing in landscape architecture

The Word well-being has many definitions and related terms, but according to WHO, Well-being comes under the term health or mental health, as quoted “ Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” According to the European landscape convention wellbeing is linked to landscape, quoted (2012, p. 3) “the Landscape is a key element of individual and social wellbeing” (Council of Europe, 2012). Therefore, it is important to address the design in our built environments, so that people can be healthy and feel wellbeing on all levels. Wellbeing with connection to the landscape is not new, despite its increasing focus today. Over the years, tracking back to the Persian gardens, vegetation were of great importance, where park like settings, was referred to as a heavenly garden or a paradise (Thompson 2011). These paradises were to provide humans with food but also wellbeing through awakening all the senses. In ancient Greece, the location of temples but also cities were chosen carefully and placed near and within views of picturesque and beautiful landscapes. In the medieval time in Europe, gardens were used for recreation, to heal the ill ones, closely linked to what we would call a healing garden today. But later, in the 18th century the focus was merely on the physical wellbeing of city dwellers and an aim to prevent the many spreading illnesses like tuberculosis and cholera. A park was a matter of life or death. In the late 18th century Olmsted merged the two aspects of physical wellbeing and mental wellbeing together. Olmsted saw the need for comfortable places to alleviate anxiousness and irritability caused by the cities hardscapes, what he called artificial conditions. And emphasised that especially sensitive people had a necessity for relief through natural surroundings. Today wellbeing is not only experienced through a garden or a park but wellbeing can also be present in the urban environment (Scopelliti & Giuliani 2004). But there is a certain way the city should be arranged so that the city can promote wellbeing. Many architects and city planners has been investigating in how the city can be a comfortable place. Jan Gehl is one of the many architects. His observation of people and the environment relation has heightened the knowledge in how to make better cities. Gehl’s main focus is not on the value of vegetation, more the organisation of urban life. He considers how people behave in the street or squares per how the city is designed, and seeks to improve the facades, streets, squares to make people feel more comfortable in the city (Gehl 2013). Landscape architecture has put a lot of emphasis in wellbeing in terms of green eco cities and wellbeing that address the socially aspects- enhancing healthy communities. It is also an increasing interest in how the environment affect us mentally. This new direction is called health and design deriving from environmental psychology where the aim is to create restorative places for people (Dilani, 2001). In landscape architecture, the interest is often being expressed through vegetation as in sensory gardens (Marcus & Barnes 1999).

People affected by stress in the cities

As mentioned earlier people in cities are in a higher risk of experience stress compared to those who live in rural areas. It has been laid out that living in cities have a negative effect on people because of environmental stressors like traffic noise, pollution and crowding (Gifford et al. 2011; Linda Steg 2013).) (Un-Habitat 2008). All the environmental stressors above can contribute to the feeling of stress. If being vulnerable and having high arousal levels, being tense and alert, the stressors can seem stronger and therefore tire the mind to fatigue. But the negative impact of living in poor maintained environments is also a factor whether it is in the urban or the rural areas. Bad quality in the living environments is associated with violence, crime and even suicide (Un-Habitat 2008).

Kaplan and Kaplan (2003) has considered the linkage between good environments and crime. the Reasonable Person Model (RPM) emphasise the importance of good environments. Good environments awake reasonability in people, promoting behaviour of willingness to cooperate and helpfulness, which again can enable more thrust in a community and therefore less crime (Kaplan & Kaplan 2003).

But it is not always the city to blame. The city does not have to be the primary cause for stress and bad behaviour. The city as with many landscape features has dualism of positive and negative parts, where some people perceive the city as a stimulating place of opportunities while others perceive it as a bad and negative place (Krupat 1985). It all depends of which emotional state we are in. Studies has shown that stressed or/depressed people can be in a state of negative emotional congruence, which means that they easier can pick upon negative parts compared to someone who is happy and healthy (Marcus & Sachs 2013). The result is often to compensate with shielding and withdrawal. But luckily most cities have places that can give a the sense of withdrawing, like parks, urban pockets and other restorative settings, like historical buildings that can stimulate fascination, exploration and reflection (Linda Steg 2013).



Figure 1.1- Wellness in city

Theories about human-nature interactions

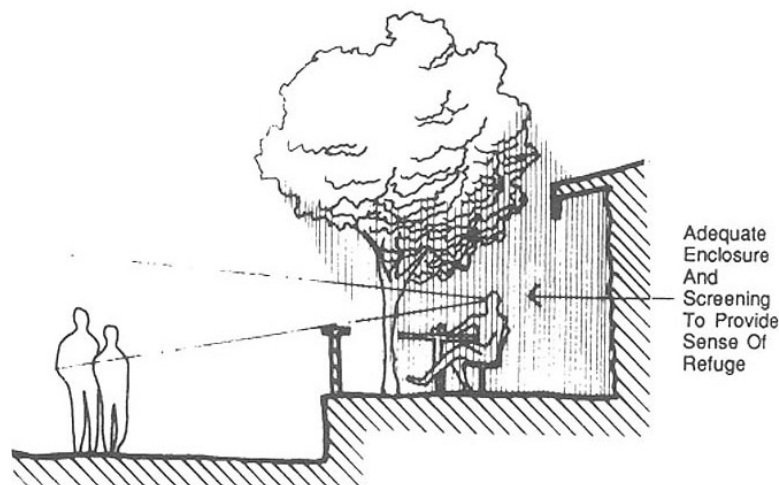
Restorative settings can promote wellbeing. However, it can be a challenge to design a place that promotes wellbeing. Lack of money, lack of knowledge and disagreements between the developer and the architect can result in a poor environment. Even though the intention of the architect or designer is well-meant, it can sometimes lack restorative qualities. A solution can be to tap into what people need.

Environmental psychology is a field where the connections between human and the environment is being studied. The behaviour of people induced by the environment is in focus. The field is broad and handles everything from how people shape the environment and how the environment shape people. The main aim is to study the connection between humans and environments and from there improve the built environments from a holistically viewpoint. Among many areas, environmental psychology taps into for instance pro environmental behaviour, architecture, the cities effect on people and the natural areas effect on people (Gifford et al. 2011).

In cities, environmental psychology study how people behave when they are in different settings, like public places, streets, and neighbourhoods. How both positive and negative effects of the city affect different people. Depending on the personal state of feeling, the city can have different degrees of both positive and negative influences.

Prospect refuge theory:

If being highly receptive to environmental stressors it is natural inherent to seek refuge, to sheltered areas. Refuge tend to be needed when feeling stressed, reduced or when feeling over stimulated. The opposite to refuge is prospect which is more welcomed when feeling healthy and in surplus. (Kellert et al. 2011). Prospect refuge theory suggest that humans seek areas where they both can experience shelter as in refuge, but at the same time experience an overview of the landscape through sight. In other words people don't want to be seen but still want to have an overview of the surroundings (Appleton 1984). The studies Appleton has done, shows that people has an evolutionary inherent need for scanning the environment for information with all the senses, especially sight. The scanning is to get an overview of possible danger and discomfort, and to find a place for shelter to be safe when getting the overview. An example of a landscape that contain both prospect and refuge is an open grassland with trees in between.



Picture: 1.1 Prospect and Refuge, (No year)

Biophilia theory

By integrating design that both includes vegetation but also built structures that imitates natural features, it is a higher chance that places in cities can promote wellbeing. Biophilic design derives from the Theory about biophilia.

Biophilia theory is defined by Wilson (1995, p.4), as the “innate tendency to focus on life and lifelike processes”. The theory proclaims that all humans has an innate biological necessity for nature to feel fulfilled. And the need for nature is far more important than the need for aesthetic and spiritual meaning (Kellert & Wilson 1995). Many scientific studies support the need of nature. Nature can increase wellbeing, reduce stress, increase cognitive functioning and affect neighbourliness in a positive way (Kellert et al. 2011). By incorporating biophilic design through natural features and imitations of natural shapes and images, it is easier to connect to nature and achieve a greater feeling of wellbeing.

ART- attention restoration theory

The ART- theory is about how certain environments can make people recover after stress or demanding tasks. When trying to focus on something that is not that compelling, the cognitive mechanism called the central executive is being used. After high intensive use or extended use, this mechanism can be drained and lead to direct attentional fatigue (DAF). However, by interacting in environments that contains characteristics of fascination, being away, extent, and compatibility, DAF can be decreased.

Settings that promotes indirect attention is often found in natural settings as for example in a garden. But other built settings can also have the same effect (Kaplan et al. 1998).

The ART theory encompass 4 components; Being Away, Extent, fascination and compatibility. Being away is accomplished in a soothing environment, away from the stressful events. Extent is the feeling of walking into a unique world a contrast to the everyday environments. Fascination is experienced both by physical settings and /or activities combined with the thought process. Compatibility is how suitable the environment is for the individual. Whether or not the person wants to be there or not (Kaplan et al. 1998).



Picture 1.2: Trees give me a little hope,
(no year)

Sensory gardens

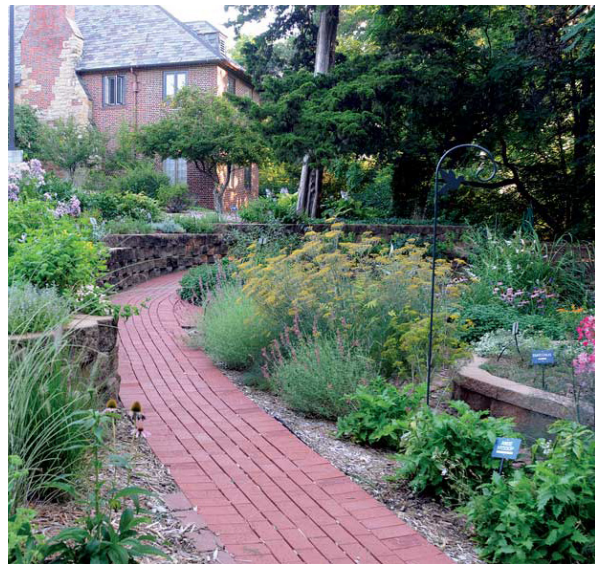
In sensory gardens, there are a whole amount of biophilic design, but also the theories ART and Prospect & refuge is relevant.

All kinds of gardens can be a sensory or healing garden if it can reduce stress and increase feelings of wellbeing. To be healing, it is essential that the garden contains actual plants and water of some kind (Marcus & Barnes 1999). But there is also certain element that needs to be covered; light and shade, a view, seating areas, textural details, wildlife of birds and insects, human scale, accessibility, cultural references and personal references (Souter-Brown 2014).

One of the most important aspects of a sensory garden, is that it should be restorative, in a way where it can distract people away from their stress and pain (Marcus & Sachs 2013). A sensory garden can distract by activating all the senses, Touch, smell, taste, sight and hearing (Marcus & Sachs 2013; Patrik Grahn & Ottosson 2010). Edible plants and plants that attract butterflies, birds and other friendly animals can be a positive distraction (Severtsen 2015). But distractions should not only come from visual senses, it is of importance that people get to feel the garden, hear it and even taste it, through digging in the soil, touch and taste the plants, feel the different textures on the ground, and hear the birds sing or the pouring water from a fountain (Stigsdotter & Grahn 2002).



Picture 1.3: Gillard, 2016



Picture 1.4: Guthrie, 2010

The relevance to urban areas

Many people suffer from stress because of city life (Kaplan et al. 1998). Therefore, it is a need for restorative environment that can reverse this tendency. By adding sensory elements, biophilic design through for example a garden, the theories described above can come to action. Several of studies show that people living in cities with hardscapes and lack of greeneries is more stressed than people who surround themselves in restorative settings (Kaplan 1995; Marcus & Sachs 2013; Ulrich 2002).

Even though park like settings may facilitate restoration, the built environment with beautiful and relaxing features can also have the same effect (Scopelliti & Giuliani 2004). Viewing buildings or streets with ornaments or details that enhance fascination can also promote restoration. A quiet square or a street with inspiring leisure's such as going to a restaurant, shopping or entering a museum or an historical town can also be restorative (Scopelliti & Giuliani 2004). If the different settings can create change in perspective, feelings of calmness and wellbeing, it is restorative.

However as mentioned earlier people have an inbuilt longing for greeneries (Kellert et al. 2011). And nature of any kind can increase wellbeing. But a good sensory garden covers all the ART (attention restoration) components; being away, fascination, extent, and compatibility (Kaplan et al. 1998). Being away in an urban setting is not always that easy, with all the noise, crowding and disturbance a city may give. Making sure that the restorative area is separated from the disturbance by making a border, an enclosure of vegetation's like hedges, walls, can help. Also, canopy trees and different textures/ groundcovers can help to shield of the area and trigger fascination. The screening does not only help the feeling of being away, but also enhance the feeling of safety, remove distractions, and make an area optically bigger than what it in reality is (Kaplan et al. 1998; Stigsdotter & Grahn 2002). However, vegetation can also give rise to negative emotions of fear and unsafety if placed or shaped in ways that triggers these emotions (Sreetheran & Van Den Bosch 2014). I will address this under the section about trees.

Healing or sensory gardens is more than just a park or a green pocket, it is usually made for hospitals and healthcare facilities for elderly and ill people. But sensory gardens can also be of great benefit to urban dwellers that suffers from stress, illnesses or just need a quiet break from the city to contemplate (Marcus & Sachs 2013). Barnes studied the staff of hospitals, and concluded that sensory gardens is highly convenient in recovering from work related stress (1994). Other studies show that people exposed to stress had a decrease in negative emotions and higher emotions of wellbeing when exposed to nature rather than the city's hardscape (Ulrich 1979). Which is relevant for stressed workers and students who sits in offices the whole day, or executives in demanding positions (Souter-Brown 2014). By adding a sensory garden, it can both save money and time, since it is revealed that people become more healthier and therefore more productive and efficient when relaxed.

A sensory garden in the city is not only good for healing/ stress reduction but also the sustainability of the city (Marcus & Sachs 2013; Souter-Brown 2014) the idea of that cities should be sustainable is very up to date and seems to be an obviousness when planning. But a part of the sustainable concept is the social aspect. If the design is sustainable but not beneficial of human's wellbeing, the design is no longer sustainable if not used.

Sensory experiences

Biophilic design can offer a great sensory experience and is important in the city (Souter-Brown 2014). There are certain sensory dimensions that is shown likeable especially for stressed people ; refuge, nature, variety of plants and calm areas (Patrik Grahn & Ottosson 2010) . In these dimensions, certain components that is important to include, like plants that can attract animal life, trees for shade, different shapes, different materials that can give textural details, water and good seating alternatives (Souter-Brown 2014).

Plants

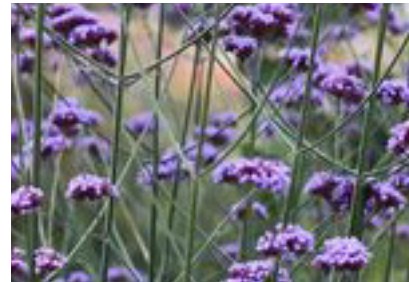
Plants can be healing in the way it awakens the senses. By including plants, people can get more in touch with themselves and their senses (Patrik Grahn & Ottosson 2010). Plants in a sensory environments should stimulate vision, smell, sound, touch and taste (Marcus & Sachs 2013).

When it comes to vision it could be wise to be aware of the different colours of plants, light, calming colours like blue, violet and yellow can be preferable if intending to create a calm experience. But if wanting to make a happy, energizing environment, orange and red can be advisable (Patrik Grahn & Ottosson 2010). A different range of colours should be visible having all people in mind. For example, old people with reduced sight and those with cataracts has problems of perceiving light colours of blue and purple. Therefore colours like orange, red and yellow could be wise (Marcus & Sachs 2013).

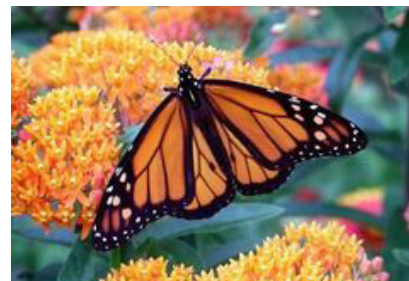
Plants can make calming sounds to stimulate soft fascination when for example wind blow through grass or leaves in nearby trees (Marcus & Sachs 2013). Plants can also attract sounds through animal life, like singing birds attracted by berry shrubs . Plants should also have other visionary qualities like animal life attracted by the plants, for instance birds, butterflies and other insects. Preferably the plants should be edible to stimulate the taste buds. But most importantly the plants should not be poison, especially not where there are kids and elderly or other people that can mistake plants. Plants that are medicinal can also increase knowledge and better health among people, and also motivate people to eat healthier (Marcus & Sachs 2013). Plants should also have comfortable textures to touch, for example plants like lamb's ear or moss, or other shiny, smooth leaves. Avoid plants with sharp or itchy qualities like roses. Rather pleasant fragrance from for example lavender or other flowers and herbs. Even bark and pine trees or just the smell of grass can stimulate the sense of smell.



Picture 1.5: Lavender., no year



Picture 1.6: Flowerona, 2012



Picture 1.7: Wodard, 2014



Picture 1.8: Eyego, no year



Picture 1.9: Lamb's ear, no year

Trees

Trees has a special place in a healing garden; they can give shelter, separate an area from another, and screen from windows from surrounding buildings (Marcus & Sachs 2013). They can also give different symbols, the trees visual indication of the shifting seasons (Kaplan et al. 1998) and give perspective of the length of life (Marcus & Sachs 2013). trees can amuse people with their colour, beauty and shade. The more trees the better (Marcus & Sachs 2013) and the more repetitive pattern = esthetical pleasing = better vitalization of the brain (Patrik Grahn & Ottosson 2010). In cities, the trees also add to sustainability, by reducing pollution (Kaplan et al. 1998). But there are mixed feelings about trees and vegetation's in urban areas, especially females associate parks and vegetation with crime (Sreetheran & Van Den Bosch 2014). Trees that are canopy, should not be too low. Vegetation are welcomed if it is well maintained, not too dense, and not give to many shady parts.

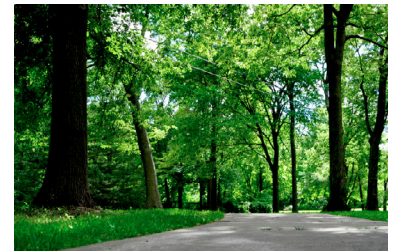
Tree preferences in urban areas:

Even though most trees are highly treasured, there are certain trees that is more preferred than others. According to the prospect and refuge theory, trees should have wide canopies for shelter and high trunks for a good overview. Trees that has a shape of spreading branches creates more positive emotions than for example shapes of columnar, conical and rounded trees (Lohr & Pearson-Mims 2006). Having spreaded tree shapes in urban areas showed lower blood pressure and more feelings of happiness, focus and friendliness than with other tree shapes. However, the other tree types did not have any negative effect on people. In another study about preferred tree types and shapes, the shape as in Acacia tree, got the highest rates of preferred trees out of eucalyptus, oak, conifer(pine tree) and palm tree (Summit & Sommer 1999). Oak tree came in second and pine tree came on last preferred. Through both studies the restults expressed that trees with big canopies was better than small. In the study to Lohr & Pearson- Mims, dense canopy was also preferred (2006). But one of the main factors was all about proportion and size in relation to the surroundings. For instance, the bigger the canopy got, the higher tree trunk was requested.

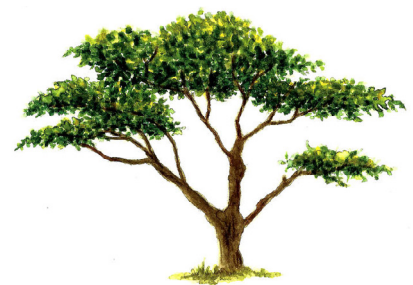
When all is said, Preferences about trees and landscape characteristic also depends on the individual's taste, and where the person has grown up. There may be a correlation between landscape preference and homearea.



Picture 1.10: Shannon, 2013



Picture 1.11: City forestry, no year



Picture 1.12: Vigliotti, no year



Picture 1.13: Tree forms, no year, includes the following pictures



Shapes

According to theory Biophilia, connection to nature is one of the most efficient ways to create positive distraction (Marcus & Sachs 2013). But very often in the city, it is not always room for vegetation, that means we must find other positive distraction, like for instance in the facades and exterior. By incorporating biophilic design, transfer nature simulations through shape, colour palettes and materials from nature, there is a big chance that the environment will have a restorative effect on people (Kellert et al. 2011) In Alnarp rehabilitation garden, they discovered that most people prefer organic shapes and a variation of shapes more than straight lines (Patrik Grahn & Ottosson 2010). Especially big open areas that are rigid give low ratings, and opposite comfy rounded shapes of rooms are more welcomed (Marcus 2007; Marcus & Sachs 2013). Burle Marx irregular shaped design and Gaudi's organic and soft design in buidlings, is an exellent example of biophilic design.

Imitating the irrregular shape of natural features.



Picture 1.14: Burle Marx, no year



Picture 1.15: Gaudi's design, 2011

Materials of groundcovers and exterior

Materials can strengthen restoration through fascination (Kaplan et al. 1998). The materials should harmonise with the surrounding but is most preferred if it is natural materials, such as stone, wood and sand (Kellert et al. 2011). It is convenient if the materials are of local origin to connect to local culture and history. In sensory gardens floor material of gravel, grass, single, and bark are incorporated so that people have a chance to get in touch with their feet and their tactile senses, which can also stimulate acupressure points under the feet (Patrik Grahn & Ottosson 2010; Souter-Brown 2014). Smell of bark and the sound of gravel under the feet are also sensory experience that can heighten wellbeing.



Picture 1.16 Gorgeous rock path, 2015

Comfortable seating areas

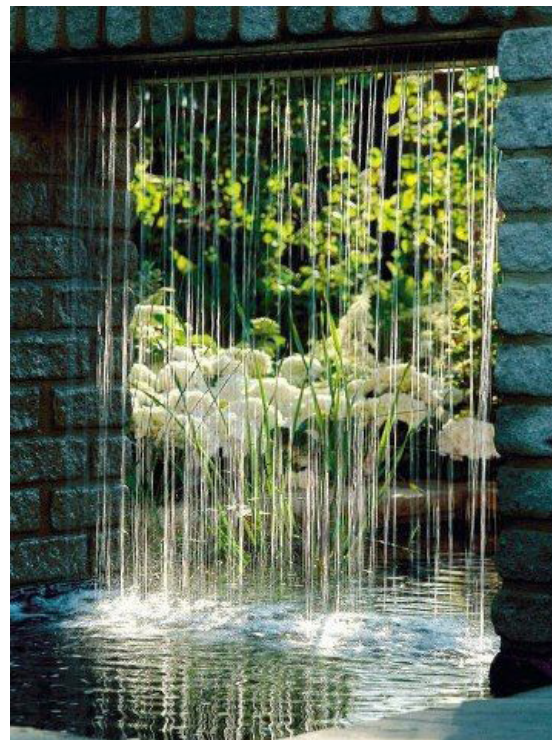
In favour to people enjoying the garden, there should also be room for them to stay there longer by placing out comfortable seating's. Pleasant seating opportunity's like sunbeds and hammocks can be suitable for people to find relaxation. In Copenhagen, the evidence of the theory is put into practice; hammocks placed in the central of the city, inviting both grownup and kids to play and relax. According to the designers of the project "off- ground", they claim that play is important in creating wellbeing (Nygaard no date). According to the play theory; dissipative amusement is important for healthy brain function and the reduction in depression and anxiety (Matsuo 2008). Which can also be found when doing gardening and being in touch with nature.



Picture 1.17: Offground, Playscapes, 2013

Water

Water can also heighten playfulness and well-being and is an important element in biophilic design (Souter-Brown 2014). Water can have different functions, as mentioned used for play, to cool down on summer days, or just the presence of water features either still or moving can be calming to the eye. Water is "the music" in a garden, that makes trickle kind of noise that can mute down traffic noise or other city disturbances (Patrik Grahn & Ottosson 2010). But also make areas in the garden more enclosed for private conversations (Marcus & Sachs 2013). However, water can also be incorporated to support sustainability in the city where grey water from the roofs can be leaded and gathered in plantings and flowerbeds.



1.18: Kindersly, 2009

To integrate sensory qualities in urban areas

An urban oasis can have all the sensory qualities as an healing garden but even though it is meant to the prior of humans wellbeing, it can also provide sustainable benefits to the surrounding city (Marcus & Sachs 2013). Design that are pleasing to the senses but also supports biodiversity; animal life and improves air quality is a bonus to the already positive contribution an oasis can provide. As cited by Thomas Benjamin “ Sustainable design + a beautiful landscape = healing and health” (Marcus & Sachs 2013).

There are many ways to enhance sustainability but in an oasis and sensory garden, it should both be functional and pleasing to the eye. Certain designs can be especially beneficial like green roofs or green walls. These can be viewed by people both inside and outside (Marcus & Sachs 2013; Souter-Brown 2014). Green roofs are good to lower the island heat effect, but also when limited space like in a city. By making intensive roofs that are walkable, people can also use the area to grow food, do sports and other activities.

Vertical plantings do not only have to be green walls, fruit trees as an espalier, can also be used if not enough space (Hemenway 2009). In the healing garden at Seattle hospital, they have vertical plantings with herb pockets that can be taken in and out depending on the weather, which can be beneficial in rainy and windy climates (Brodeur 2016). But also, when growing herbs in public/ semi public areas, giving the opportunity to take plants in for the night.

Raised beds are both good for people and the health of the plants. Combining seating incorporated with the raised beds, will make it easier for visitors to simultaneously smell the flowers or sweep over them (Marcus & Sachs 2013). Raised beds are good when wanting to grow edible plants in cities where the existing soil might be contaminated or packed (Hemenway 2009). Also, good in areas where runoff water because of hardscapes and heavy rain, is an issue. With raised beds the plants can survive longer than on the ground, since the roots are away from the cold ground (Nair no date).

Native plants placed in a planting bed like a raingarden is sustainable in a way that it does not crave artificial compost. The natural plants is also good in a way it defines the place identity (Marcus & Sachs 2013).



Picture 1.19 Nichols, C. 2017



Picture 1.20: Siegel, 2016



Picture 1.21: Dome of vision,



Picture 1.22: Haarkon, 2017

But even though the plantings are native, there can still be an issue for both plants and people to thrive. In Scandinavian countries where the winters are long with heavy rain and lack of sun and daylight, especially in cities with high pollution there can be issues with keeping a varied amount of plants. The plants are not the only one who suffers, people also find it unmotivating to go out when it is cold, windy and rainy. A solution can be to cover the plants and people with for example a greenhouse or an orangery. Orangeries: is a mix between greenhouse and a heated, insulated house that provides for plants that cannot survive the cold winters (Stausholm 2013).

In Alnarp rehabilitation garden they have a greenhouse called Growpoint. Here it is possible to enjoy the natural light among beautiful plants of exotic origin and at the same time be shielded from wind and coldness. In this way, it is easier to “soak” into the healing effect of the garden and extend the warm seasons. In warm summer days the greenhouse can also open and transform into a theatre or a place for festive meals (Patrik Grahn & Ottosson 2010).

By using transparent materials as in greenhouses, it allows for natural light to enter. Natural light has many health benefits compared to artificial fluorescent lightings. Artificial light does not have the same amount of spectral composition as in natural light, giving only the white colours. Artificial light does increase melatonin like natural light, but has a side effect by increasing levels of cortisol which promotes stress (Mahnke 1996). Daylight will also provide with D- vitamin which artificial light lacks. Therefore, it is of importance to be exposed to as much daylight as possible.

In Stockholm and Copenhagen, a new installation has found its place; “Dome of vision”. This is a great example of how people can enjoy the illusion of being outside but still be sheltered. The temporarily installation managed to intertwine the healing effect of natural light and plants but also touches the other senses in form of different light settings in night-time. It is described as ”a sensuous place in between ”(Dome of vision, 2017). Dome of vision is an innovative, community building open for the public to explore and heighten the awareness of culture, sustainability and plant growing in the city (Sustainable urban gardening.. 2008-2017). The building is made of biodegradable materials as the wood spruce, glass and mineral wool. It contains plantings such as apple-, plum-, pear-, and apricot- trees, also raised beds with herbs, vegetables, and berries. In wintertime, green walls provide for visual interest. The installation is also used for concerts, debates and exhibitions (Sustainable urban gardening.. 2008-2017).

Gardening in the city

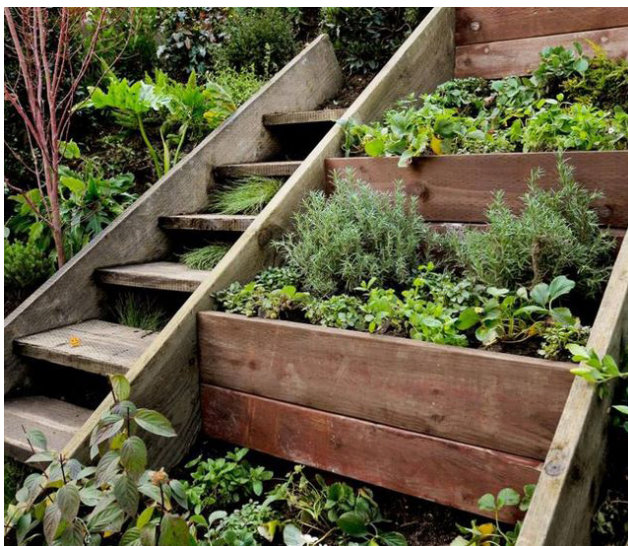
Gardening and space for greenery in the city, supports sustainability and wellbeing. There are endless and numerous benefits by incorporating flowerbeds, allotments and raised beds for gardening. The main intention people want to do gardening is learning, concerns about the environment and political economic situations, socio- cultural relations, to take care of physical and psychological health and produce food (Laura Calvet-Mir 2016).

Lack of space in the city, for doing gardening or just spending some time near vegetation is starting to become usual. For example, in Oslo since 1994 it has shown a decrease of green spaces within the city border. These tendencies is a result of avoiding urban sprawl and does also apply to other growing cities (Thorén et al. 2010).

Many people living in cities wants to grow plants and food, to support short supply chains food and grow food without harmful pesticides (Laura Calvet-Mir 2016). But also including edible plants as in small kitchen gardens can also heighten other people's awareness of healthy food and also initiate better and healthier eating (Marcus & Sachs 2013).

By having gardens within reach, it is shown that more elderly people and people in general is going out more into nature, if having a park or a garden nearby (Laura Calvet-Mir 2016). Gardening can also strengthen the community by increasing social contact even though it was not the intention in the first place. Most people come for the gardening itself but often keep on with the gardening because of the value of seeing other people. It is shown that socially isolated people are at a higher risk of mortality than people who interact socially and has a network of supportive people (Erickson 2012). A restorative garden with activities as gardening can decrease social exclusion (Laura Calvet-Mir 2016).

But gardening does not necessarily have to be done together with others to achieve health effects. Gardening has shown to initiate soft fascination, where other thoughts are allowed to be present while at the same time being engaged in the environment (Kaplan et al. 1998). For example, observing the way season change can also help by reminding people of the time of the year and be more present in the moment (Marcus & Barnes, 1999).



Picture 1.23: HGTV Gardens,
no year



Picture 1.24: Atlanta Botanical
Garden, no year

Being in contact with natural environments and soil, especially soil has shown an increase in the level of serotonin in the brain. Serotonin is a chemical in the body that makes us feel calm and happy naturally. Sunlight together with soil can have a considerable effect in preventing depression and anxiety (Francis, 2010). But also digging in the soil and doing gardening activities is also good for exercise and in strengthening bones.

Doing gardening can give emotions of satisfaction, producing and seeing plants bloom at different seasons, has shown to increase the feeling of meaningfulness (Laura Calvet-Mir 2016). It has also shown an effect when feeling apathetic. By doing gardening you get a feeling of doing something and seeing results, that can be transferred to other settings (Gimbel 1995).

In garden therapy, nature is often used to create symbols and linkages to other parts in life, for example observing natural processes, trees growing and sometimes see plants that does not always grow as planned, can give meaning to personal experiences. and in that matter, help to give perspective to one's own life (Corazon et al. 2012).

Words and expressions in gardening can also relate and reflect the personal processes one are in; for example; blossoming, new growth, transplanting, growth, nurture. Metaphors of nature is sometimes used in therapy when people have difficulties expressing their emotions (Marcus & Sachs 2013).



Picture 1.25: Edible garden city, no year



Picture 1.26: People shaping New York, 2016

Feng shui

And the relevance to wellbeing in cities and
backyards

What is Feng shui?

The Ancient Feng shui practice is the so-called art of placement (Shen 2002). Feng shui comes from the name wind and water (Chuen 1996). Where Feng is wind and shui is water. Feng shui has been used for over thousands of years, to place and orientate buildings in the landscape to best benefit from sunny parts, fertile soil, moisture, vegetation and avoid strong wind exposure and other negative energies (Shen 2001). The practice is based on observing the landscape and through experience, find the optimum place or solutions for best possible living. As defined by Hagen (2015, p.68) “Feng shui is about all the influences that either supports or weakens the place”. It considers the overall picture of the place where everything from the shape of the landscape to the interior of the building is addressed.

Chi

There are many concepts in Feng shui, one of them is Chi. Chi is the energy or the life force, that exist and flows through everywhere. Chi can flow in harmony or disharmony all depending on how the environment is built and organised (Hentschel 2006; Shen 2001). If the environment has organic, meandering shapes, chi will flow slowly through the area which is the ideal. In Contrary to environments that has many straight lines and shapes, that can make the chi rush through the area, which can affect us adversely (Hentschel 2006). As quated by Hentschel: “The shape leads the energy and the energy affect us humans” (2006). Therefore a good city or a place, should have fortunate placements for buildings, roads, colours and shapes; to allow fortunate chi flow through the city (Shen 2001). If the placement and the shapes is in disharmony, chi can be turned in to sat chi meaning negative energy, that either flows too fast or stagnates in a place.

Chi is created by the everchanging flow of yin and yang. Yin and yang represent two opposite forces, two antipodes that is in an equilibrium with each other and everchanging. The circle surrounding yin and yang, represent the oneness of everything that is alive. yin is the black and yang is the white. Yin and Yang complements each other; if yang is weak, yin is strong and vice versa (Chuen 1996). Everything we surround us with, has either yin and yang in it, or both. It all depends on how the sorroundings is arranged. An object can both be yin and yang; it depends in which relation it stands to another object. If for example a tree is more dominant and appearent than a smaller tree, the biggest tree therefore becomes yang and the other small one yin (Shen 2002). However, nothing is either just yin or just yang, it melts into each other. When observing the symbol, it is apparent that yin has a small circle of yang in it and opposite with yang. (Hagen, 2015). Yin represent the female, the moon, the shadow, the colours blue, green violet (Shen 2002), and everything that gives a feeling of calmness. While yang the male is the sun, the daylight, the colours yellow, orange and red (Shen, 2002), and everything that gives a feeling of movement and activity (Chuen 1996). If it is too much yang present, people might feel stressed and geared up (Hagen 2015). For instance too much yang can be compared with a high tempo at work which on the long run can lead to stress related disease. On the contrary, if just yin is present; for example no work, just inactivity, it can lead to fatigue. Therefor it is important both yin and yang are equally balanced.

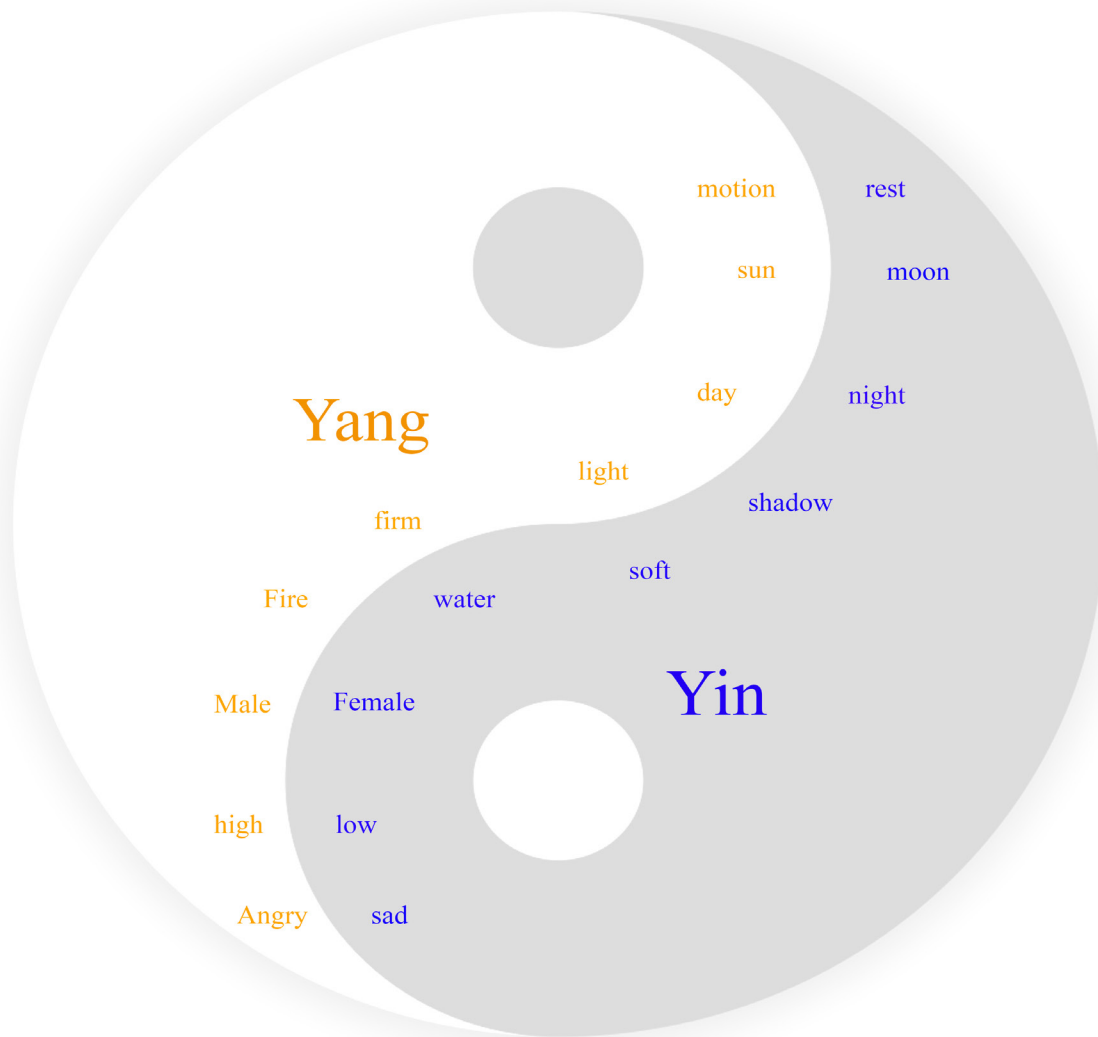
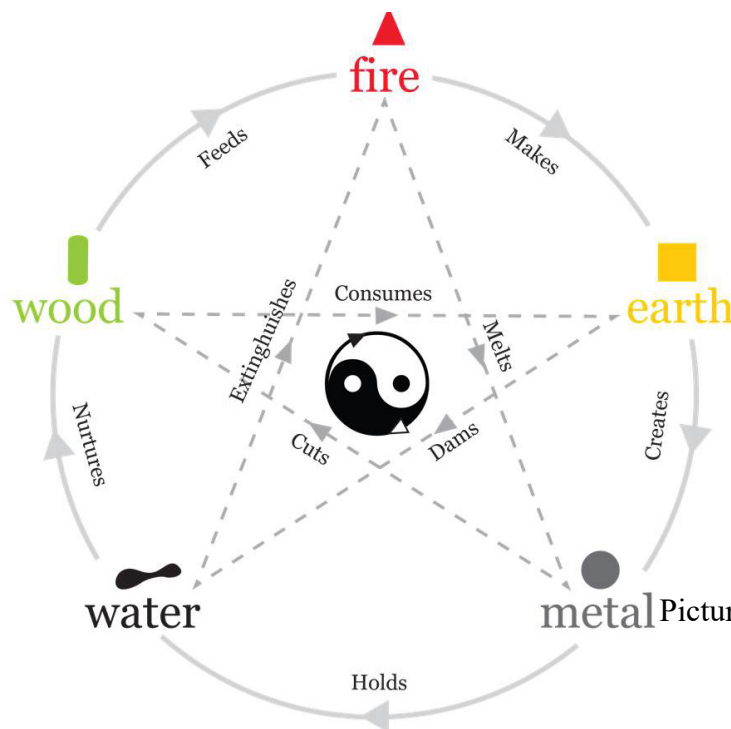


Figure 2.1: Adapted by: Chuen 1996

The Five elements

In yin and yang, the five elements exist. The five elements come in under the compass school which is a more accurate and advanced form of Feng shui (Shen 2001). The five elements, fire, water, earth, tree and metal, is a result of the constant movement between yin and yang (Hagen 2015). The elements are flowing in different cycles; either creative, draining or controlling. The ideal cycle is the creative one which is most balanced and supportive one, but if out of balance, the draining cycle can be used to bounce back the controlling cycle (Hagen 2015; Shen 2001). The creative cycle is positive and is supportive of good chi, since it gives strength and nutrition to produce each element. As metal gives minerals to water, water gives life to tree, tree give wood to create fire, fire give nutrition through ash to soil, and soil create minerals and metals (Hagen 2015). The controlling cycle delays the chi flow and creates negative patterns in the surroundings, like pollution and illnesses. Where metal cuts tree and water extinguish fire. The draining or so called healing cycle helps to mute down the controlling and the dominant element in a place. For example, if it is too much water, tree can soak it up, or if too much fire, earth can dim it down (Shen 2001).



By balancing the five elements, it is possible to create a better energy flow of chi, and therefore a better and more supportive environment of wellbeing (Hagen 2015). All human-beings are connected to one main element. Some Feng shui masters connect the elements to astrology if they do individual consultation, in the aim to further increase the supportive effect of Feng shui. But this method might be a challenge in urban areas where there are many different people strolling around and are likely more suitable to apply to one house where one family lives. Therefore, when designing in urban areas, it could be wise to look at basic principles of Feng Shui, such as the shapes and the colours in a place to make the area feel more balanced. Which colour and shape is most dominant? And which is not visible at all? Often the shape square is all over the place while the circle is so often missing (Hagen 2015).




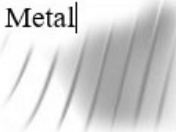






	Tree 	Fire 	Earth 	Metal 	Water 
season	Spring	Summer	transition	autumn	Winter
colour	Green,	Red, orange, pink, purple, light blue	Brown, yellow, orange	White, metallic	Blue, black, turquoise
Shape					
Cardinal direction	east	South	South West North east	West	North

Figure 2.2: adapted by: Hagen, 2015 & Chuen1996

The elements have different attributes that characterizes them; such as different colours, shapes, seasons, and cardinal directions. In the surrounding, it appears as colours and shapes.

The tree element is natural found in east, it beholds the colour green, which stands for the season spring, joy, enthusiasm, and growth. The shape is tall rectangles like buildings and trees. Using the three element in a garden through shape and the colour green, is in most cases all positive. It is a colour that nurture people (Hentschel 2006).

Water element is naturally in north, it beholds the colour dark blue, black and turquoise, which stands for winter, yin, calmness, but also movement, flexibility and emotions. The shape is meandering and curvy features (Hagen 2015). The water element can be added through shape and colour, but also as actual water circulating in the garden (Hentschel 2006).

Earth element is in northeast and southwest, it behold the colour brown, yellow, grey, orange, which stands for the transition between the seasons, caring, community, teamwork and nutrition. The shape is square and the lying square (Hagen 2015). If having too much of this element, the garden can feel tiring and boring, but if lack of earth element it is easy to feel unsafe and stressed (Hentschel 2006).

Fire element is in south, it behold the colour red, orange, pink, purple, and bright blue. Which stands for the season summer, yang, warmth, passion and love. The shape is a triangle and often edgy features (Hagen 2015). In a garden, placing flowers of this element either through shape or colour, the garden can either feel energetic or if too much the opposite of calmness (Hentschel 2006).

Metal element is in West, beholds the colour white, gold, and metallic surfaces. Which stands for the season autumn, focus, sorrow, precision. The shape is the circle (Hagen 2015). The same as with the other elements, if it is too much or too little of this element, the garden can feel unbalanced. This element can be added through for example white flowers, using the material metal as in a fence or make the flowerbeds in a rounded shape (Hentschel 2006)

The basic of Feng Shui - Relevance to urban areas:

How can Feng shui support and create wellbeing to a space?

Sometimes an area does not feel quite good and it can be difficult to pin point exactly what changes should be done to make the feeling more optimum. This is where Feng shui comes in, to do those small adjustments so that the energies can flow better and the place feel more balanced and comfortable. It is often just a small adjustment that needs to be done. As quoted by Hentschel: "Good Feng Shui is felt, not seen" (2006, p.14). Feng shui consists of two parts, the compass school and the form school (Shen 2001). The compass school is as mentioned earlier about the five elements. While the forms school is the earliest way of Feng shui and address the natural shapes in relation to shapes made by humans, such as buildings. The form school also address general principles about materials, colours, and landscape architecture (Shen 2001).

When making an urban garden in the city, it is not only the garden elements that needs to be considered, also the cities impact on the space is also important to have in mind. In urban areas, some basic principles from the form school can be quite useful to heighten the flow of chi and create a more positive feeling of the space.

But still, even though Feng Shui has many rules and principles about how to arrange a space. It is first and foremost about the tidy image and to make sure that the place is maintained (Hentschel 2006). The exterior of the place is of importance in a city where many people wander. If the house, a store or a business is placed in an area that is poorly maintained, it scares away the positive chi, and people will quickly associate the place with unsafety, out of control and bad quality (Shen 2001).

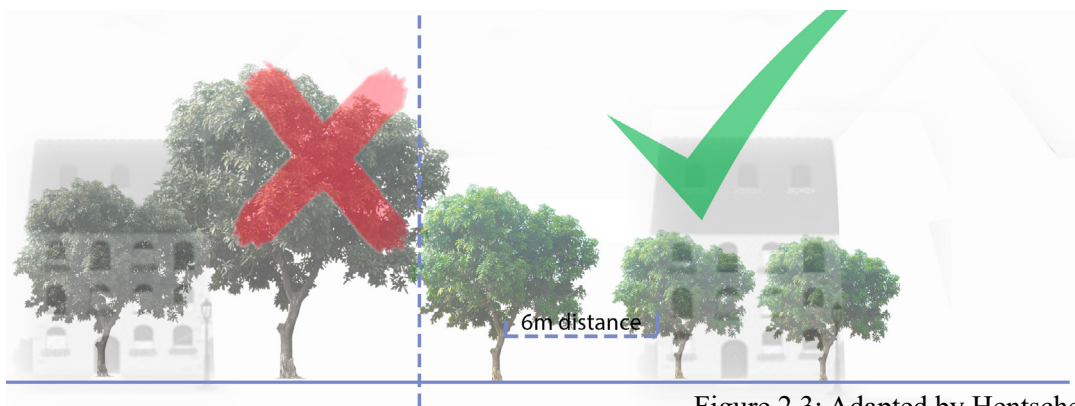


Figure 2.3: Adapted by Hentschel 2006 & Shen 2001

Trees is seen as very nurturing since it brings strong fortunate chi to a place. However to make the most out of the healing energy, trees should be placed and held in a specific way. For example, no trees in front of entrance doors, especially not in front of stores or businesses since this will block good chi flowing through. It is a saying in Feng shui; if a tree cast a shadow on the house, it is too close to the building, or more specific a tree should not be closer than 6 metres since it can drain the earth energy in the house (Hentschel 2006). Small trees can be used everywhere but big trees should be placed with more thought. If placed too close to buildings, with lots of branches lying on a roof or pointing directly towards a window or a door it can symbolises a heavy burden on the shoulders that can lead to economic difficulties. If possible, the tallest trees should also be placed behind the building as a support and the smallest in front to make sure of a clear view (Shen 2001). When it comes to certain types of trees, pine trees are fortunate since they are robust and have three branches that has straight lines with branches close to the ground. Trees with these qualities is seen as supportive since they give healing chi and are therefore suitable to be near when seeking relaxation (Hentschel 2006).

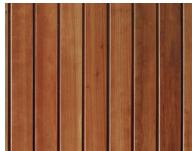
Yin Colours



yin materials



Picture 2.2: Indiamart, no year



Picture 2.3: 24H Architecture, 2011



Picture 2.4: Archiproducts, no year

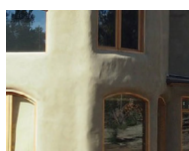
Yang Colours



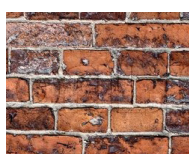
yang materials



Picture 2.5: Pixabay, no year



Picture 2.6: Thakur, 2016



Picture 2.7: Colorbox, no year

Neutral Colours



The walls of the city, is the Facades. The walls we surround us with has a great impact on our wellbeing. If staying too long in a room with for example too much metal element like white or metallic features, people can get more stressed and tense (Hagen 2015). Even though people don't stay the same amount of time out in a public areas as home, the facades can have the same impact if having one dominant colour or material. Most beneficially the facades should have colours that belongs under yin, like cool colours of blue, violet or warm yang colours mixed with cool yin colours (Shen 2001). This can also be kept in mind when placing other exterior in a landscape, like benches, statutes, fences and other objects with large surfaces that meets the eye. The facades should also have materials beneficial to the climate of the place. Yang materials of wood, brick and clay is benficial in climates of coolness while yin materials like, metall, glass, sandstone and cement is better in warm stable climates (shen 2001). Eventhough climbing plants can be decorating, it is not beneficial on the facade for those who live in the building. Since the plants blocks the materials ability to breathe, and therefore can affect the peoples skin health (Chuen 1996).

Shapes like buildings and places should be placed in a beneficial way, so that healthy chi can occur. The shape of the landscape, how the water flow and the condition of the soil, are things to look for when choosing a place (Shen 2001). The most ideal place is near a landscape of water and nature. The place should be as supportive as possible without or with as little negativity as possible. In Feng Shui negative environments is described with bad chi or sat chi/ shar, in other words poison arrows directed towards the building or the place. Poison arrows or shar can be wind arrows; if the place is in a windy area the good chi can blow away. The same is with water arrows; water that runs too fast, can also affect the chi in a negative way. Rivers that flows slowly is more ideal. Therefore, shapes that is meandering and can slow the rush of either traffic or streams down, is preferable. In cities, Rivers can be transferred to roads, where the traffic is the flowing water. If the traffic is too fast, the same thing can happen, healthy chi will disappear with the traffic.

In the city, there are many features and objects mixed together. Buildings with different shapes placed in different angles close together. If there are objects of sharp edges, for example sharp edges on buildings, directed to another building or a place where many people lives and spend most of their time, the negative arrows, in this case edges, can cause discomfort and negative influences on a person's wellbeing (Shen 2001). The way buildings and objects in the landscape are shaped, affects the chi and therefore people nearby. If the building has the pointy edge faced into the house and thereby has a shape of an L- form the people inside will suffer where emotions of beeing stuck or not efficient enough may occur. Therefore the best shape is to have a complete shape, either a rectangle/ square placed in a way that does not send out edges or a circle that lets the chi gently and effortlessly flow around and through the area (Chuen 1996). In Feng shui, circles is also a good shape, it represent the heavenly energy and are the most nutritive shape to be near (Hentschel 2006). If not having an optimum shape, plants placed as a buffer can heighten the flow of chi. For example paths should ideally have a meandering shape so that chi can flow slowly through the area. But if having a straight forward path, chi will flow to fast and the place can be experienced as negative and stressful. A solution can be to place a rounded flower bed to slow the chi (Hentschel 2006).

Meandering paths for healthy chi

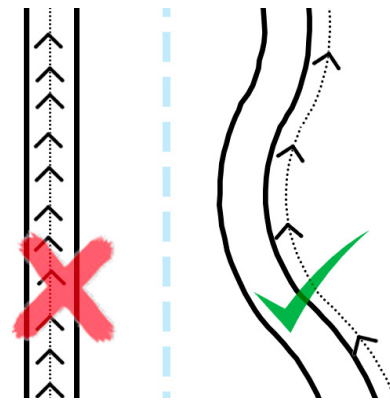


Figure 2.4: Adapted by Chuen 1996

”The shape leads the energy and the energy affect us humans” Hentschel, 2006,p 100

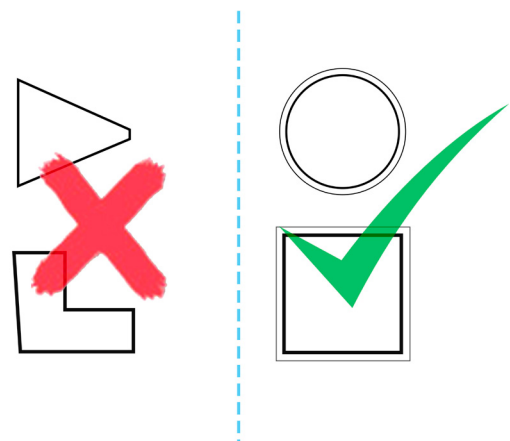


Figure 2.5: Adapted by Chuen 1996

Garden elements

In Feng shui the sensory details is an important component as in a sensory garden (Hentschel 2006). In Feng shui a garden should have at least one plant that blooms every season and many plants that awakens the senses. As with Sensory gardens, a garden in Feng Shui is more than just plants, it is a composition of many elements as water, bridges, stones, paths, lightings and of course plants (Shen 2001).

The plants can be used to protect the garden or area from sat chi, but also replace lacking corners of buildings as described above. Preferably evergreen (Chuen 1996). If not, a greenhouse can be built to complete the shape, or let it be high activity use by humans by placing chairs and tables there to add more positive chi (Hentschel 2006). The organisation of a garden is important since it is seen as an extension of the house (Shen 2001). The garden can be filled with plants and elements, but the area in the middle is the heart of the place and should always be open and empty so the positive energy can gather here. Plants and shrubs should not cover windows or entrances. And even though a good Feng shui garden is enclosed by vegetation, the view should not be blocked.

There are also certain plants that represent symbols that can attract positive or fortunate energy (Chuen 1996). Plants like Cypress equals a long life, lily's give harmony and friendship, peach tree is magical tree that represent immortality, pisonia is all about love and abundance, and Magnolia stands for purity. The 4 seasons has each one representing plant. Bamboo is winter, orchid is summer, autumn is chrysanthemum, spring is cherry tree (Hentschel 2006).

However, there are basic guidelines for choice of plants. The garden area should have at least one plant with visual characteristics through every season. Evergreens are much welcomed like bamboo. And in detail, the plants should have rounded or slim leaves of either red, dark- or light -green, and Shiny and soft leaves, plants with thorns are not ideal, unless it is roses which has a special place in a Feng shui garden. (Chuen 1996). The plants should also be grown vertically, horizontally or in a rounded shape. The most important thing to consider, is the size, shape and the colour. Lately it has become popular to grow herbs and vegetables in the cities backyards and rooftops. But In Feng shui edible plants should not be mixed with non- edible plants or decoration plants especially not in the backyard (Chuen 1996). If placing herbs in the garden, the herbs should be faced in the east part or east direction to soak up the morning sun since this area consists of heavenly chi, making the herbs richer in taste (Hentschel 2006). The east area or direction is also supportive of peoples wellbeing, making them feel happier and more relaxed (Hagen 2015).



Picture 2.8: Bakker.com, no year



Picture 2.9: Hekkplanter, no year



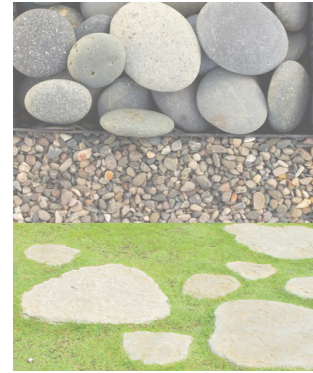
Picture 2.10: Lem, 2014

The materials of the ground are also of importance. Although gravel can imitate the water element in Feng shui, it is not to be used in too high doses because of fragmenting chi, stepping stones on the other hand allows chi to flow calmly through the area (Hentschel 2006). It is also convenient to place rounded stones around the house to balance the dominant square of a building (Hentschel 2006).

Water is an important element in a garden or near a house. Feng means wind and shui means water (Hentschel 2006; Shen 2001). Wind is believed to bring and send away chi, while water captures and stores chi. Having water, especially clean, circulating water is seen as fortunate and supportive for the area's energy, and is believed to heighten the abundance of the surrounding buildings. Beneficially the water should circulate in a river from west to east (Hentschel 2006). If lacking water in an area, water elements should be added in shapes of meandering and curvy features (Shen 2001).

Above the water a bridge can be placed. If bridges are not directed towards a house or a deck, bridges can have a supportive effect of chi. Bridges can also be placed over plants, rocks and other landscape features (Shen 2001). A bridge is a place to contemplate and listen to pouring water and perhaps observe gold fishes from the pond or river (Hentschel 2006).

In between the plants and the vegetated areas, stones are welcome to balance the energy. Stones, especially the tai-sea stone, nourish the earth element which then again supports the tree element or the vegetation (Shen 2001). Stones and vegetation also represent yin and yang, that can be kept in mind when balancing a place (Hentschel 2006).



Picture 2.11: Organ, F. 2014

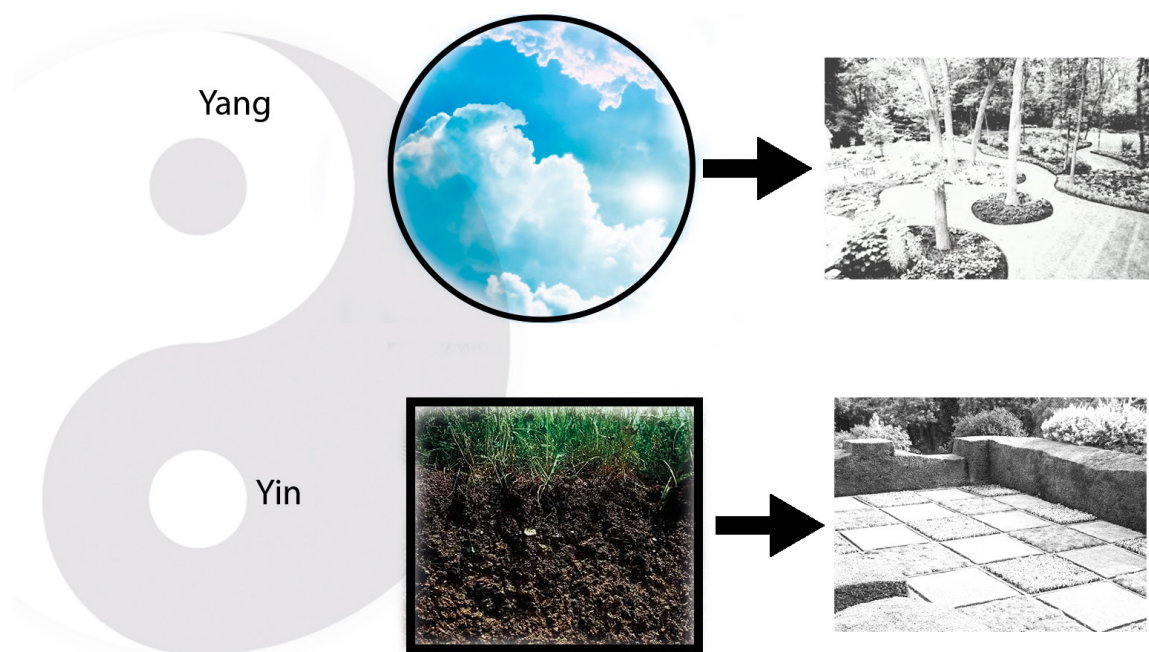
Picture: 2.12: Stepping stone..., 2017

How to add Feng shui principles ?

As in Feng shui, as with any design project it is all about reading and observing the place before applying new elements and objects.

Feng shui as with healing gardens also see greenery as one of the most healing colour (Hagen 2015).

Feng shui can enhance supportive design by balancing the colours, shapes, and the placement of shapes in the surroundings (Hagen, 2015). There are many layers of Feng shui, and it can be easier to incorporate first yin and yang when designing. It can be as easy as to vary between the square and the circle when designing a place. In Feng shui, the circle is a symbol of the sky and the square a symbol of the earth (Hentschel 2006). Another way to balance yin and yang, is to balance tall and short objects, soft and hard or the sunny and shade parts. When having an area full of shade, white or light coloured flowers can be used. Mainly it is all about balancing the opposites. For example if there are a lot of buildings and objects shaped as a square, it is a good compensation to bring in the circle inbetween the buildings.



Picture 2.13: Adapted by: Media- cache, no year

Yin is also under the cardinal direction north and yang is under the cardinal direction south. North and south are the most important cardinal directions since they represent the biggest contrast. When designing in north direction, it is common to use the warm element fire which is naturally in south. North is cold, humid, and needs for instance warm colourful flowers and lights. In south, the fire direction, needs to be calmed down with the opposite. Colours of red, pink, and light blue, should not be used (Hentschel 2006). Light blue believe it or not also stands for fire, and is therefore not a calming colour (Hagen 2015). Both south and north in a place or a garden should not have any high objects like tall trees that can steal energy in the opposite areas. Both areas should be open (Hentschel 2006).

The Compass school

In the west, it is recommended to avoid red since fire drains metal (Hagen 2015; Hentschel 2006). Also avoid black and dark blue which represent the water element. A pond is not advisable in this area either (Hentschel 2006). In North west, it is more convenient to support the element metal with colours as white and yellow from the earth element and shapes of circles which naturally represent the metal element, west. Here the water element and fire should be less present.

In Northeast, the energy can be quite intricate. This direction is also cold. Which means, warm colours are again needed, but all with a balance. If too many red flowers the feeling of the place can be too edgy and tense. Nevertheless, blue cold colours should be used at the minimum since these can be draining on the soil.

In East the colours should also be supporting. In this area, the colour blue and water relating objects is welcome. Unsupportive colours are white and circles which belongs to the metal element.

Last but not least; southeast is also under the element tree, which thrives with colours such as blue and black, but gets reduced by colours such as white since this belongs to metal whereas metal “cuts” tree. South already has some of the fire element which has many strong colours, orange, red and pink, and does not need more added.

Conclusion: all directions has each element that needs either the supportive one or the controlling. Sometimes the draining if too much of one element in the already existing design. All in all it is all about having a balanced variation of each element to achieve a healthy chi and therefore a healthy place (Shen 2001).

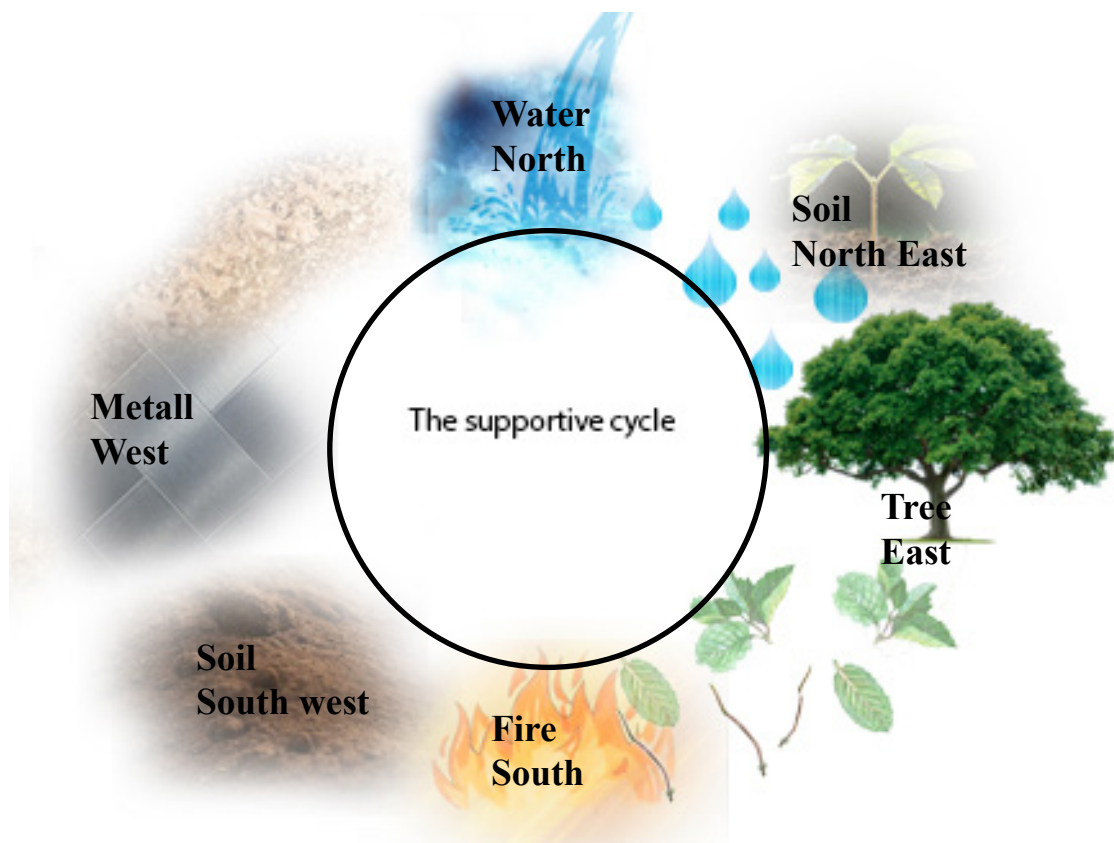


Figure 2.6: Adapted by Hagen 2015, Chuen 1996 & Shen 2001

Colour Theory

And the relevance to wellbeing in cities and
backyards

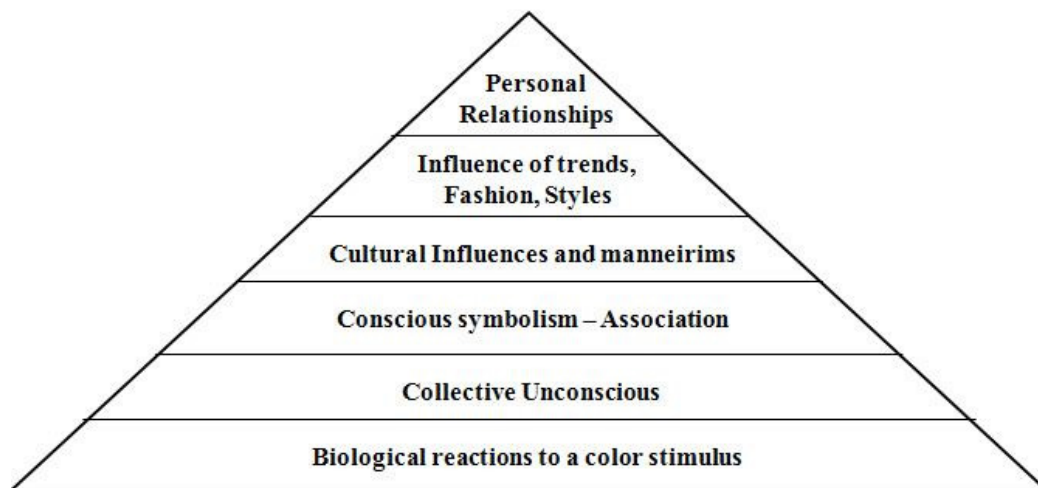
Colours

Colours are different wavelengths of lights that are reflected in an object. Our body records colours through our eyes and our skin (Mahnke 1996).

As quoted by Mahnke (1996, p.51) “Communicators= perception = Impression = Emotional reaction “

The surroundings give us information which therefore communicates with us. The same with colours. Giving us an impression that creates emotions within ourselves.

Our impressions and reactions to colour vary depending on many different aspects. The colour experience pyramid, is a good foundation in understanding, that there are more aspects that determine our emotions towards colour, other than personal preferences. There are biological factors, the unconsciousness, conscious associations, culture, and trends that also affect us. But out of all the aspects, the personal relation to colour is the most important one.



3.1: Mahnke, H.F, 1996

Since colour has such an immense power to awaken our emotions, it is probably not surprising that colours have been used in healing. Back in ancient Egypt in 1550 B.C, healers would use coloured minerals of malachite or red clay to heal wounded and ill people (Gimbel 1995; Mahnke 1996). Among them, green copper salt was prescribed for cataracts and powdered stones of colours were used for illnesses like jaundice. In China, the colours expressed from the body, have been used to diagnose illnesses for over 2000 years. The colour diagnoses spilled over to Europe where the so called ”4 body fluids” was interpreted among doctors.; blood red, yellow bile, black bile, and white mucus. Later in the history, colour therapy was developing, Ibn Sina a philosopher/ physician in Persia, discovered and stated that blue light could relax the blood flow and red the opposite (Mahnke 1996) .

The Colours effect

Colours are all about the context; which atmosphere is being created and who the people living there are. For example in Asia they associate the colour white with death and red is more favourable (Marcus & Sachs, 2014). In Islam, they believe that green is a holy colour. There are different associations and impressions to colours, but there are some general associations and impressions that seem to be the same no matter culture or country (Mahnke 1996).

Red is a stimulating and the most dominant colour, it tricks the eye to believe that an object is closer than what it originally is. People often associate it with either passion and warmth, or aggression, blood and intensity.

Orange is often associated to socialness, energy and festive behaviour. If too strong, it can also remind of intrusiveness.

Yellow on the other hand is one of the colours that is highly associated with happiness and cheerful thoughts. It often gives feelings of hope and good prospect for the future, but also associations to the sun, but if too strong it can be kind of crazy yellow.

Green is a colour to like as it is associated with nature and plants and gives inbuilt associations of food. It is the most restful colour since it falls perfectly in the middle of the retina on the eye. That means that the eyes do not have to focus to perceive the colour. If the colour is balanced right in between yellow and blue, people have a higher chance in experiencing wellbeing, and feelings of relaxation, but also to create a quiet and refreshing atmosphere.

Blue is a colour that can seem cold but if used in materials of thick textiles or a deep blue, it can seem warmer than it actually is. Blue has many associations, it can give feelings of calmness, comfort, and security and feelings of being near the sky or ocean, but also a wet, clean atmosphere. Emotions of sadness and contemplation can appear. There are few people disliking this colour.

Grey is associated with industry and built environments made of metal and concrete. It is considered as a neutral, passive and boring but also a quiet colour. With no therapeutic effects what so ever.

White is a colour that can seem sterile and be associated as clean. But if chosen in outdoor, the chances are high that the clean white expression will fade away by dirt, and is therefore better to consider than another colour. Even though white is a colour that many like because of its associations of clean, holiness and innocence, and nowadays as a trendy colour that seems to appear everywhere, the colour has unfortunately no therapeutic effect to promote wellbeing (Mahnke 1996). And is often at the lowest ratings in colour preferences tests.

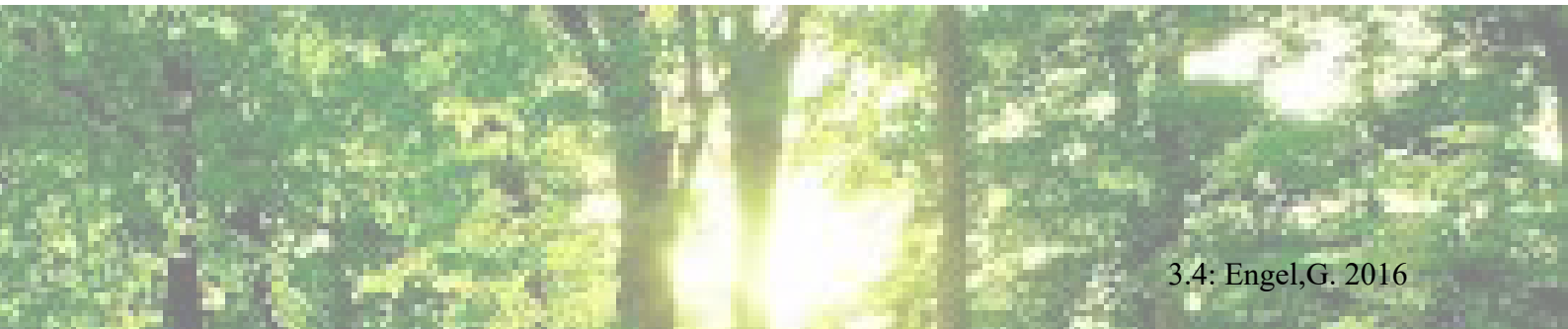
Black is a colour of fear, grief and death, but also elegance. Black is a colour that can make other colours seem more shining and beaming. But if used on walls, it can also feel threatening and heavy and in floor scape seem unreal and odd.



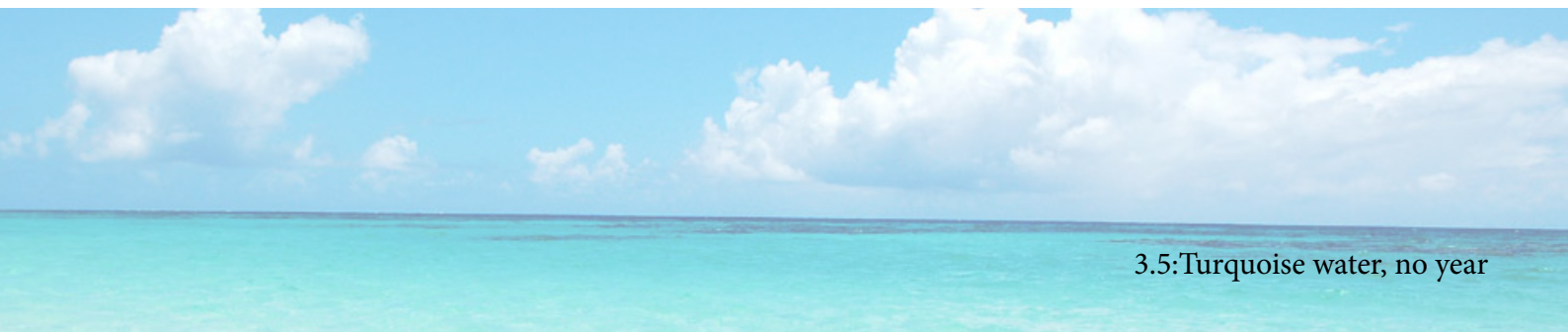
3.2: Forestry commission Scotland, 2014



3.3: MW2, no year



3.4: Engel, G. 2016



3.5: Turquoise water, no year



3.6: Designmixer, 2011

The relevance to urban areas

It is not odd that much weight is put into the sensory effect of vegetation in environmental psychology and landscape architecture. The colour green but also blue has shown to increase wellbeing and relieve tension in the body, more than red and orange colours that have a more energetic stimulating effect (Mahnke 1996; Nicholson-Lord 2003). But vegetation is not always possible to integrate in each area being planned, and therefore a basic knowledge on how colours affect us and how to integrate colours in our environments, can be of great benefit when planning an area, especially in the city where there is a tendency to be few vegetated areas.

Colours used in the city have started to become more and more monotonous. In most places where there are placed new buildings, most of the facades and exterior are colourless of white, grey and black (Thurmann-Moe 2017). In between there is sometimes those few buildings that have strong red or orange to compensate for all the other grey buildings around. The main reason to this issue, is that disciplines such as architecture have less knowledge about colours and think that colour choice is all about individual preferences. and therefore avoid using them (Janseens, (Mahnke 1996). Another reason that adds weight to the issue is that newer building materials are often not possible to repaint and therefore end up sticking to safe colours (Thurmann-Moe 2017). Luckily there are still some old buildings left here and there that have kept their original colour. But many people are influenced by the trend that white is a “timeless” colour. People believe that white or similar colours are the right colour to use when choosing safe (Mahnke 1996). But in many cases this is not the fact. First and foremost, the colour white has shown to increase stress levels in humans (Thurmann-Moe 2017). Secondly people want something different. A study done by Porter and Mikellides in 1976, in Sweden, showed that people were unhappy with their white colour painted house and exterior, and wished for more varied and “happier” colours in the exteriors (Mahnke 1996). It is also said that our main human behaviour is to be activated by curiosity (Ellard 2015). In Stavanger in the west coast of Norway, a quiet white coloured street was painted in a variations of colours in the aim to attract more city dwellers to the area. An artist was to choose the colours, and today the street is referred to as the colour street and is a landmark and a tourist attraction in Stavanger. There are also other example like the “blue city” in the north, Sortland, that definitely initiates curiosity in people just by viewing the blue artistic image from a distance. By including colours, it can help people recognise and navigate in an area. Colours from the facades, exterior, trees and flowers in an area all help as wayfindings but can also activate quiet fascination and thereby restoration, which happens when one is being distracted and still allow sother thoughts to be present. For instance looking at flowers, or colours from the exterior, or details in a place (Kaplan et al. 1998).



3.7: Favorittfargen, 2016



3.8: Elisabeth Sortland, 2011



Figure 3.1: sensory garden with old facades

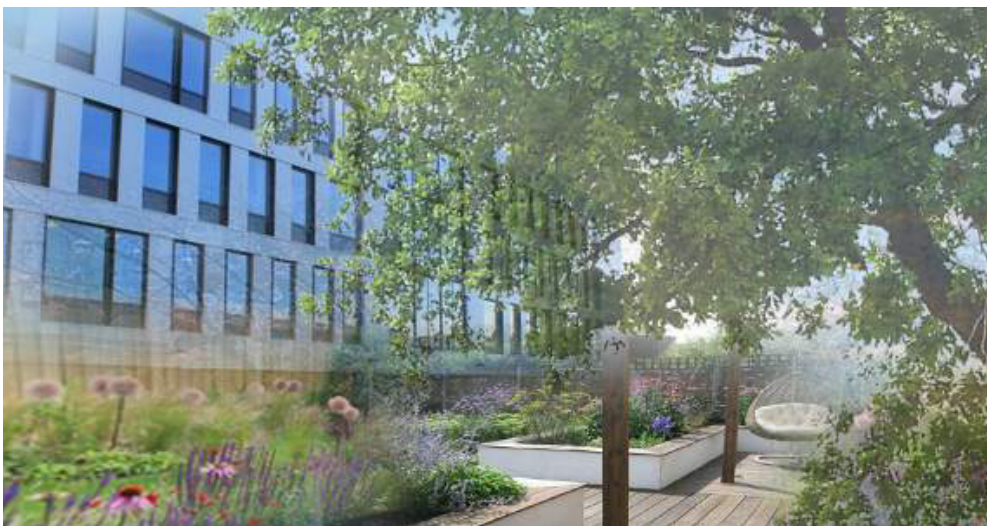


Figure 3.2: sensory garden with new facades

Inspired by Dagny Thurmann who showed an example of a repainted barcode in Oslo, I here show buildings of different materials and colours to emphasis the importance of the interplay on the floor scape and the walls in the urban areas.

The two pictures is manipulated, cut and pasted, where the facades is changed. The first picture shows classical older buidlings with colours and the other shows a typical modern building with a white blank surface. The park is the same at both pictures. But the two pictures has clearly a different atmosphere. Colours and details can be crucial for a place, especially when the intention is to create a sensory garden in-between buildings in an urban enivronment (souter-Brown). As long as the park or garden is blooming, the garden compensate for the dull and colourless facades. But in wintertime when the garden might be lacking visual impressi- ons, like flowers and leafy trees, it is convineint if the facades can compensate on the missing colours and detailing. Ideally it would be of preference to have both visual features on the facades as well as on the ground (Thurman,D. 2017).

How can colours be integrated?

When designing areas whether it is in the city or a neighbourhood, there are some key factors that can be helpful to have in mind. Colour can be used as detail on buildings and exterior, like benches and flowerbeds, if being boring and repetitive. For example, if a row of buildings is all similar in shape, it can be wise to divide it by colour. But it is all about balance, colours can easily make an area either overstimulating or the opposite. For instance, if the colours are too strong and screaming, the place can easily seem more small and intense. But if low saturation is used, light colours, the place suddenly looks more open and airy (Mahnke, 1996). In some experiments, even blind people have shown the ability to determine which colour is used, by just feeling the density encompassing the colour. Dense if red and light if blue (Gimbel 1995). Colours have an ability to indirectly awaken all the senses; because of their powerful associations. They can make objects seem bigger or smaller, heavier or lighter, emphasize the tactile feel of an object, and can also associate sound, temperature and fragrance (Mahnke 1996).

To modulate an area/ a shape::

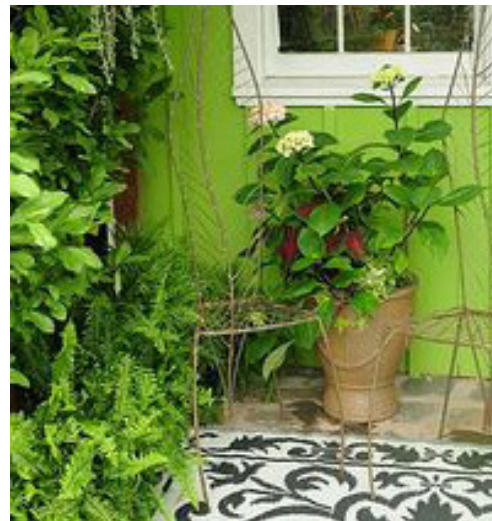
Colours as red and orange have longer wave lengths than green and blue, and are therefore beneficial to use if it is a wish to draw attention to an area. But blue and green are for example good if making the impression that the vegetation goes beyond its actual place (Thurmann-Moe 2017). Using colours of yellow for example can make a room seem lighter and can be convenient if the place is small, narrow and dark. On the opposite if wanting to make an area seem smaller, colours of dense saturated colours, like brown and red can be used (Colours calming.. no year).

Materials: studies have shown that looking at hardscapes of non-natural materials, such as steel, concrete, glass and white surfaces, leads to increased levels of stress in humans (Thurmann-Moe 2017; Velarde et al. 2007). Using natural materials with nuances gives more depth to the eye, which is more similar in nature (Thurmann-Moe 2017).

Vegetation: since green is the most relaxing colour and the most comfortable colour to look at, it is to believe that all kinds of plants of green is highly welcomed (Mahnke 1996). To achieve visual colour effect from facades but also floor scape all year around, it



Picture 3.9: Garner, V. 2012



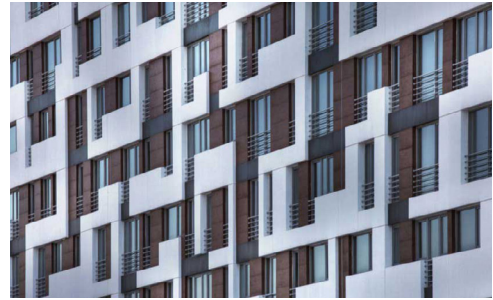
Picture 3.10: Polyvore, no year

Facades: By using colours outdoor, it can awaken attention and attract people to spend time outside (Souter-Brown 2014) studies done by Psychologist Daniel Berlyne, shows that people has increased levels of stress if facades or the surroundings is lacking complexity or if the buildings are too sterile. His conclusion is that when feelings of boredom is present, stress is more likely to be present (Ellard 2015). One way of making buildings and areas less plain and dull, is by adding colours to the façades and exterior. Preferably the facades should have 3- 5 colours to increase the variation and depth in the surface (Thurmann-Moe 2017). The colours on the facades should give identity to the area and express the intention of the area, is it a quiet place or an energetic, lively place?. Should the area blend in to the surroundings or stand out, or something in-between?(Mahnke 1996; Thurmann-Moe 2017). If it is desired to harmonise with the rest of the city or adjacent buildings, it can be an idea to use the same colour palette. The colour use on the facades is of importance since these are big surfaces that both determines the associative emotions but also decides the further decision of colour use.

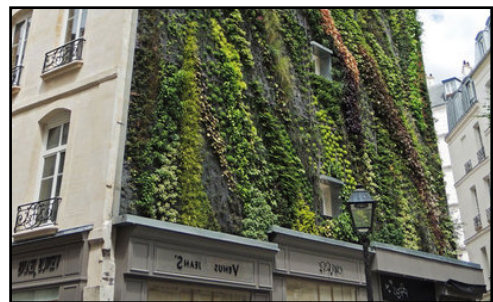
Having colours on flowerpots, benches, coloured mosaic in the floor coating and coloured plantings. When applying, it can be wise to find harmonising colours. If the facades is coloured, the exterior and even the plantings should match or find a harmony to create the optimum feeling of wellbeing.

Colors can be adajacent, contrast, different but the same hue, and still be in harmony with each other (Thurmann-Moe 2017). By using the colour circle the optimum level can be achieved. As with every new object in a landscape, the new object should harmonixe with the existing.

In the facades, Coloured glass can be beautiful, but clear glass is of preference to those who want the full benefit of natural light (Mahnke 1996).



Picture 3.11: Playground-time, no year



Picture 3.12: Blanc, P. 2014

Colour harmony-basic

Ittens colour circle can be helpful to get an overview of the colours available to create certain visual effects. If the aim is to create harmony and balance it is wise to follow the colour wheel's different set combinations. But it is also eye catching to look at a view where some colours is in discord.

The colour wheel is split in two of warm colours and cool colours.



3.13: Rønning, R.K, no year



Figure 3.3

Primary colours:

The colours red, yellow and blue, that is the purest and clearest colours available without any mixture from other colours (Shallbetter no year).



Figure 3.4

Secondary Colours.

Colours that is achieved by mixing the three primary colours with each other. Resulting in green, orange and purple (Shallbetter no year).



Figure 3.5

Tertiary colours:

Colours mixed from both primary and secondary colours. Like for example mixing yellow with green, giving a lighter colour of green (Shallbetter no year).

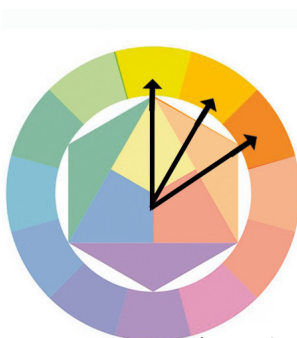


Figure 3.6

analogous colours:

is the three colours lying next to each other. It is one of the easiest ways to achieve colour harmony. Analog colours are also often to be found in nature (Color harmonies 2015).



Figure 3.7

Complementary colours:

is when using the opposite colours on the colour wheel (Shallbetter no year). It is a great way to make contrast and highlight the different colours (Skarholt 2002).

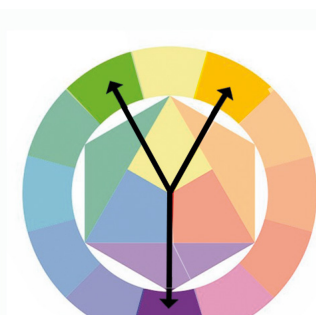


Figure 3.8

Split complementary:

Colours complementary to each other. With one dominant strong colour and the other split into the adjacent colours. Colours arranged like this, gives a lighter expression than the previous (Color harmonies 2015).

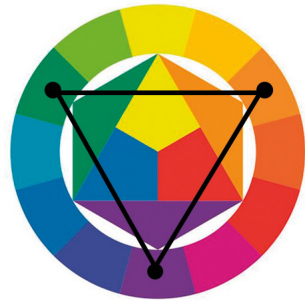


Figure 3.9

Triadic colour combination:
When three colours are the longest away from each other. This combo gives an energetic image and should be chosen with one dominant colour and the other two at small details (Color harmonies 2015).

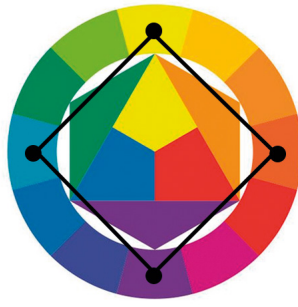


Figure 3.10

Square colour combination:
Allows a balance between warm and cool colours. But here as with the previous combinations, one colour should be the most apparent (Color harmonies 2015).

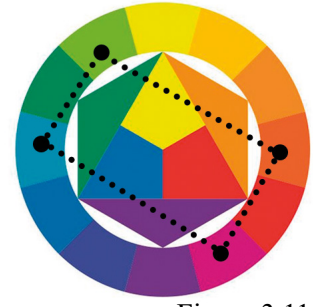


Figure 3.11

Rectangle colour combination:
When there are two pair of complementary colours. Rectangle combo demands the same cautiousness as with square colour combos (Color harmonies 2015).

Colour harmony outdoor

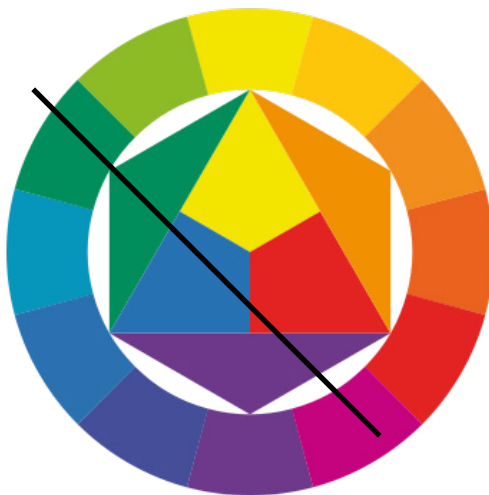
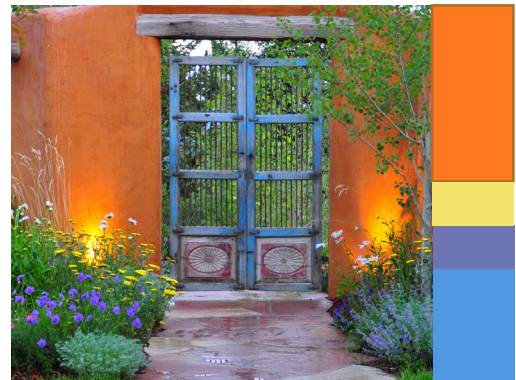


Figure 3.12

Complementary colours



Picture 3.14: Courtyardideas, no year

Analogue colours



Picture 3.15: coastal gardens, no year

Split complementary colours



Picture 3.16: Find me travelling.. no year

Colour hues

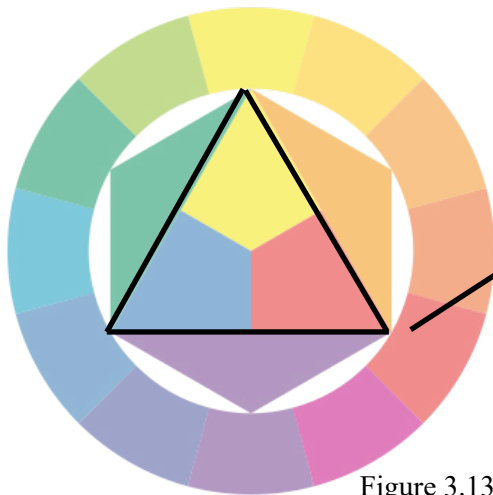
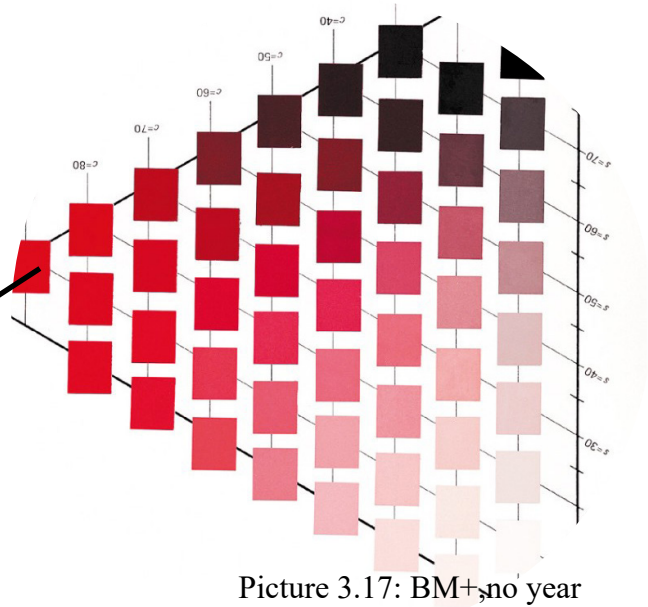


Figure 3.13

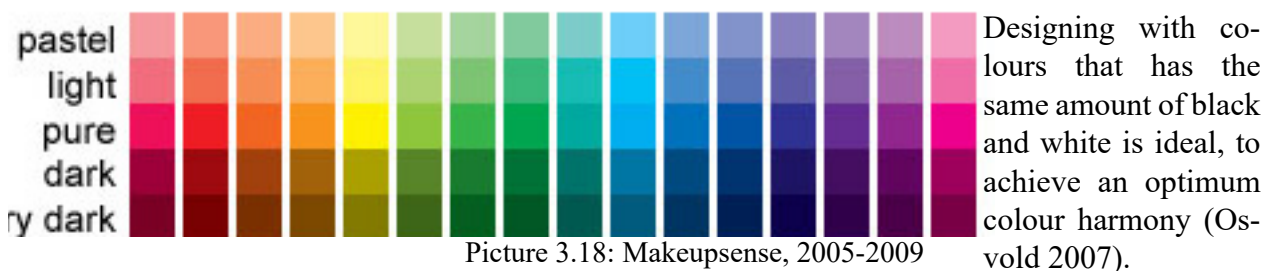


Picture 3.17: BM+, no year

Colour hues:

The colour wheel on figure: 3.17, shows the clear colored colours, but the colour also have different hues (Osvold 2007). Hues either of black or white as seen in the triangle can be used on all the colours in the colourwheel. The front part of the triangle is completely red without any influence of black or white. Using these colours can be heavy and dominating on big surfaces. But as soon as white or black enters, moving more over to the right, the colours is muted and can be easier to blend in with different kinds of colours. especially if the colours is of the same hue (Osvold 2007).

choosing hues verging to black, can make a space seem smaller. while opposite using hues of white can open up a space and make it optically bigger and wider. Therefore it can be wise to observe how the space is shaped and modelled before choosing colours. preferably a space should have both white and black hues to avoid a dull and monotonous expression (Osvold 2007).



Picture 3.18: Makeupsense, 2005-2009

Designing with colours that has the same amount of black and white is ideal, to achieve an optimum colour harmony (Osvold 2007).

Pastel colours: has a whole amount of white which means that the colour saturation is lower than with pure colours (Skarholt 2002).

Dark colours: has a whole amount of black which means that the colour also has a low saturation compared to pure clear colours. thereby giving it a more earthy autumn image.

Pure colours: has neither black or white in it, these colours are colours with high saturation. And can create contrast, seeming strong and eyecatching if using many colours.

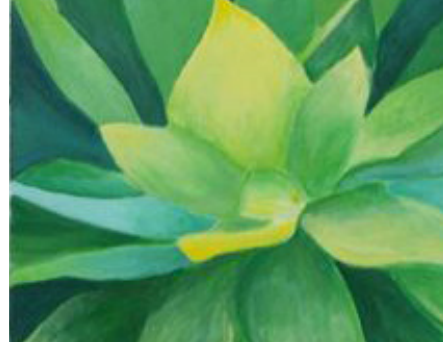
Colour balance



Picture 3.19: cool stuff directory, no year

Warm and Cool colours:

In a picture the warm colour seems stronger and closer to the eye than the cool colours that seems far away. The same happens outdoor looking to a view of different colours. In this picture the artist has used warm colours to highlight and show the far away build-



Picture 3.20: Design. tutsplus, no year

If combining analogue colours, it is easy to achieve a colour balance than it is with complementary colours. But enough contrast from other existing colours is preferable to make the impression more alive. One of the three analogue colours should be more dominant (Color harmonies 2015).





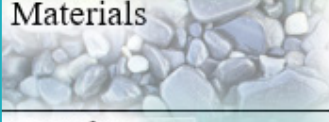



Picture 3.21: Hayes,R. 2012

Or if having the same amount of colours or more of the recommended colours, it can be an idea to try different hues; blending in black or white to make the colours less strong (Shall-better no year). If the cool colours are muted down more than the warm ones, a greater balance is achieved.



Picture 3.21: Hayes,R. 2012

If combining the complementary colours in certain amount, the colours is at its most beneficial harmony. The above diagram shows a guideline of how much each colour should take place (Hayes 2012).

	Healing Garden	Colour psychology	Feng shui
Plants 	Stimulating the senses	The green colour most nutritious	Evergreen, blooming each season, avoid climbing plants
Trees 	Open, well maintained, many trees= high rates	The green colour most nutritious	Away from the buildings
Materials 	Gravel, grass, pebble stone, single grass, bark, natural materials	Avoid concrete, metal, glass, use colours that mute down the effect.	Avoid gravel. Use stepping stones.
Facades 	Biophilic design, Green roofs and walls	Colours harmonising with the surroundings, avoid black, white and grey	Yin: metal, sandstone, stone, cement = fluctuating warm and cold Yang: wood, brick, clay = colder but stable
Shapes 	Curvy, organic	Amplify or mute down shapes through colours	Squares, circles in buildings. Shapes per the five elements
Colours 	Calming, blue, green Stimulating; orange, red, yellow	Affects all our senses. Calming, happy, stimulating colours	Colours after the five elements and the cardinal elements

Site analysis

Location: Bergen, Norway



Apapted picture5.1: Harald-
sen, W. no year



History



Picture 4.2: Hogenberg, F. 1580

Bergen is located in the west of Norway. The city is surrounded by Mountains and ocean. The name Bergen derives from the name Bjørgvin. Bjørgvin means the green savannah/ field between the mountains. Bergen was considered as the main capital of Norway from the year 1070-1299 (Lodtz 2010).

Today Bergen is enriched with history and culture. The history is reflected in the many monuments in the city. Monuments is defined as protected buildings and areas, or listed or conservation worthy. In Bergen all buildings and areas that is from the time 1537- 1649, is recognised as protected (Byantikvaren 2012).

Bergen is and has always been a seaport, in the beginning the city lived of dry fish trade and later grains. Bergen city centre is easily accessible by North to Lofoten and to the markets in Europe. Because of its mild climate, freezing of the shore, has never been an issue, and has therefore not made it difficult to transport food and goods by ships and boats. Because of the convenient land shape of the quay, called Vågen, it was naturally to build the buildings and street after the shape. In the beginning of year 1000, arkeological founding's showed signs of quays further behind the existing quay line. It is measured that the shoreline was 280 meter behind the todays shoreline. Which means that the shore was reaching up in between the two churches, Domkirken and Korskirken. In the medieval age Vågen was a marketplace for trade, but around 1600, Vågen could not provide capacity to deal with the expanding activity of trade and shipping. It all resulted in an expansion of the active shore to the north of Vågen, Sandviksbodene and Sandviken. Here they placed buildings a close to the quay, to make sure to receive shipping efficiently and shield the nearby farmland.

The shape of the city structure is built based on the areas topography and practical functions deriving from older times. The many fires in the city, has led to a further expansion of Vågen, but also a streetscape of both small and wide streets. The Wide streets/commons together with vegetation, was functioning as a buffer zone against fire. Secondly they were used as gathering places for people. Most of these commons is today protected places and still maintained as meeting places for people.

The history of Parks in Bergen



Picture 4.3: Anfinssen, S.M, 2016

Despite of Bergens rich nature from the surrounding mountains, nature in the city was also needed. One of the first big parks, Nygårdsparken, were founded in 1883- 1885. The park was a result of the growing population in Bergen, and therefore the doctors, Hanssen and Wiesner, saw a need of spending time in fresh air and daylight to improve health for the citizens of Bergen (Smedvigsarkitektene 2013).

Many parks were built in this period: Byparken, the citypark was also gradually introduced and built in 1865. First by building a park around the pound; Lille lungårdsvannet. Thereby gradually building further on the park in front of the museum; Permanenten with statues of well-known people from Bergen, like Edward Grieg (Skreien 2009).

Close to Nygårdsparken the museum garden or the bothanical garden at that time, was built around 1897-1899. The park has been well maintained. It has 3000 species of plants from both Norway and abroad and a protected greenhouse dating back to that time (Bergen 2013).

Vegetation in Vågsbunnen:

But approximately 200 years before the public parks, in the renaissance the bishop in Bergen, Geble Pederssøn, made a garden in Vågsbunnen nearby Domkirken. He ordered exotic trees from Germany and established an herb garden and later a gazebo with art of the four seasons and flowerpots made in Holland. The garden is recognised as one of Norway's finest renaissance gardens at that time. At the same time the pharmacy "svaneapoteket", had a similar garden near the waterpond "lille lungegårdsvann" (Museum 1991).

Closer to our time a garden from 1993 was made in the street " Kong Oscarsgaten". The area is located in between the leprosy museum and Bergen school of art. The garden is a hidden oasis which no one can enter. It was made in the inspiration of the St. jørgens hospital for lepers back in 1400. At that time plants and herbs were used to cure the illness. Today the garden contains lots of herbs like mint, lemon balm, edible plants, poisonous plants and perennials (tidende 2004).

The history of Colour use in Bergen



Picture 4.4: Chouan, G. no year

In the medieval age, colours were not that available as today. Colours were produced by plants and bugs and resulted in limited colours as indigo, blue, black, red, green and yellow. Moss and bark was common to mix with glue, rubber, egg white, honey and oil (Museum 1991).

In the medieval, most of the houses in Bergen were built out of wood with colours as brown, gray white, green and roofs of green turf roof. There were some white chalked stone buildings in between. The churches had a different touch, they were dressed in stone and roofs of slate and particleboard. In 1247, when the King was crowned, the king expressed that they needed colour to compensate for the grey Bergen weather. Red and green was used with a great deal, and colours were used lots in churches. Since colours were rare, they were worn both in clothing and on facades to show luxury and abundance. But was muted down by restrictions in 1300, since it revealed too much class distinctions between poor and rich people.

In the renaissance, the colours from Ages were still present, but more white buildings were raised with coloured windowpanes, and adjacent gardens were added and gave extra colour to the city image. The wooden bridge coating of the street in Domkirken, cityhall, stranden and bryggesporen, were replaced with stone coating.

In the baroque, in 1702, a huge fire destroyed almost everything of the city. In 1702- 1730, the revival of the city started with new materials and colours. Timber frames were used with barely any colours, sometimes a bit of red. Gradually the city got a new image when panel was laid outside the timber. Suddenly heavy dark colours such as red, earthgreen, grey, black and blue appeared.

Later on in 1750- 1800 connections to Europe influenced the style. White was now popular but also expensive. Facades painted in white and roofs of black shiny tiles, demonstrated high class and prosperity. Ordinary houses could also have white but then with red/orange tiles, turf roofs or deck roofs.

In 1800, the classicism, the white houses expanded with pastel light colours and slowly replaced the heavy dark colours from the baroque. The colours could be dark, but more cool and dry colours than before. The doors often were painted dark green, blue or brown to make a contrast to the light-coloured houses. The facades facing the street often had white expensive colours, and the backside ochre and English red which were cheaper. Decorative painters would imitate the look of expensive wood- and stone materials.

In 1900 the styles and colours were mixed and new buildings could have inspired details from the medieval, the dragonstyle. Like for example Banco rotto near Skostredet and vågsalmenningen. Since the dragonstyle was inspired by Bergen's peak time, the medieval, colours were also reused again. Resulting in the colours yellow, ochre, and red, which is associated as typical Norwegian.

History of Vågsbunnen



Picture 4.5: Bergen byleksikon, 1950

Vågsbunnen was in the medieval time, the city centre of Bergen. The area was filled with craftsmen, trade and inhabitants. The most common craftsman were shoemakers who dominated most of the area (Hevrøy 2013). The name Skostredet (shoe place) explain their strong character. The area was also quite international, German and Dutch people were quite common. A street name; Hollendergaten is also named after the people living there in late 1400. As mentioned earlier the city like we see it today, were in 1500 not the same. The church Korskirken were located at the tip of a headland and the street; Domkirkegaten were a bridge, because of the quay or shoreline. In Domkirkegaten 6 they have found remains of quays.

In 1702 almost the whole city and Vågsbunnen had to be rebuild because of a fire. Luckily there were some stone basements leftover that could show the outline of the buildings and streetscape. There are still some well-preserved basements from the medieval age, located in vågsbunnen, Hollendergaten 6 and 2 , and Torget 13. Because of these outlines the streetscape and the building structure is still visible today. Even some of the houses that were rebuild after the fire, still has remained till this time. Some of them are the same age as Bryggen. Today 80 % of the houses in the area is made of wood, timber or panel.

Destination spots

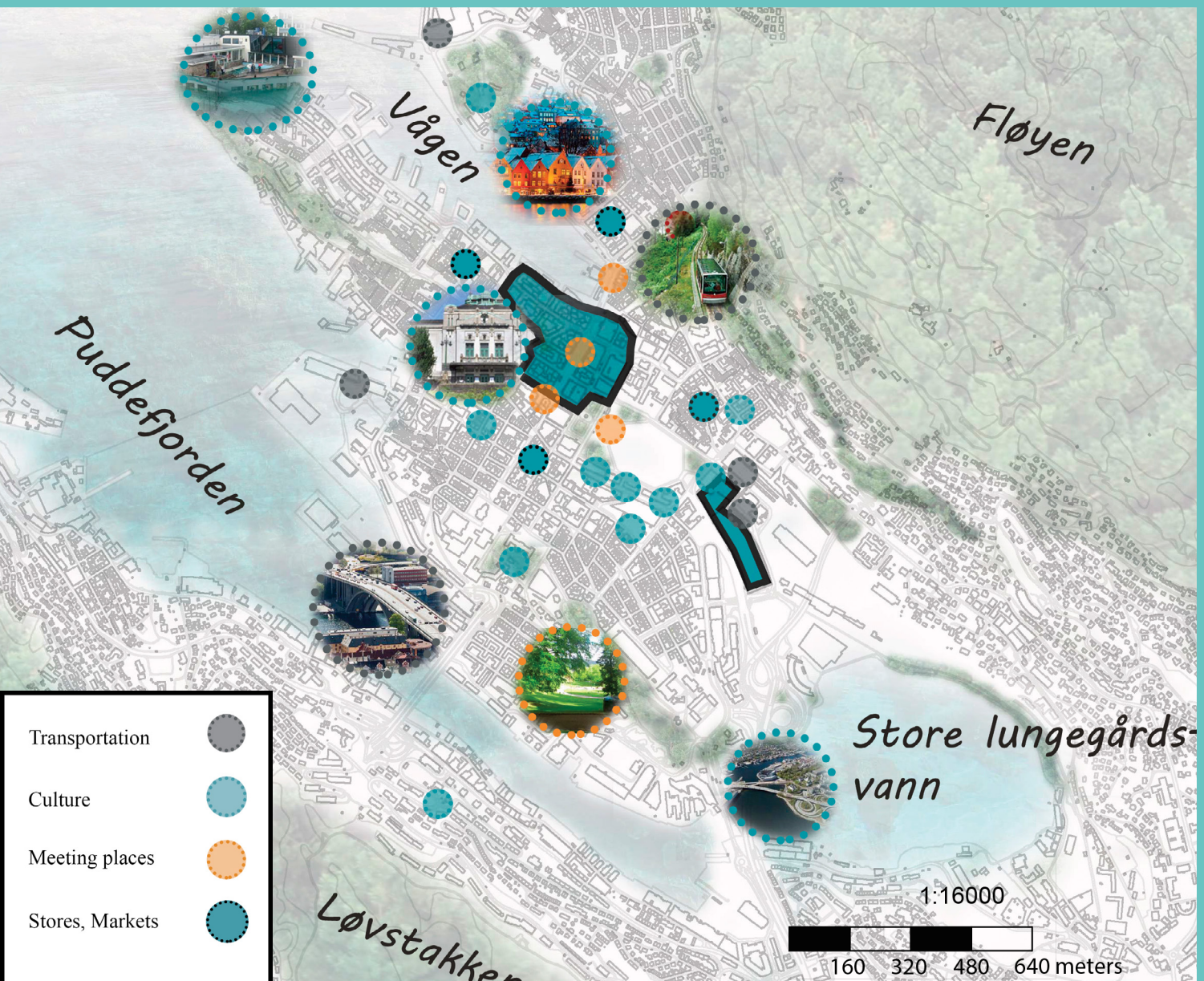


Figure 4.1: Adapted map from Norgedigitalt

The destination spots in Bergen is all gathered in the inner centre of the city. Meeting places, transportation, stores and culture activities are all within reach and easy to navigate to. Bergen is one of the cities in Norway that is known as a culture historical city. Bergens rich history has resulted in many museums, such as the Maritime museum with its collection of Bergens maritim history, KODE Bergen artmuseum with everything from contemporary art to classical art such as Edvard Munch and Nicolay Astrup. But also the many wellmaintained areas, like Bryggen, Old Bergen town, the Rosenkrantz tower, the former leprosy hospital are one of many places that has been turned in to museums. There are also plenty of department stores close next to each other and one close to the big lake; "store lungegårdsvannet". There are three areas that lies a bit outside the big hot spot, that is dominated by stores; "Marken", "Gågaten" and "Bryggen". If wanting to get closer to nature, the funicular is a good option to get up in the mountain; "Fløyen" or if in the urge of the seaside, the little boat "Beffen" will take you from Bryggen to the other side close to the Aquarium in Nordnes.

Demographics and healthprofile

The Population of Bergen

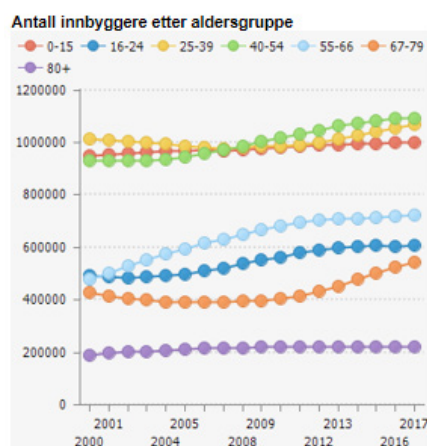
In year 2000, Bergen had a population number of approximately 330 000 but in 2017 the number increased to 450 000 people (Kommuneprofilen 2017). One of the reasons for the high number is due to immigration which represent 16.8% of the population. Bergen also has a higher number because of the many students from other parts of Norway that makes the city richer and denser (Loodtz 2011).

Age distribution

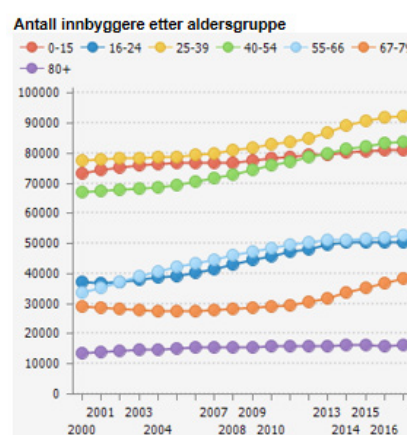
The average age is 39. Despite the many students, the age group between 0-15 and 25-39 has decreased (Kommuneprofilen 2017). In contrast the age group between 55-66 has grown and is still growing. As in Bergen and many other cities in Norway, it is expected an increase in the population of elderly. It is expected that people will live at least 5 years longer in 2049 than today in 2017 (Svanes 2011).

Health profile:

The health profile of Bergen shows different tendencies. In Bergen city centre, there are more people in the age of 45 that lives alone than the rest of the country. But still the expected age is lower than many other cities. The general civic condition is good, people don't smoke, there is little obesity and heart diseases and the mental health conditions are better compared to the rest of Norway, but there are some high incidents of Bowel cancer.



This graph shows inhabitants average age in Norway



This graph shows inhabitants average age in Bergen

Picture 4.6:

Parks within reach

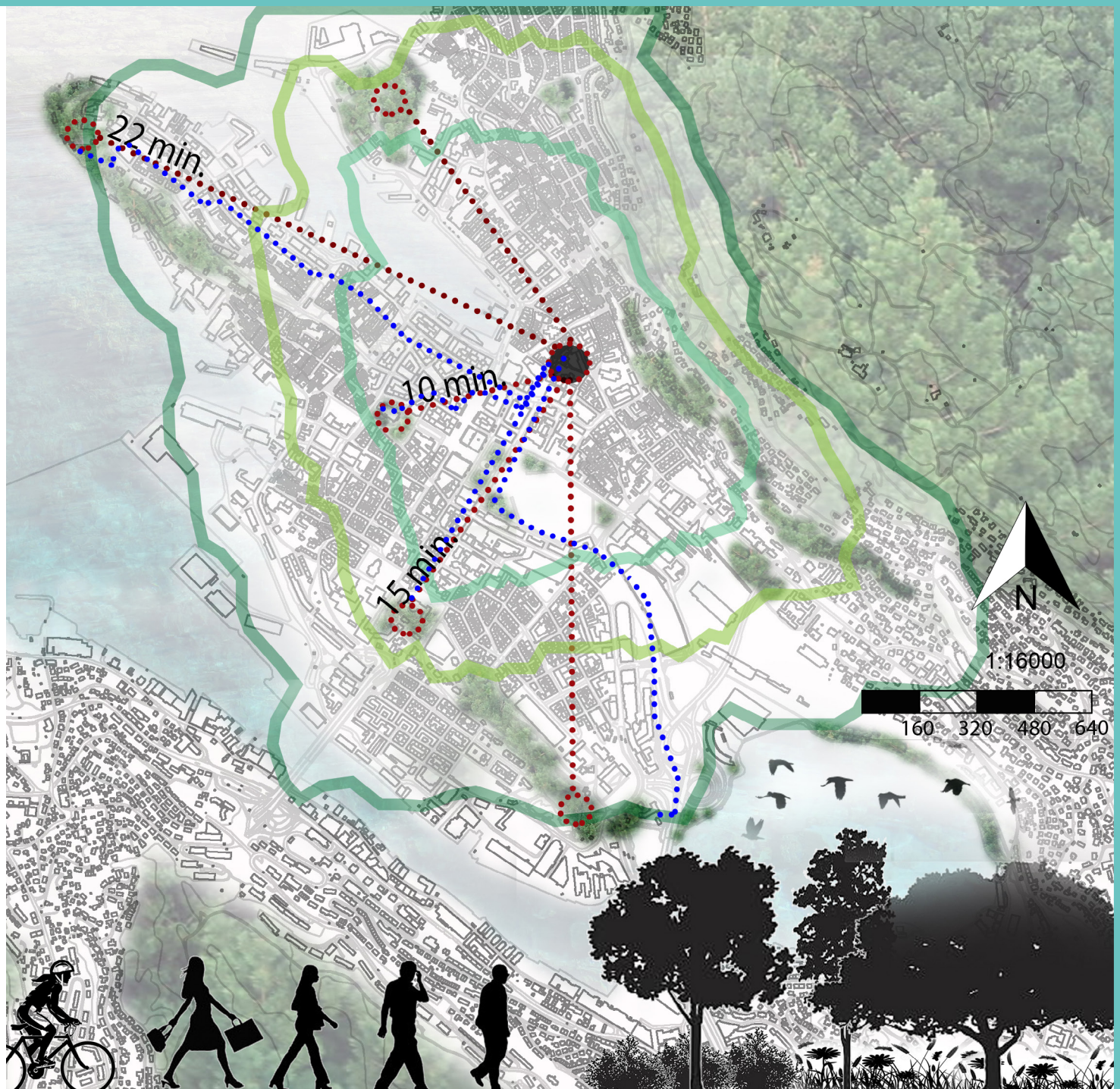


Figure 4.2: Adapted map from Norgedigitalt & Walkscore

Bergen is a beautiful city with lots of culture and history and surrounding nature in the mountains. Bergen has many meeting places but most of these meeting places are poor in vegetation and those that are rich, is in the border of the city centre. It is a need for more vegetation in the city. Since Bergen is exposed to climates like inversion, the lower part of the landscape is colder and contains more pollution. The whole city center of Bergen is located to experience inversion and pollution especially in wintertime. As a result people with respiratory ailments suffers more with asthma, and allergies when these conditions appear. To allievate the pollution, a reduce in vehicle traffic is needed but also improve the climate through more vegetation. Today it takes about 10 minutes to 22 minutes to get to the nearest park from the location Skostredet or the inner city center.

Public places within walkable reach

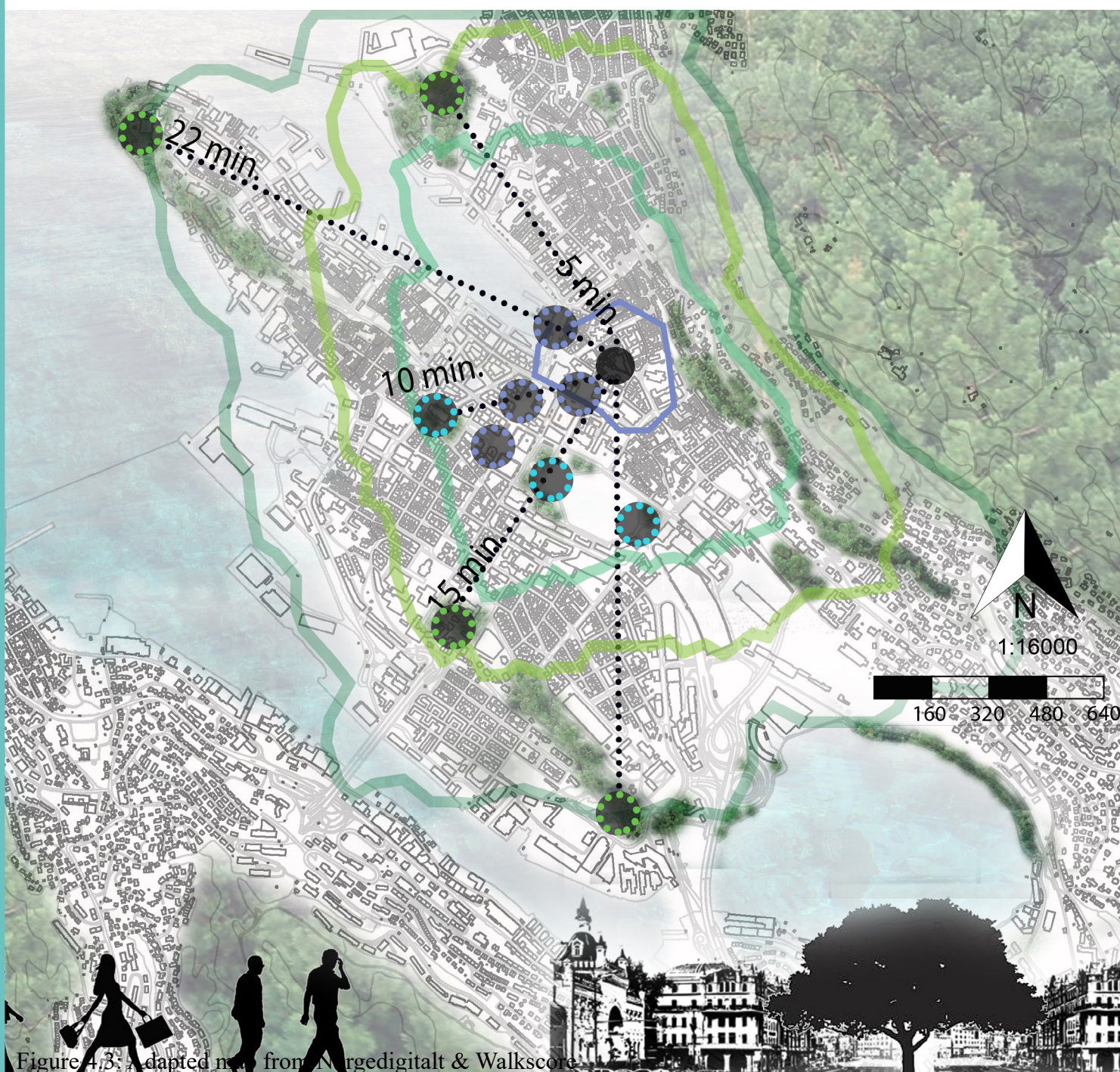
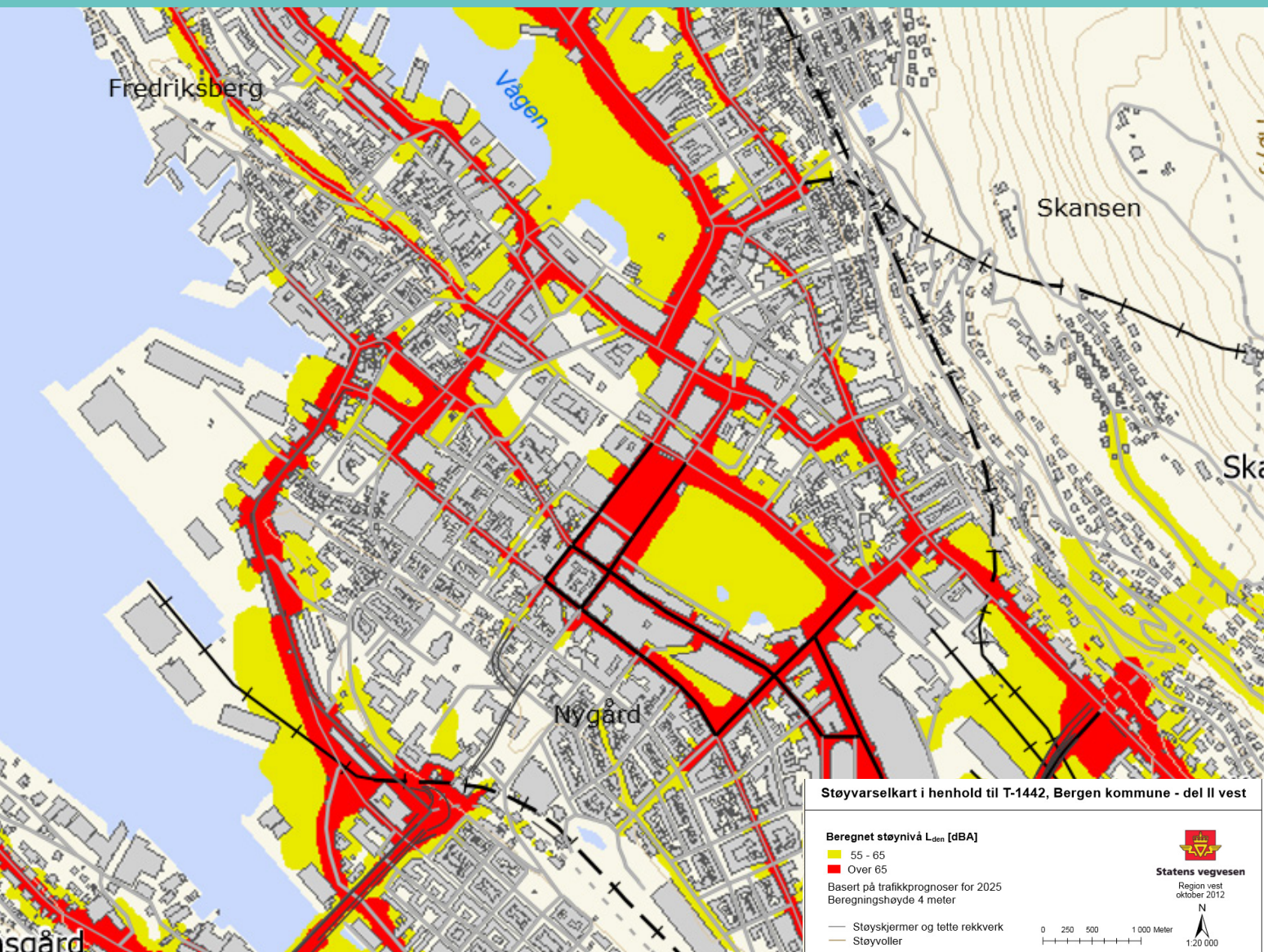


Figure 4.3: Adapted map from Norgedigitalt & Walkscore

In Bergen there are many common squares that is used as meeting places for people living and visiting Bergen. Torgallmenningen is the biggest square available with 50 meters width and 229m in length, Festplassen a smaller square (65m in width, 75m length) near the little water” lungegårdsvannet” and some small squares (45m x55m) in-between. Even though these squares is of great importance, the squares does not necessarily give enough refuge to relax and get a contrast to the disturbance of the busy city life. According to Jan Gehl public squares has an ideal measurement to feel optimal of use (2013). A square with a length or width of 35 meters is ideal if wanting to create a place where people can sense everything that is going on. If extending over 100 meters it is difficult to distinguish people and other things going on. If the area is 60- 70 m it is a chance to recognise people (Gehl 2013). Torgallmenningen and Fisketorget does not fulfil the criteria of these measurements. According to biophilic design too large spaces without vegetation does not give the highest rating in restoration (Kellert et al. 2011). Since most of these public areas is grey and without Vegetation, it is a need of more places that can offer both the right scale, refuge and vegetation. 67

Noise pollution- map

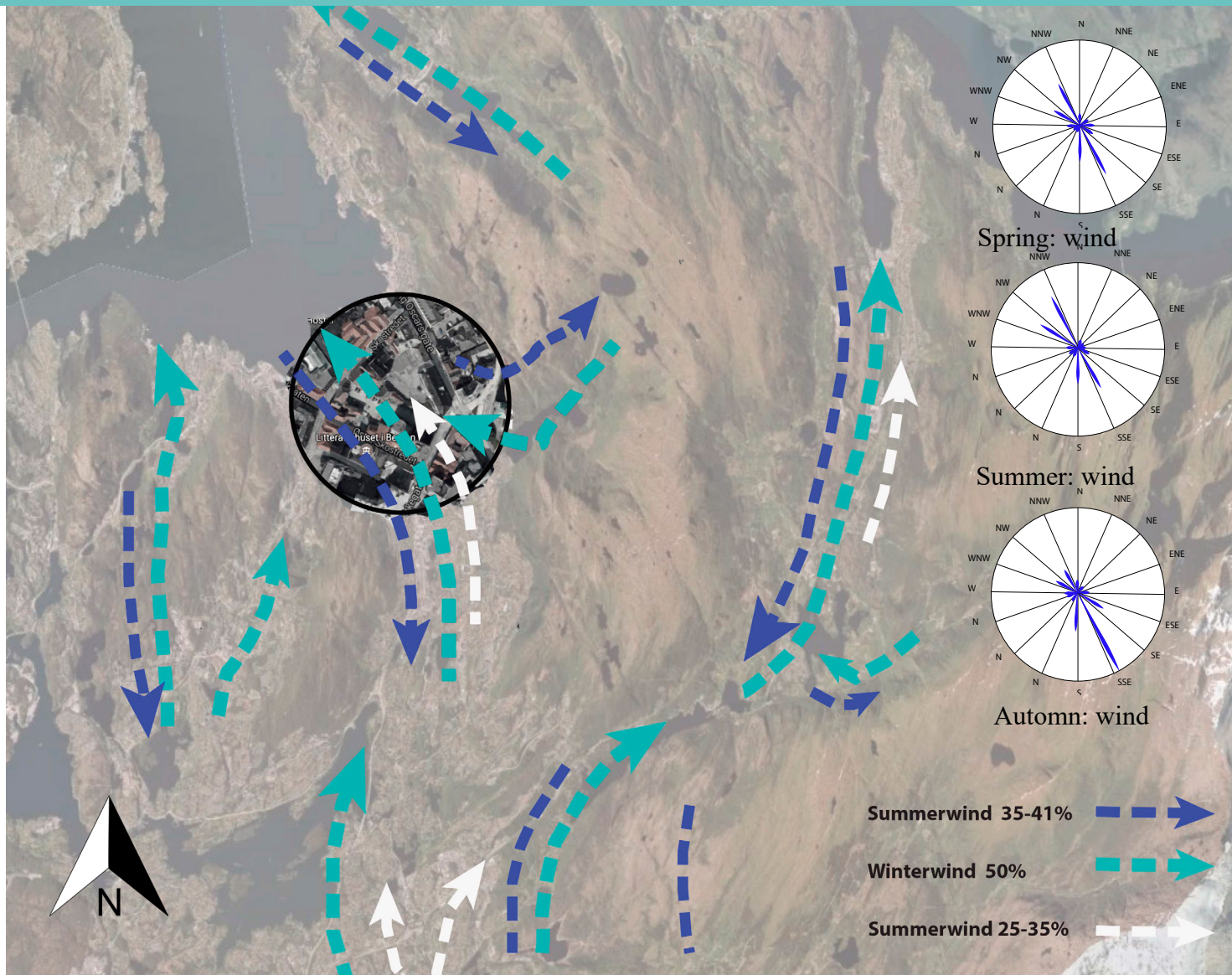


Picture 4.7: Statens vegvesen, 2012

Noise pollution:

Road traffic stands for 80% of noise pollution in Norway. Today many of the new cars makes more noise than those that were produced for over 20 years ago. Stereo system and spike tires is also adding to the higher noise pollution. Being exposed to protracted noise can forsake stress and reduced health. Noise as a background noise, such as music can be experienced as less provoking than direct intense noise. Beeing in charge of the noise is more helpful and less stressful than noise out of control. Noise is also more welcome in work-related environments than in recreational areas such as parks and in leisure time when one expect full relaxation (støy 2017). The map of Bergen city centre shows a distribution of noise in two noise levels; Red; 65 Decibels, and Yellow less noise in 55 decibel. The measures are not accurate but gives an indication of how the noise level is now and also what is predicted in 15- 20 years from now (vegvesen 2012). As we can see on the map, the location site; Skostredet, is shielded from most of the noise because of the pedestrian zone in the streets, Skostredet, Østre Skostredet and the reduced traffic in Domkirkegaten. The Street Kong Oscarsgaten might give extra noise with its heavy traffic.

Wind analysis



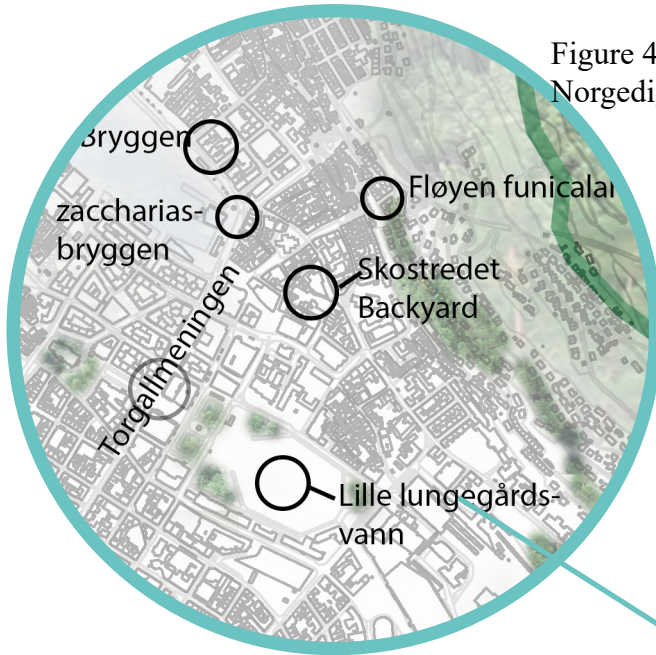
Picture 4.8: Adpated by: Kåre Utaaker, 1995. The map is not in scale and is only intended as a visual illustration.

The wind roses reveal that the predominant wind directions mainly come from southeast, south and northwest and north. The wind is following the 4 seasons (Utaaker 1995). In winter time wind from south and southeast is leading and in summer time wind from North and northwest is dominating. It is also wind from south and south east with a low frequency in the summer as well.

Because of Bergen's landscape with all its mountains and valleys, cold wind, cold air drainage is going downhill the valleys. This type of wind is especially predominant from the water "Svartediket" located between the two mountains "Fløyen" and "Ulrikken". There are no specific wind measures in the area "Skostredet". The wind stations are in a place Called "Florida" and the airport "Flesland". These areas are quite different from each other; Skostredet is sheltered by buildings, while Florida has an open view and lies near the lake and water, which means that this area is more exposed than Skostredet. Since the wind in Norway is quite alternating and often is affected by the landscape and terrain it is not that easy to determine how the wind behaves in a specific area (Utaaker 1995). But the Wind is most likely slowed down by Buildings and trees. The same in Skostredet, which is surrounded by many buildings and lies sheltered from the quay line "Bryggen", which is highly affected by strong wind from North West. The city centre is mostly affected by this wind but also from the south and east in April and September. It is therefore to be assumed that Skostredet, is also affected by wind in south since the baskyard is open and exposed to this direction. Because of the landscape, Bergen city centre is also affected by inversion in wintertime.

Landmarks- Skostredet Backyard

Figure 4.4: Adapted map from Norgedigitalt

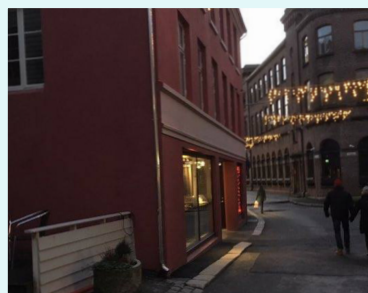


Folk og røvere pub/café



Picture 4.9: Edal,M. 2017

The café or pub "Folk & røvere" has been in the area the longest of all the cafés. This is a popular place for both students and adults.



Picture 4.10: Edal,M. 2017

Råvarene is a recently open store that provides Bergen with organic food and has many plans for the backyard; among making the place into a social arena of food and herbs grown locally.



Picture 4.11: Edal,M. 2017

Tanks skole is an high school that has existed for almost 100 years, but recently was moved to a newer building in Bergen. The old building might be turned into a hotel in the future



Figure 4.5: Adapted map from Norgedigitalt



Picture 4.12: Edal,M. 2017

Domkirken and Korskirken are two churches located in Vågsbunnen, near the backyard. Dom kirken is from 16 th century and the other one is dating back to 12-century.

Literaturehouse



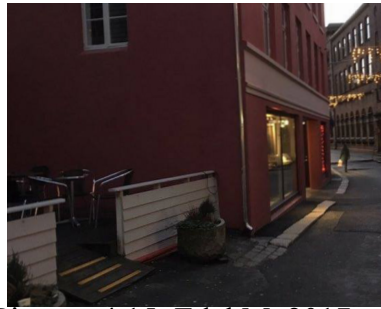
Picture 4.13: Edal,M. 2017

Litteratur huset/ the literature house is one of the places that is most visited in the area.

Todays situation of Vågsbunnen



Picture: 4.14: Edal,M. 2017



Picture: 4.15: Edal,M. 2017



Picture: 4.16: Edal,M. 2017



Picture: 4.17: Edal,M. 2017



Picture: 4.18: Edal,M. 2017



Picture: 4.19: Edal,M. 2017



Picture: 4.20: Edal,M. 2017



Picture: 4.21: Edal,M. 2017



Picture: 4.22: Edal,M. 2017



Picture: 4.23: Edal,M. 2017



Picture: 4.24: Edal,M. 2017



Picture: 4.25: Edal,M. 2017



Picture: 4.26: Edal,M. 2017



Picture: 4.27: Edal,M. 2017



Picture: 4.28: Edal,M. 2017

The backyard lies in the midst of Bergen city centre under the area called vågsbunnen. It is a 5 minutes' walk to "Bryggen" and the meeting place "Torgallmenningen". And is therefore acknowledge as an area with great potentials. Today the area is a contrast to the shopping atmosphere in the middle of the city. The backyard lies empty, but the surrounding streets, has an almost bohemian atmosphere with street art on the facades, vintage stores, eco-friendly trading, like the zero-waste store, organic hairdressers, and an organic homemade ice cream shop. It also has many restaurants and cafès, like the literature house and also a youth house called 1880 in domkirkegaten. The area consists therefore of both youth, students and adults. Occasionally in the summer when it does not rain, there are street fairs and jazz concerts in the area.

But even though the area has activity it is still a quiet area compared to the rest of the city. There are lots of uninhabited buildings and unused areas, like the backyard. It is therefore many plans both from the municipality and private owners of the area in Vågsbunnen. A building in the edge of the backyard was recently a school called Tanks, but is now empty, and the owners are planning to renovate it into a hotel but also wish to cover the street Skostredet with a glass roof to attract more people to the area when it also rains (Espeland 2015). It has also been other requests to use the buildings and the backyard for art and culture, but has not been achieved yet. Some stores around the area also has wishes to make room for growing food in the backyard. However, all the changes still must be approved by the cultural heritage law, since the place is dating back to the medieval time and is therefore listed (Fredet-vernet no date). In the cultural heritage law, it is said that the area, if changed, should be built in a way that complements and supports the cultural and historical value of the area.

In one of the pre-projects about Vågsbunnen, there has been laid out plans about building further on the history of the area (Lasse Berntzen 2011). Among the plans, is to use materials and textures like ground coverage of cobblestones and stone cellars. Since the area has been under water before in the early medieval time, it is a wish to demonstrate the former quay line through water features spread around in vågsbunnen. The area in korskirke allmenningen will also integrate stories and memories from Ludvig Holbergs science fiction stories, like "Niels Klims underground travel" where the story takes place in the surrounding area. Which suits well since the statue of Ludvig Holberg is already in korskirkeallmenningen.

The street "skostredet"x



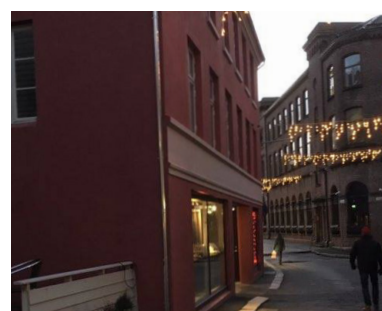
Picture: 4.29: Edal,M. 2017

Tanks School



Picture: 4.30: Edal,M. 2017

Råvarene zero waste store



Picture: 4.31: Edal,M. 2017

Statue of L. Holberg



Picture: 4.32: Edal,M. 2017

Protective and listed Monuments

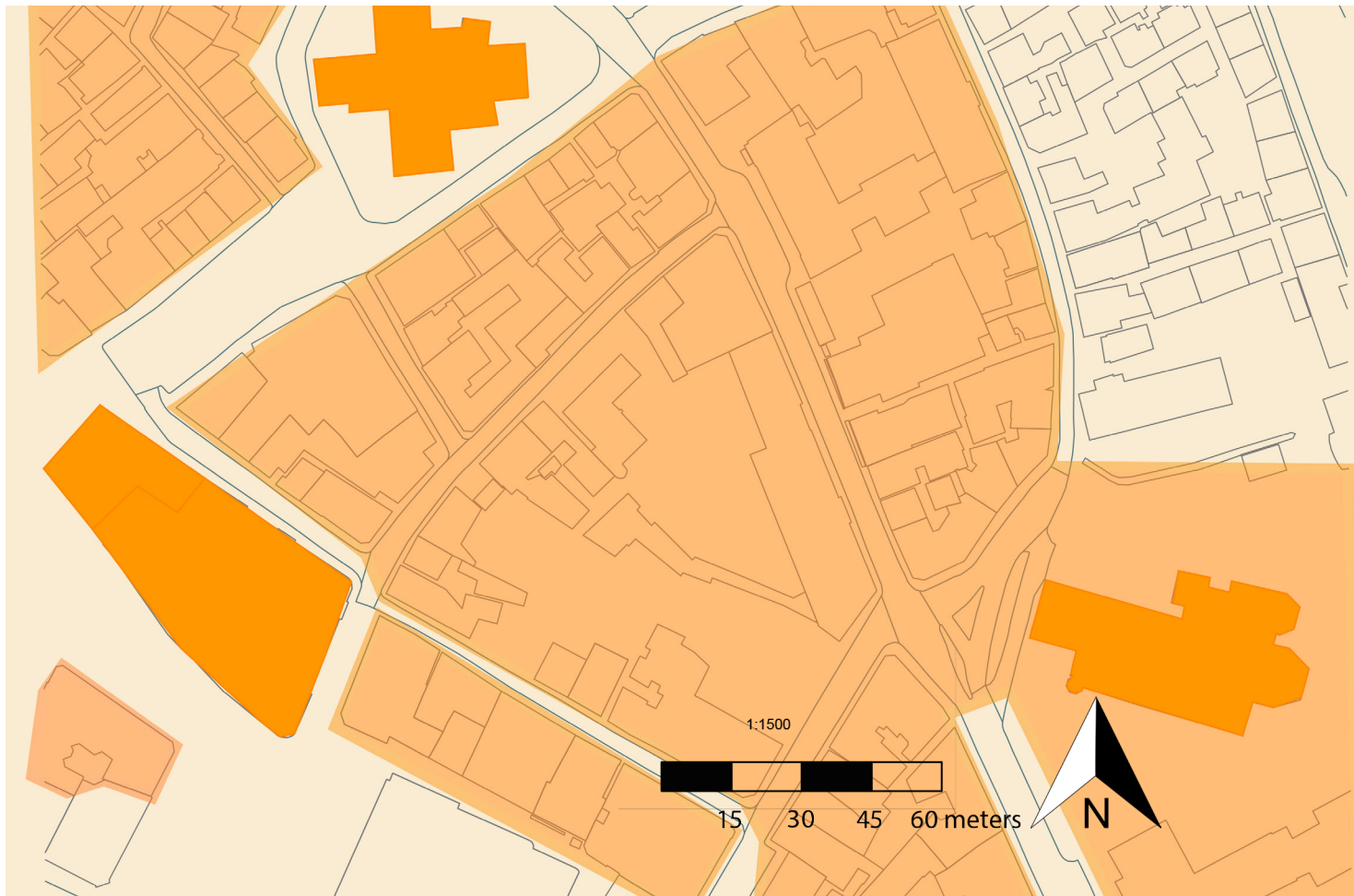


Figure 4.6: Adapted map from Norgedigitalt

PROTECTIVE AND LISTED MONUMENTS

According to Riksantikvaren protective monuments is formally protected by the cultural heritage law (kulturminneloven). These places and buildings is not changeable unless it is approved from the authorities. It can either be automatically protected or decisions listed (Riksantikvaren). Listed or conservation worthy buildings is both the same. They are not formally protected through the cultural heritage law but is by judgement from a culture historical viewpoint been examined as worthy. Either worthy because of national-, regional- or local value. It is therefore encouraged to keep and further maintain these if owning a monument (Riksantikvaren).

In the zoning plan to Bergen municipality, the buildings Domkirken, korskirken and Banco rotto is protected (geodata 2013). The two churches date back to the medieval and banco rotto is from the new renaissance (Museum 1991). In Vågsbunnen almost the whole area is Listed or conservation worthy, the city ground in the area is also protected. Certain requests and premises is stated in The zoning plan to Bergen Municipality, when further building is being planned. The main statement is; a listed area must be carefully considered according to its cultural historical values before changing, renewing a street, area or buildings (geodata 2013).

There are also other factors that needs to be considered, amendments that can change the groundwater, digging in the ground, new buildings that does not harmonise with the existing, and changes that disturbs sightlines to the sea (geodata 2013).

Sun & Shadow analysis

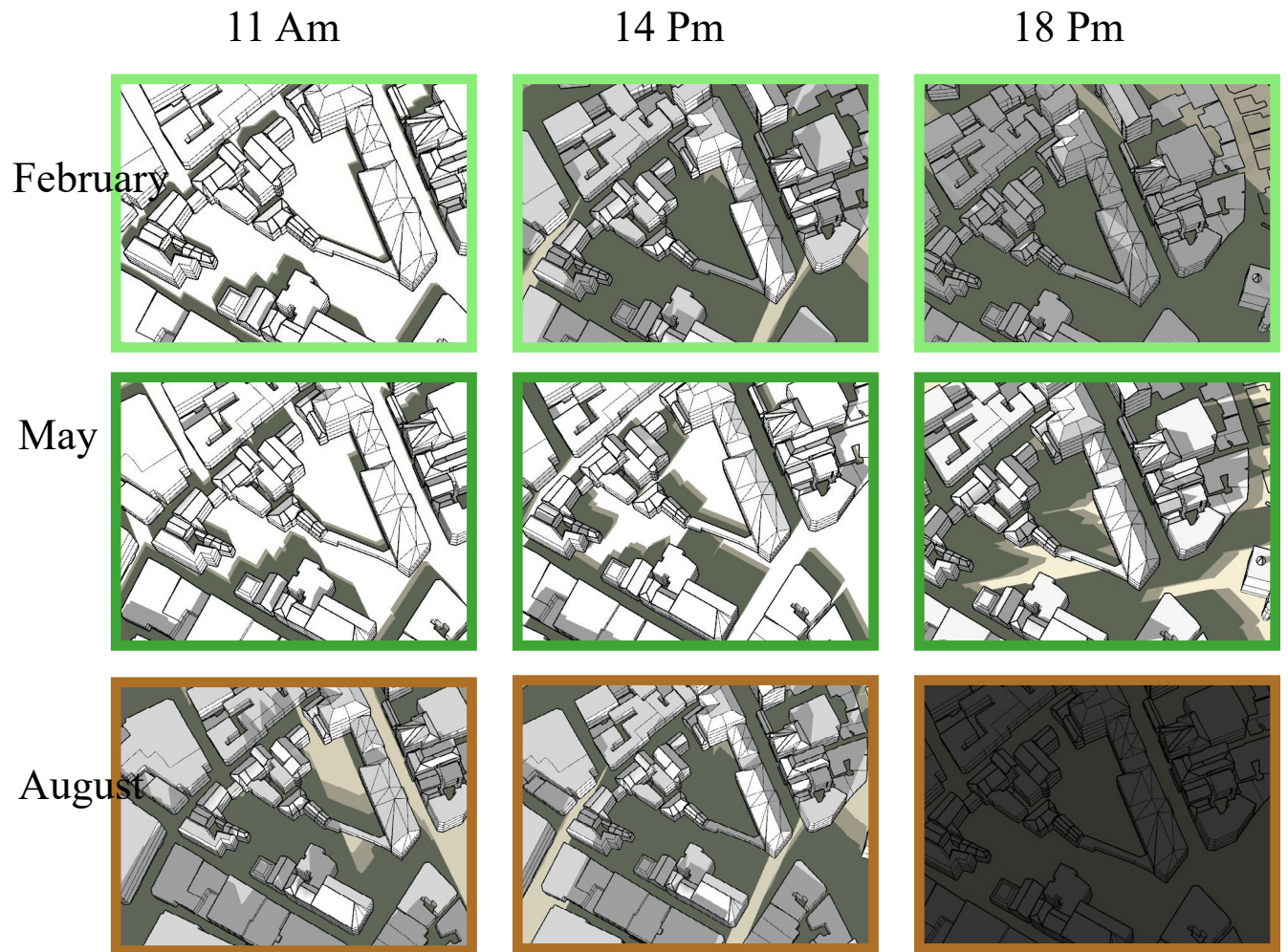


Figure 4.7: Adapted map from Norgedigitalt

The model shows sun and shadow for the months February, May and August at different times during the day; 11 Am, 14 Pm and 18 Pm. Because of the high buildings of 5- 6 floors from the street østre skostredet, the backyard has some areas of shadow. The areas is best in the morning and daytime before 18 pm. Eventhough the model shows little sun exposure in the evening, it is still possible to feel some daylight present. The most fortunate places for sun is in the above corner facing south.

Livability analysis

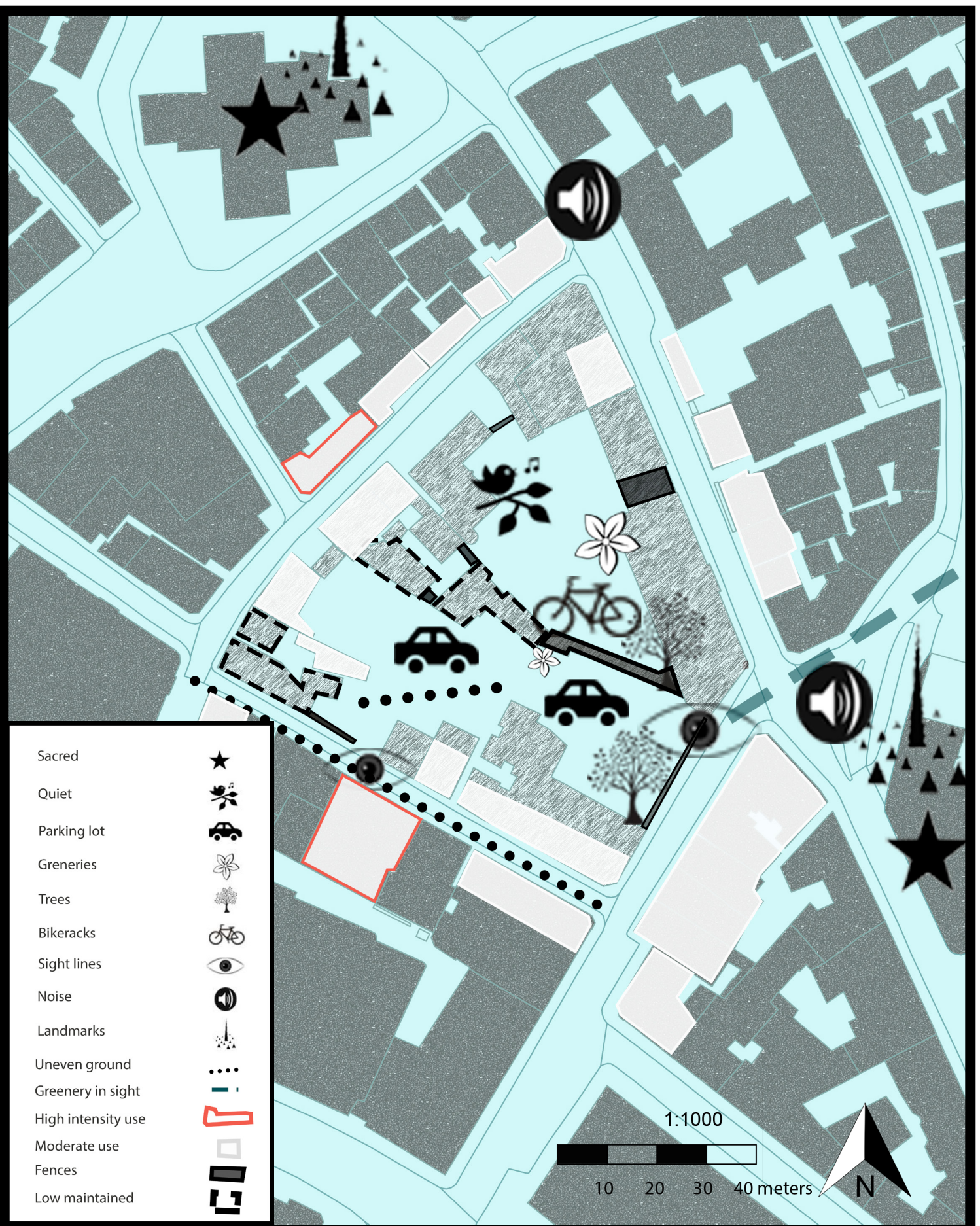
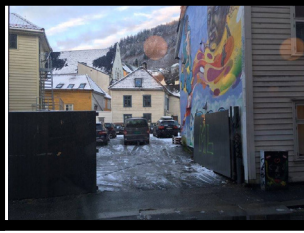


Figure 4.8: Adapted map from Norgedigitalt

Walls and fences surrounding the backyard



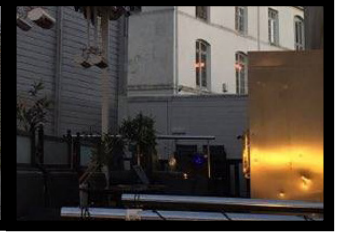
Picture: 4.33: Edal, M. 2017



Picture: 4.34



Picture: 4.35



Picture: 4.36

High intensity use of certain buildings



Picture: 4.37



Picture: 4.38

The livability analysis shows the many different characteristics about a place; areas of use or not in use, areas of maintained and unmaintained and qualities worth keeping. In Skostredet there are many elements and things going on. The buildings that are marked with white, are of high intensity use; where people go frequently. The buildings marked with red, are buildings of the highest use of them all. In this case, it is two cafés; Folk & røvere and The literature house which is popular. The buildings marked with black stippled lines, are buildings that are uninhabited or unmaintained. The black lines going either through the building or in-between, are fences and walls. The dotted lines show uneven and unmaintained groundcover. And the eyes show clear sightlines to distinguishing places, like for example the mountain called "Fløyen".

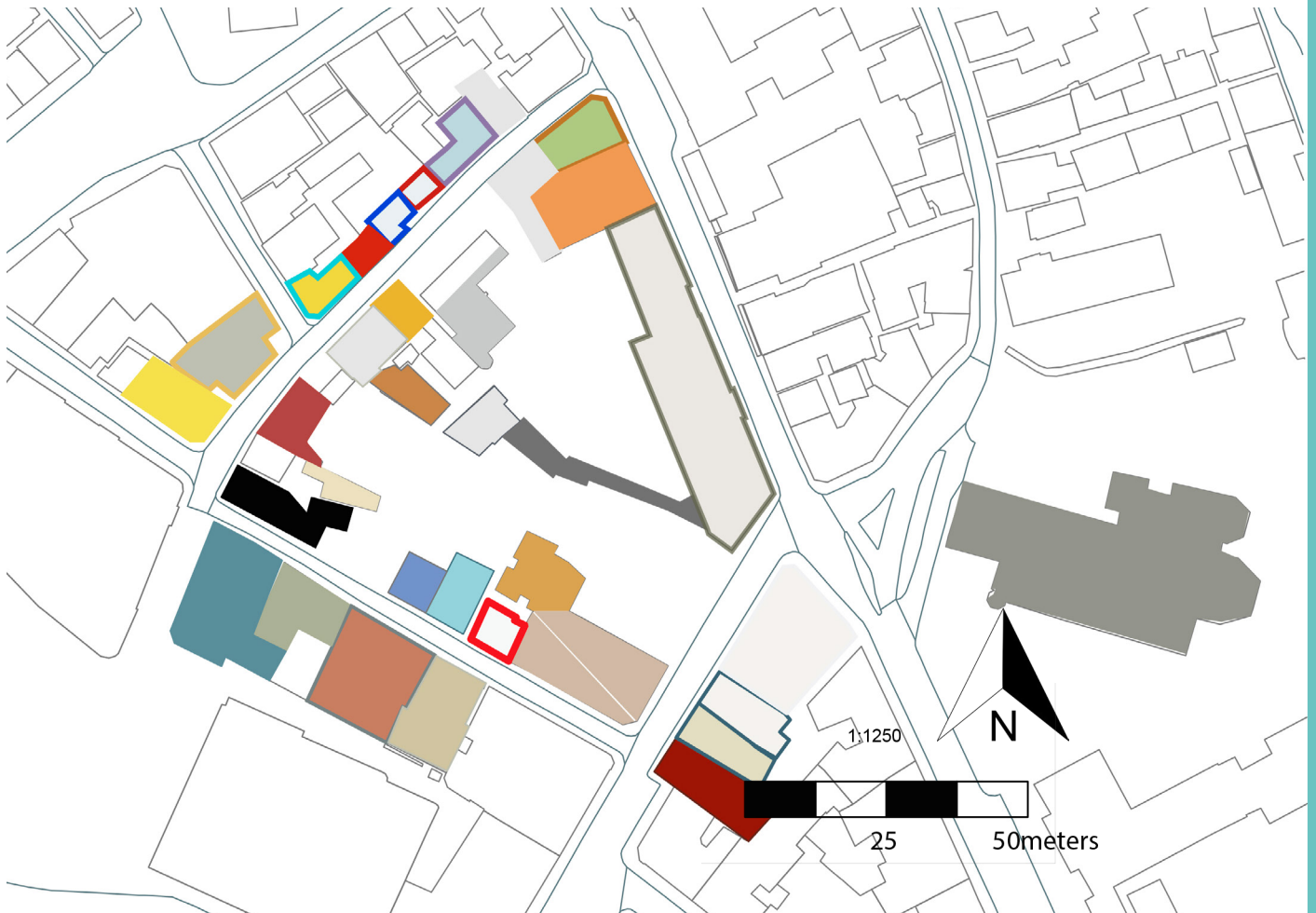
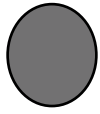


Figure 4.9: Adapted map from Norgedigital

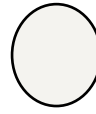
In Skostredet it is a good mixture of colours in many of the streets. It may look as if the backyard gets a range of different colours, but if we eliminate and only look inside the backyard, we can see that it is only six apparent colours from the facades; grey, blue, yellow, brown, olive grey and black. The chart shows that these colours are associated with different emotions; such as sadness from grey, hatred from black, mourning and sorrow from grey, black and brown, but also positive emotions like happiness from yellow, sense of peace from blue and the feeling of hope from the color green.

But the place is not very well maintained. And when it comes to colours, the white and also other colours are covered in dirt and is husked away, which can give rise to negative emotions (Cooper & Barnes, 1999).

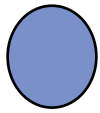
Most of the backyard are mainly covered in colours of grey, shades of white and beige/brown yellow. The saturation of the colours are low and therefore gives an optic impression of a larger place than what it really is (Mahnke, 1996). The colours of the facades mostly belongs to the cold hues, which can highlight the coldness in the existing temperature. The use of yellow/ orange is a good choice since it compensate for the wet feeling of Bergens rainy weather.



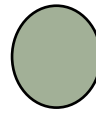
Grey is a neutral colour which according to colour psychology, is a colour associated with industry, metal and concrete. The emotional reactions is often sadness (Manhke, 1996).



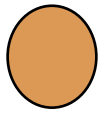
White is many things. Positively it is the symbol of light, hope, and strongly related to the state clean. But if dirty, it generates negative feelings (Mahnke, 1996). Asian people don't use white since it represent death (Cooper & Barnes, 1999). In design it can release emotions of sterile, hospital feeling, with no psychoterapeutic effects (Mahnke, 1996).



Blue is closely linked with peace and nobility, but it can also give feelings of depression, fear and coldness. But has more positive effects than negative. Light blue is often the reverse effect of relaxation (Hagen, 2015).



Green often promote feelings of calmness. But when the colour is wandering away from the balance between blue and yellow, it can be associated with mold, sickness and poison (Mahnke, 1996).



Yellow is in most cases linked to happiness and positive emotions. It stands for communication and hope. But if too strong it can give the opposite effect (Mahnke, 1996).



Black is linked to hatred and sorrow. But has also the ability to accentuate other colors. The colour represent night, grief and death (Mahnke, 1996).

Looking from a Feng Shui viewpoint, the placement of the colours could be arranged differently to create more balance between yin and yang. The arrangement of yellow/orange in the north and blue in the south might be a better solution. According to Feng shui it is wise to compensate with the opposite colour in the north and south cardinal direction (Hagen 2015). North naturally beholds blue and black, and therefore could be coloured in the opposite element, in this case orange and red. Other than that cool colours such as green, blue, violet are most favourable in public places. And warm colours in a certain balance with cold colours (Chuen, 1996).

Materials

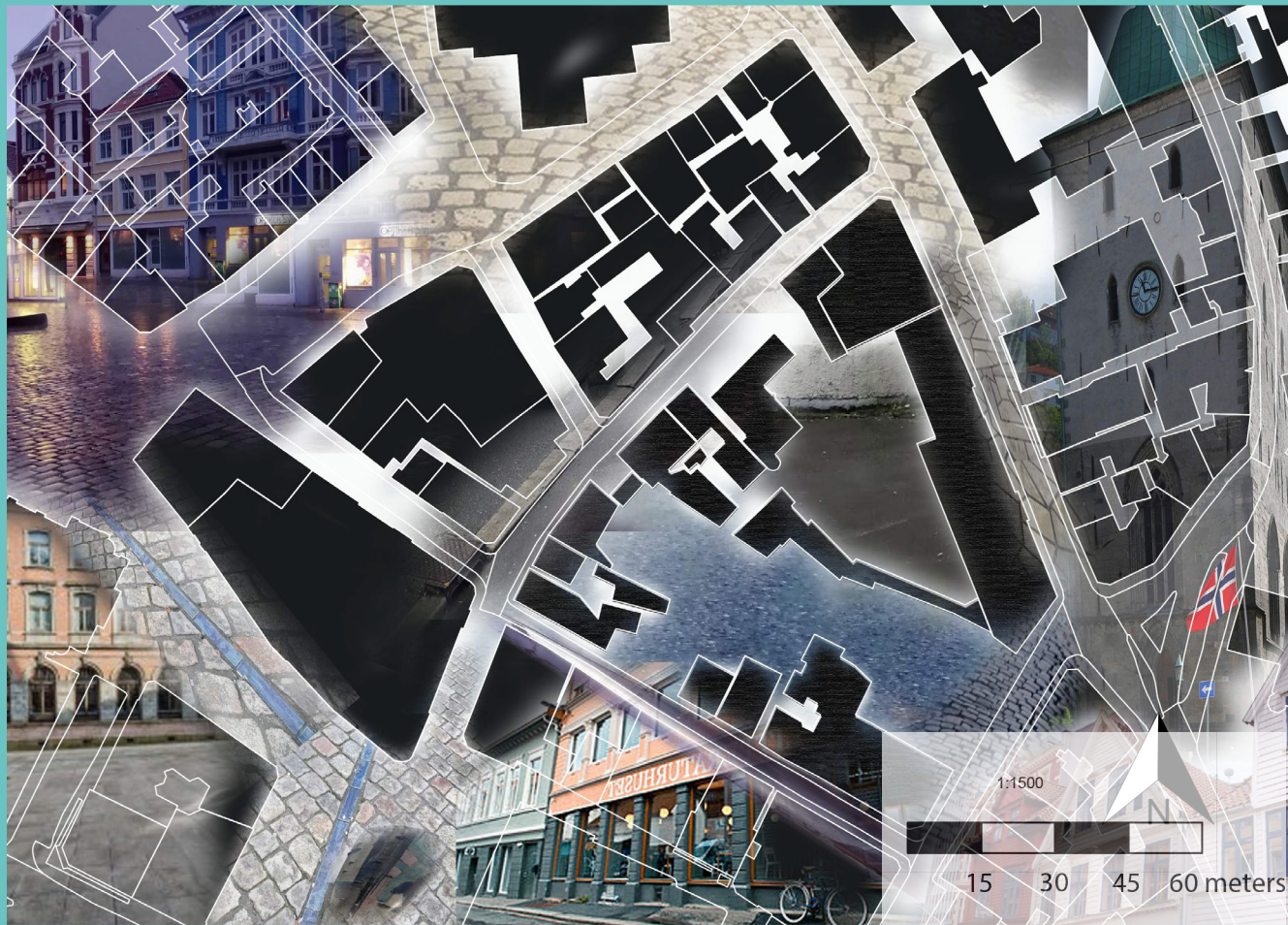


Figure 4.10: Adapted map from Norgedigitalt

Materials

In the backyard, there are many different materials, but the main dominant material is wood buildings and packed gravel/ single on the ground. There are also buildings of brick and some details of glass, stone and metal in between.

Since Bergen has mostly had buildings of wooden and brick materials throughout history, it would be beneficial to continue the tradition. Using these materials can awaken a feeling of old local history and culture and strengthen the sense of place (Kellert et al. 2011).

Materials of wood and brick is beneficial according to Feng shui, since these material belongs to yang, and are therefore more stable to prevent quick changes between warm and cold temperatures (Shen 2001).

Wooden materials with colour is also preferred more than metallic exterior since wooden surfaces invites for more details that enhance fascination and promote more wellbeing (Thurmann-Moe 2017).

On the ground, there are many materials that is of dark colour, like asphalt, when it rains in Bergen, these materials becomes more darker which in these setting adds on a the dark enclosed feeling of the place.



Picture: 4.39: Edal,M.2017



Picture: 4.41



Picture: 4.42



Picture: 4.43



Picture: 4.44



Picture: 4.45



Picture: 4.46



Picture: 4.47



Picture: 4.48



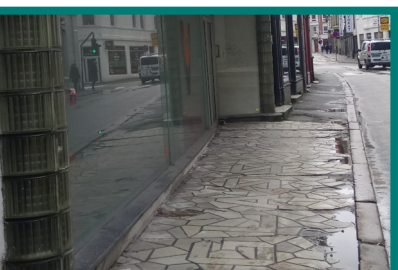
Picture: 4.49



Picture: 4.50



Picture: 4.51



Picture: 4.52



Picture: 4.53



Picture: 4.54

Shapes

In Skostredet there is variations of shapes mostly because of the different composition of the surrounding buildings. Which is good from an architecture viewpoint giving many opportunities for different settings in one area. However, from a Feng shui standpoint, the buildings could rather have a full square instead of fragmenting buildings lacking corners. Resulting in shapes of notches where negative chi can gather up. Although this may affect the people living in the houses more than people attending the place for just a temporarily visit. Still the corners marked on the map, shows corners that is not beneficial having sat chi in mind. If the corners had been pointier, the area in between the buildings would not have felt relaxing because of the negative chi. Other than that the most dominant shape is the square as the foot print of the houses, and the rectangle shape of the buildings. Some buildings are shaped and placed in a way so that the place get a characterised shape like a triangle. The area lacks more shapes that are organic or shaped as circles to achieve a balance of yin and yang.



Picture: 4.55: Edal,M.2017



Figure:4.11: Adapted map from Norgedigitalt



Picture: 4.56



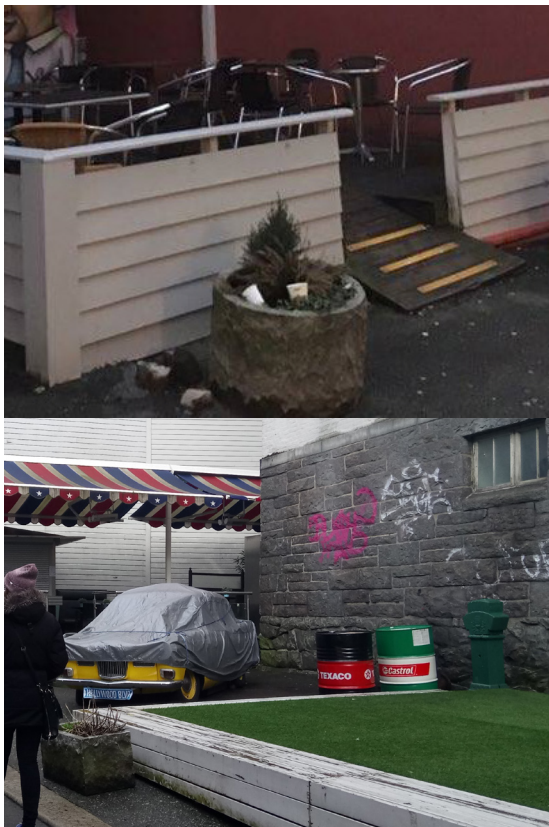
Picture: 4.57

Vegetation

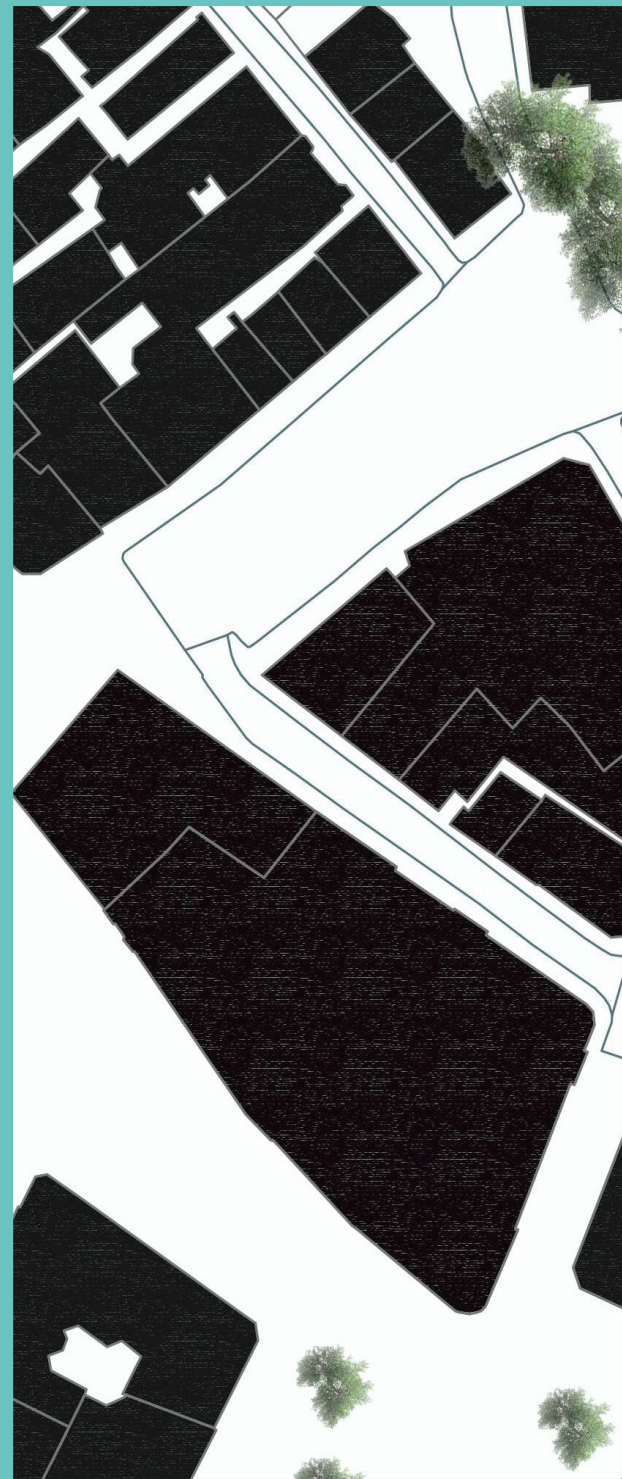
Vegetation in Skostredet

Even though the surrounding streets around the backyard is colourful in many of the facades, there are still few Plantings that stimulate the senses or any place that has rich soil ready to grow herbs from. There is some small evidence of vegetation in the backyard, like weeds and one tree that is tilting at least 45 degrees down to the ground. Together with the unmaintained houses and street cowers, the whole place gives a feeling of abandonees and therefore more negative feelings towards the area. The tree that is tilting has found its way to hang over a roof, which is according to the previous theory about Feng shui, not beneficial.

Picture: 4.58: Edal,M.2017



Picture: 4.59



Picture: 4.60



Picture: 4.61



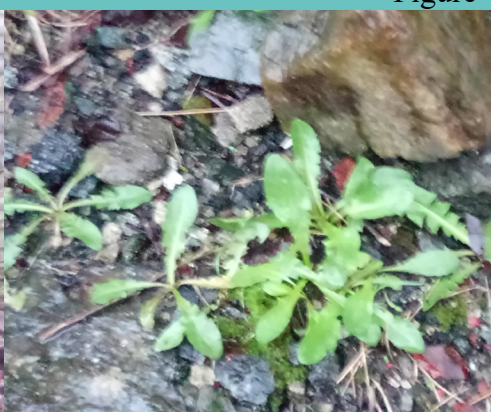
Picture: 4.62



Figure 4.12: Adapted map from Norgedigitalt



Picture: 4.63



Picture: 4.64
Picture: 4.65

Design goals in the Backyard

A garden in harmony and

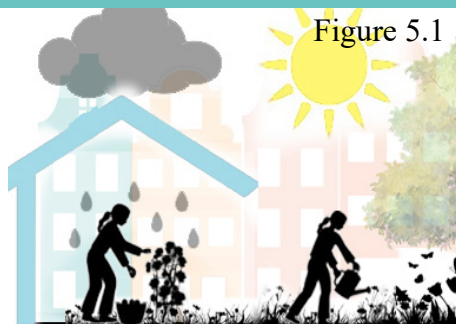


Figure 5.1

Adjust the backyard to different seasons and weathers



Figure 5.2

Design for gardening and vegetation



Figure 5.3

Colours on the facades, ground and exterior



d balance

*A place for all
the senses:*

Smell

Vision

sound

taste

scent

Adapted Picture: 5.1

Figure 5.4



A place for citydwellers

Figure 5.5



Arrange for relaxing areas

Todays situation in the backyard

The street skostredet has many cafès and stores popular of use. Østre skostredet also has one cafè; the literaturehouse.

The wall is blocking people from movement and is making the area more smaller than necessary. the flow of chi is also not fortunate with this placement.

The west part of the bakyard, is at the moment occupied by carparking of workers and recidents.

The whole are is listed despite its unmaintained impression of buildings and groundcover. an upgrade of the area is needed.

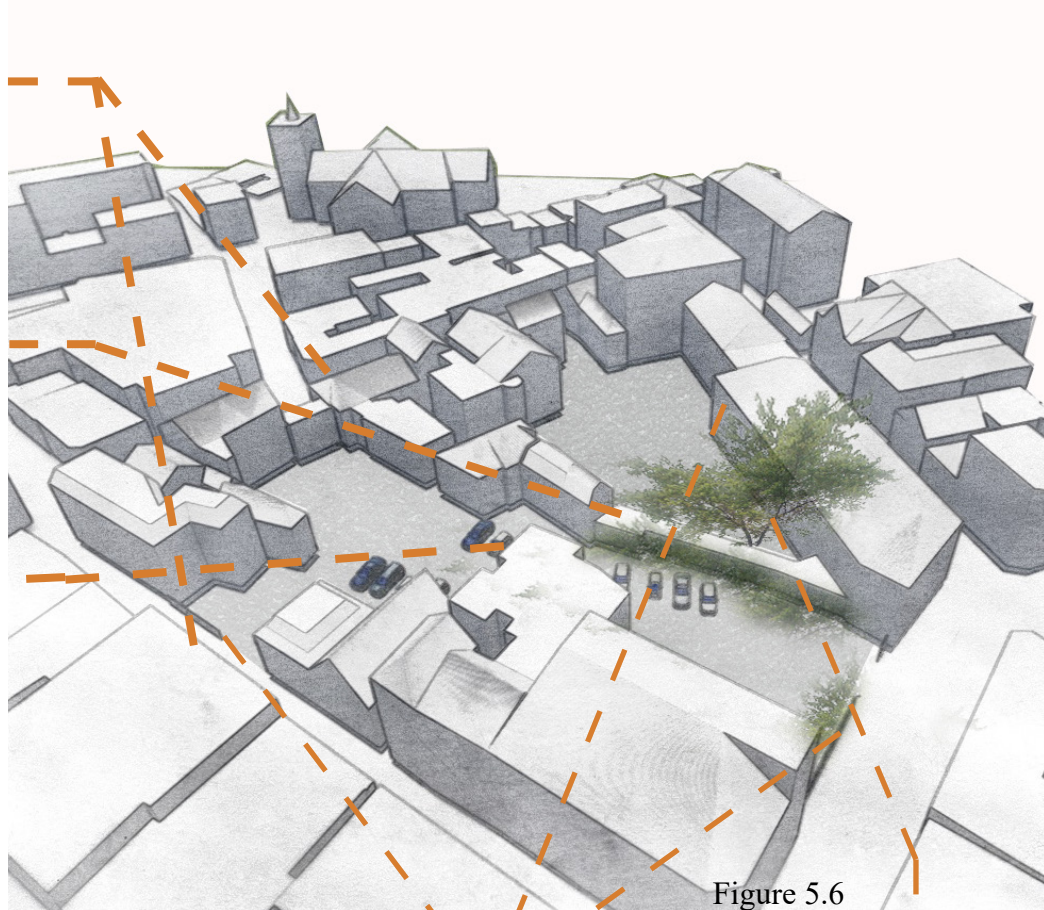


Figure 5.6

The area is a mix of stores, offices and recidents. A quiet area despite its location in the city centre.

The street sorrounding the backyard is mostly used by pedestrians. Only the the street Kong Oskars gate, is used for one way traffic system.

The backyard has 3 fences. per day the backyard is closed for entrance in the nighttime but open for passersby from morning to at least 18 pm.

It is one tree that is tilting and hanging over a fence and a house. There are some shrubs near the fences but the rest is all covered in asphalt and gravel.

Problems



Figure 5.7

Uneven groundcovers and unmaintained buildings



Figure 5.8

Some entrances closed off



Figure 5.9

Many cars parked in the half of the backyard

General Strategies in the backyard

Remove the wall in the middle, make the terrain even and fill the missing corners, for a better flow of energy, chi and a more coherent structure.

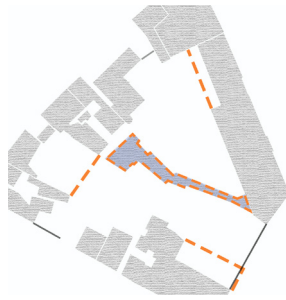


Figure 5.10

Make room for a garden of sensory stimuli through water and greenery.

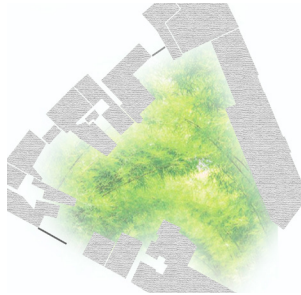


Figure 5.11

Make a greenhouse in at least one area in the backyard. Open for plants and people in the wintertime.

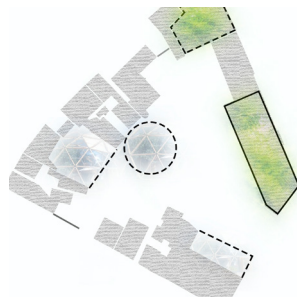


Figure 5.12

Adjust trees too close to buildings. Make the entrances more wider and allow entrance through stores and cafés during daytime.

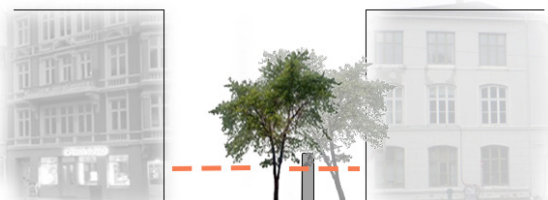
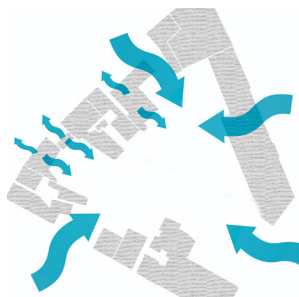


Figure 5.13

Make the facades and the exterior like benches, texture and sculptures more colourful so that the area always have sensory stimuli in all seasons. Place colours according to the five element theory.

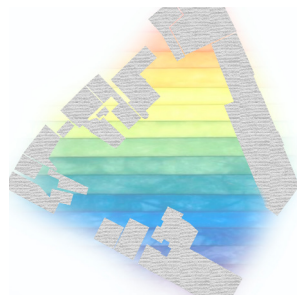


Figure 5.14

Improve the lighting in the backyard.

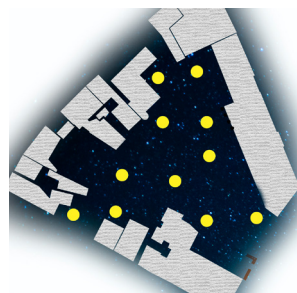


Figure 5.15

Design components in the Backyard



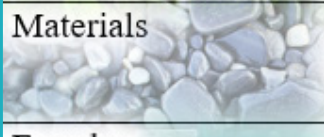



	Healing Garden	Colour psychology	Feng shui
Plants 	Stimulating the senses	The green colour most nutritious	Evergreen, blooming each season, avoid climbing plants
Trees 	Open, well maintained, many trees= high rates	The green colour most nutritious	Away from the buildings
Materials 	Gravel, grass, pebble stone, single grass, bark, natural materials	Avoid concrete, metal, glass, use colours that mute down the effect.	Avoid gravel. Use stepping stones.
Facades 	Biophilic design, Green roofs and walls	Colours harmonising with the surroundings, avoid black, white and grey	Yin: metal, sandstone, stone, cement = fluctuating warm and cold Yang: wood, brick, clay = colder but stable
Shapes 	Curvy, organic	Amplify or mute down shapes through colours	Squares, circles in buildings. Shapes per the five elements
Colours 	Calming, blue, green Stimulating; orange, red, yellow	Affects all our senses. Calming, happy, stimulating colours	Colours after the five elements and the cardinal elements

Figure 5.16: Design overview




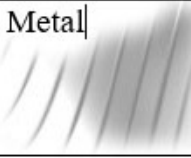






	Tree 	Fire 	Earth 	Metal 	Water 
season	Spring	Summer	transition	autumn	Winter
colour	Green,	Red, orange, pink, purple, light blue	Brown, yellow, orange	White, metallic	Blue, black, turquoise
Shape					
Cardinal direction	east	South	South West North east	West	North

Figure 5.17: Adapted by Hentchel&Hagen

Feng shui- Design components

Shapes:

As described earlier at page 38, to achieve harmony in a place, the five elements need to be balanced. In the backyard the creative /supportive cycle is being used to place shapes and colours suitable to the cardinal directions. For example, The tree element either in its place or in the south to support and nurture south/fire and the water element used in the south to calm down the fire element.

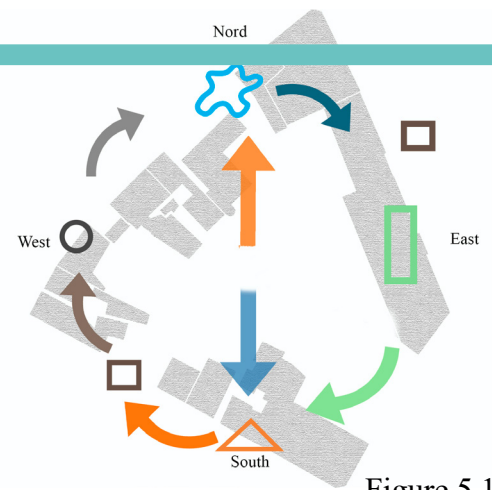


Figure 5.18

Colours:

The colours of the flowers will try to follow the creative cycle, to balance the backyard. where for example flowers of white will support the metal element in west, and green shrubs and green plants will support the east cardinal direction of the backyard.

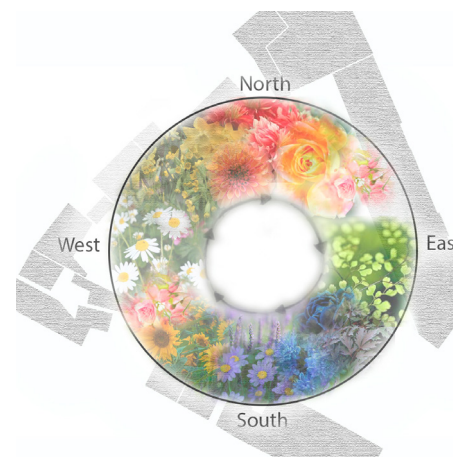


Figure 5.19

The garden will be divided in to zones in terms to the 5 element theory like shown above. The zones shows which element that will be visible through either colour, shape and resembling features through plants and objects. For instance in east colours of green and tall images of a rectangle will be used, like tall cypresses or a pergola and a number of green plants. In south the water element will influence with everything that can imitate the wavy movement of water, like round pebble stones, gravel and irregular soft shaped plants (Hentschel, 2006).

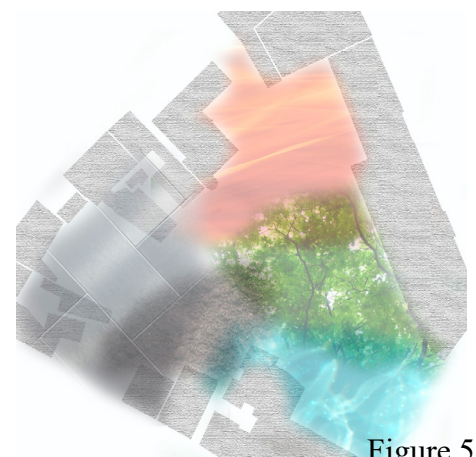


Figure 5.20

The plants and shrubs will also be used to mute down sharp corners and replace the lacking corners and space in a building. In this way lighten up the building lines and to make chi flow more gently though the backyard. The water will also flow gently through the area from west to east as preferable in Feng shui.

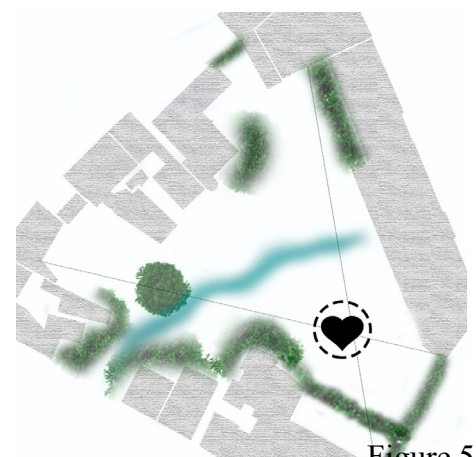


Figure 5.21

Sensory garden -Design components

The opportunity to both be in the shadow and the sun. A variety of seatings.

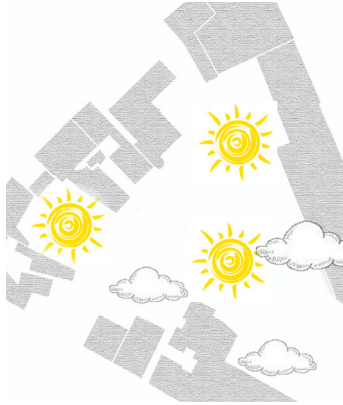


Figure 5.22

Zoning:

The zones marked with blue, is the calm zone. The orange is the active zone where social interaction through gardening, café and stores will happen. The zones marked with green are semizones a mixture of calmness and activity.

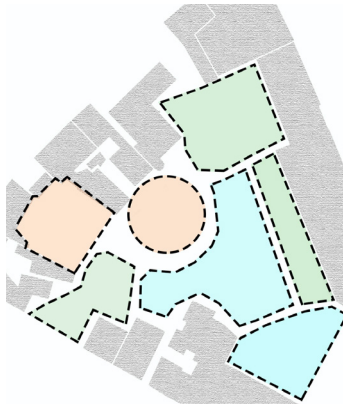


Figure 5.23

Cultural and personal references:

The opportunity to be engaged in the backyard through gardening or activity. A feeling of belonging to the backyard.

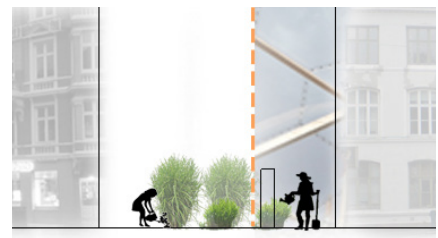
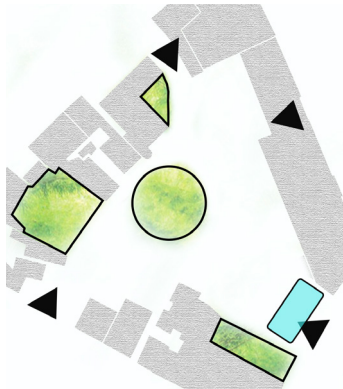


Figure 5.24

Paving cover:

The materials on the ground has three zones. In North east stepping stones will dominate, in south, gravel will appear the most, in west pebble stones will be most visible. But all the material will be used across the zones in smaller amounts. The blue mosaic will be the glue between the zones. And grass will be used on all the zones in-between.

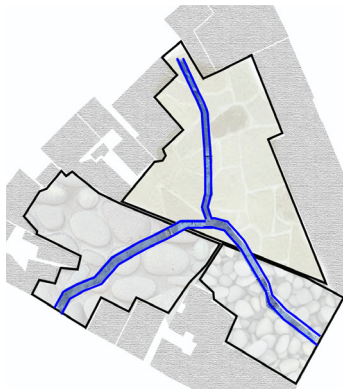


Figure 5.25

Colour -Design components

The two entrances to the backyard, will be covered in different colours and lights. In the aim to draw attention and attract people to come in. The entrance in north comes from the already colourful and active street called "skostredet". Therefore the entrance will have similar colours to make a gentle transition into the backyard.

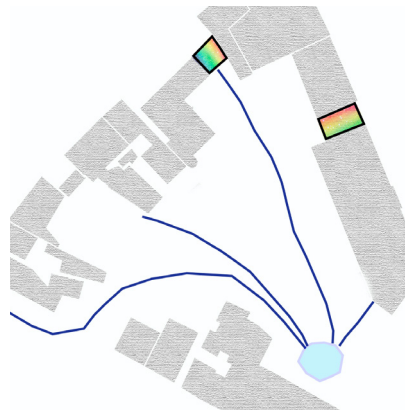


Figure 5.26

The backyard will be filled with evergreen of mainly bamboo and rhododendron. Making sure that there will always be some strong visible colours from the vegetation in all seasons. The evergreens will be spread over the whole area, but will have some main zones where it will be highly visible and dense. The circle in south shows a field of flowers and grass, that also will have visual characteristics in the wintertime.



Figure 5.27

Colour mood zones:

The main colours that will dominate on the facades, are colours of green, blue, orange and yellow. Green is a colour close to nature that as mentioned before is one of the most restful colours. The orange-yellow will initiate happy moods. The orange and warm colours are also meant to heighten the feeling of warmer temperatures but also the feeling of dryness. The colours will also be similar to the surrounding colours of the area.

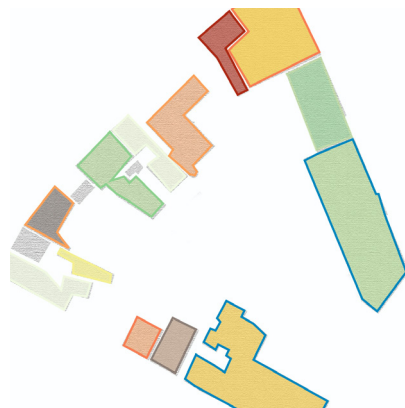


Figure 5.28

Illustration plan



Figure 5.29

- 1 The main entrance: Is lush of vegetation with a sightline to the dome, in the aim to draw people into the backyard. The blue ribbon of mosaic is also leading on from the previous streets into the backyard.
- 2 The Gardening area: is for digging in the soil and doing gardening as a social interaction. This area also has an extra greenhouse for indoor gardening in winter-time and rainy days.
- 3 Bike racks: For people either living there or people visiting the area by bike.
- 4 The empty space in front of the dome, is meant for outdoor café and/or moveable chairs and tables. In summer time the dome can also open up, and be used for small concerts or entertainment.

Pergola tunnel: entrance with colourful lighting 5
in the eveningtime.

Herb bed: raised bed with an angle of 45 de- 6
grees for better use of area.

Raised bed: evergreen in the middle and pere- 7
nials in the edge. Colourful flowers in orange,
red and yellow.

Pergola with sitting hammock for hotelguests 8
Stream running towards the water in south east.
seperating togheter with the plantings and trees.
Each tree has sitting hammocks available for
everyone to use.

Bamboo bath: a path of bamboos with windc- 9
himes and bark awakens the senses and gives
and extra dimension to the feeling of beeing in

The heart of fortunate energy: the meadow of 10
straws, perinials and lightings. Giving the area
a visual characteristic in all seasons.

The water pond: collecting water from the 11
stream and the roof gutters. But also marking
cultural and historical references; the for-
mer quayline that once ended here. The blue
ribbon of mosaic is also symbol of the former
water that covered the area.

The vertical glasshouse: is added to complete 12
the original building from a Feng shui stand-
point. Also give extra area to grow food indoor
and be exposed to natural light. The firstfloor
can be used for arranged exercise like yoga,
mediation and chi qong

The dome: is added to give an illusion of being 13
outside when the seasons and the weather does
not allow to spend time outdoor. In the dome it
is possible to learn how to grow food, eat food,
and attend cultural activities. Around the dome,
it will be seating areas and vegetation.

The Facades where there are no windows, will 14
be covered in green walls or climbing plants.
And the fences sorrounding the area will also
have climbing plants.



Picture 5.2: just
imagine, no year



Picture 5.3: Vienna
- Now forever, no
year



Picture 5.4: Da-
leys, no year



Picture 5.5:
Odoulf, P. 2013



Picture 5.6: Weh-
berg, B. no year



Picture 5.7: Steed,
J.H, 2008



Picture 5.8: dome of
vision, no year



Picture 5.9: Siegel,
2016

Plant illustration plan

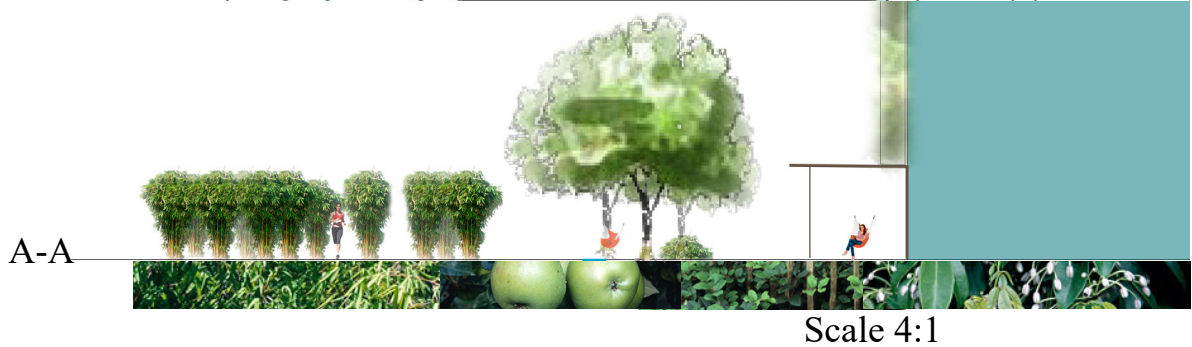


Figure 5.31



Figure 5.32

Perenials

Lamb's ear



Picture 5.10

Allium g.



Picture 5.11

Trees

Apple tree



Picture 5.16

Evergreen shrubs

Mahonia



Picture 5.19

Chrysanthemum



Picture 5.12

Hosta R.



Picture 5.13

Magnolia



Picture 5.17

Bamboo



Picture 5.20

Dahlia



Picture 5.14

Mountain hax



Picture 5.15

Cherry tree



Picture 5.18

Salal



Picture 5.21

Key- Materials



Picture 5.22



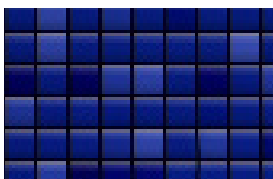
Picture 5.23



Picture 5.24



Picture 5.25



Picture 5.26



Picture 5.27



Picture 5.28

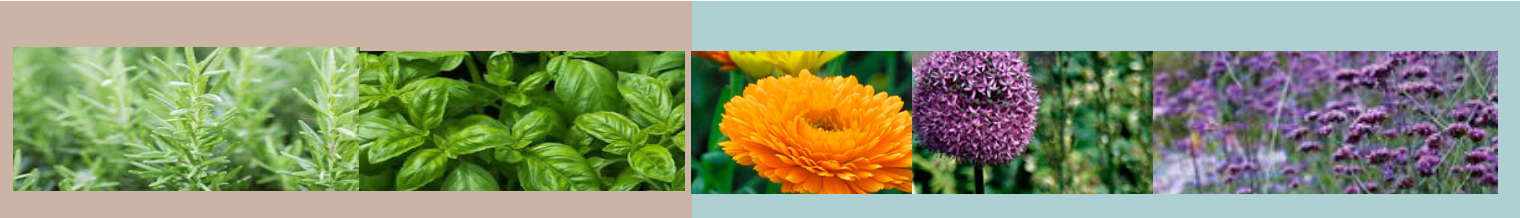


Picture 5.29

Selected facade colours



Figure 5.33



Picture: 5.30

Picture: 5.31

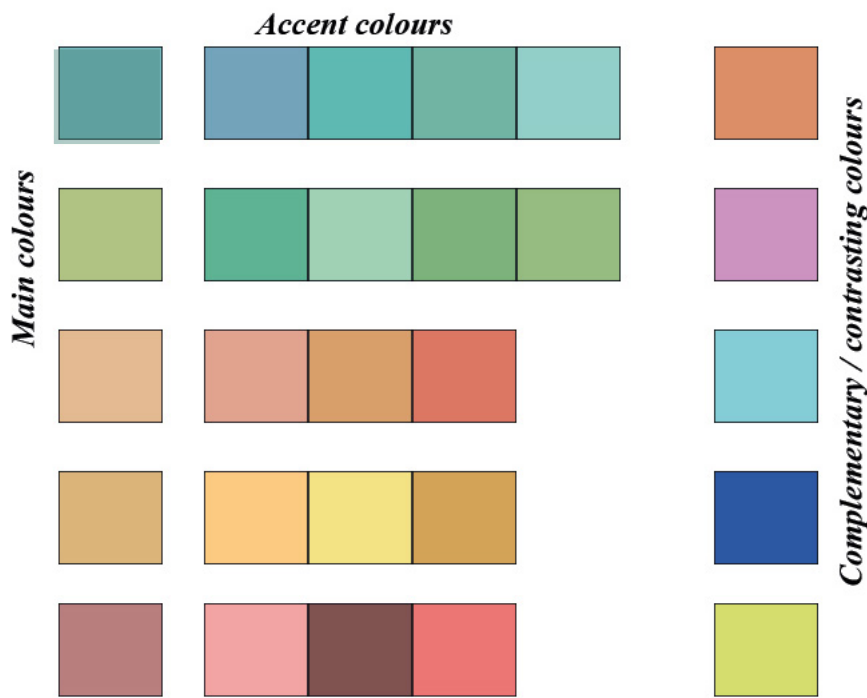
Picture: 5.32

Picture 5.34

Picture 5.35



Colour palette



The main colours on the left side of the colour palette are colours painted on the facades and big surfaces. The main colours has mostly been chosen through the similiarity of the adajacent facades and based by the creative cycle in Feng Shui. These colours are all choosen with the same hue; pastel to achieve harmony and balance. The aim of the specific colours is to create emotions of calmnes, happiness and hope. allover wellbeing. The accent colours is choosen with similiarity to the main colours, to increase the depth and fe-eling of extent in the place. To break the harmony contrasting colours is exeperienced through small detatailing in plants and ornaments.

Figure 5.34



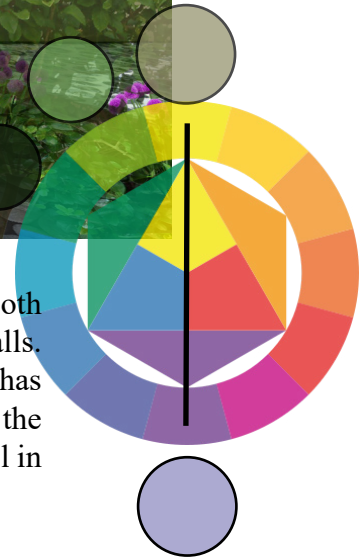
The color corner

In the area in north, Colours close to the rectangle combination has been used. The warm colours of orange has been accentuated to give more warmth to the area according to the Feng shui principles. Since in north it should be a variation of colours to compensate for the existing coolnes of North. Accent colours close to the main colours, has also been used inbetween to give more colourvariation but also depth to the area.



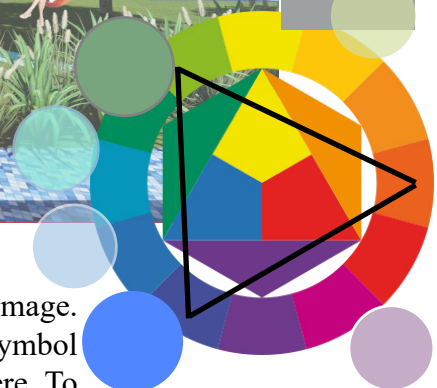
The gardening area

In the gardening area and around, the green colours are in the spotlight, both from the green house as well as from the coverage on the ground and the walls. To give some extra colours, yellow and the complementary colour violet has been used to give some liveness but yet dimmed to highlight and focus on the purpose of the place; growing. Yellow also symbolises hope which suits well in to the hope and the extra light, plants need to be able to grow.



The hotel view

Is following the triadic combination which gives a lively and energetic image. With the colours of green naturally from the vegetation and blue as a symbol of the ocean that once were. The two colours gives a calming atmosphere. To break the dullness, the seating furniture is covered in orange to make a contrast.





The quay entrance

In the south marks the former quay line with sea colors in blue and green. The fence is the same colour and style as the fence around the Ludvig Holberg statue (picture 4.49), situated near the today`s quayline. To make a contrast and give attention to the entrance, the pavement has a cover of orange red terra cotta tiles. The main paving materials has all a tone of orange/red in it, to add an extra feeling of warmth, especially on cold, rainy days. In the south, the buildings also has a colour of blue/ green pastel, hoping that the place will look optical bigger than what it is in reality.

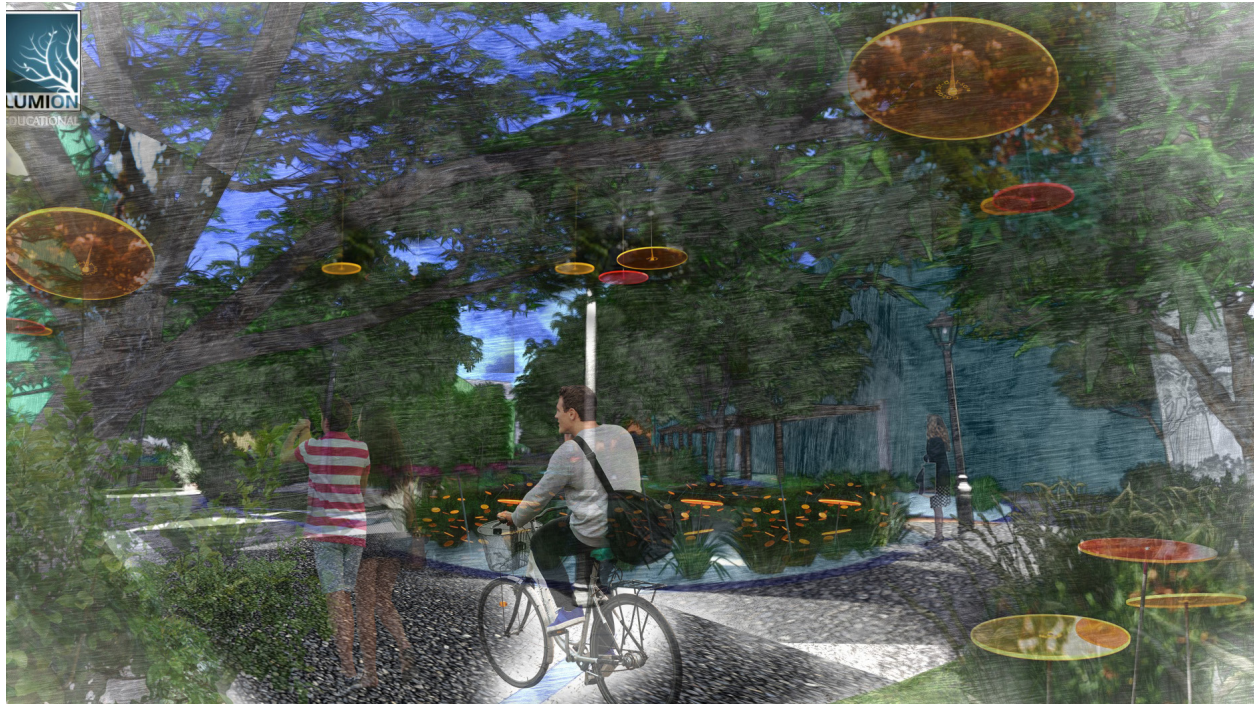




"The bamboo bath"- Is patch in the middle of the oasis, which is intended to awaken the senses. It is assisted with windchimes and a roof protecting against rain and snow. Imagine: -exploring something new- walking through the "jungle" of bamboo on bark that feels uneven and smells like wood in the rain, - curious of where the path might lead - hearing the windchimes play music after the wind - hearing the drum of the rain on the thin translucent roof- seeing the leaves blow in the wind - All of a sudden in a different "world" in the backyard.



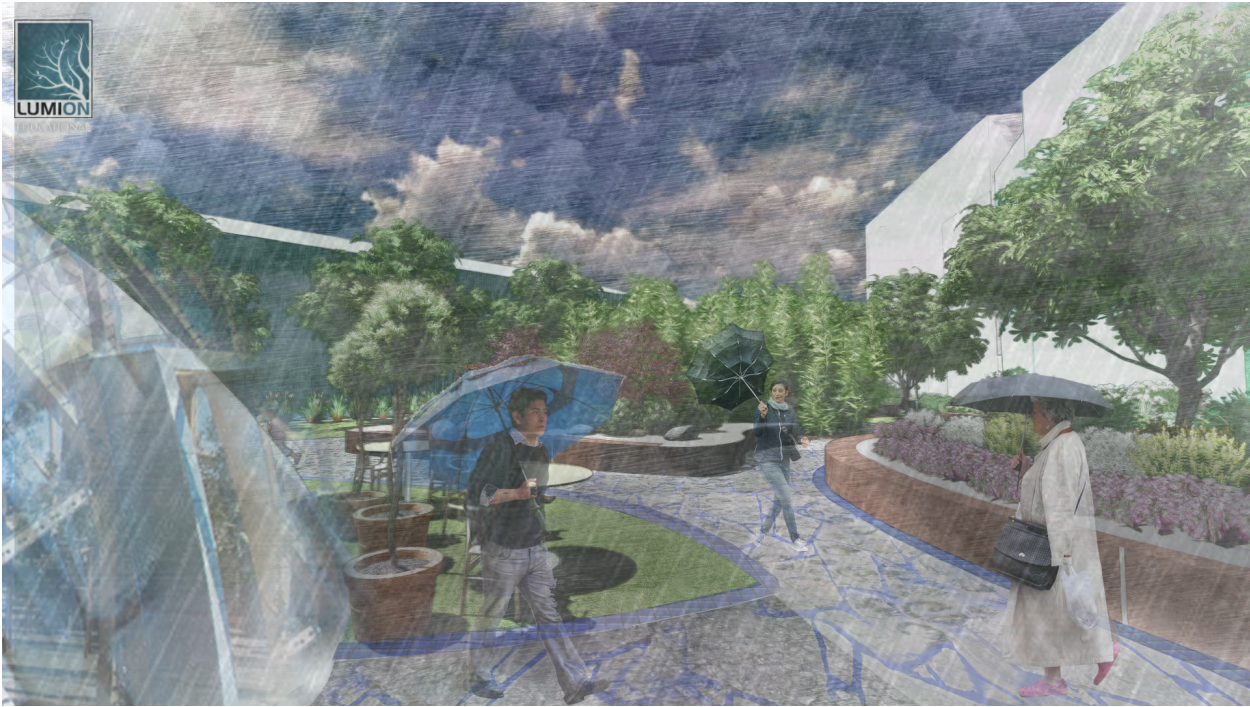
The gardening area- Is covered by paving of grass reinforcement blocks to make the area seem as vegetated as possible but also to soak up run off water. The blue ribbon leading into the key hole bed in the middle, also carries water from the phragmites. To either lead the run off water down in the key hole bed or further down towards the waterpond in the south. The key hole bed is for growing vegetables and herbs and the raised bed can for example be used to grow edible flowers and plants. All of the edible plants can for instance be used in the restaurant or the ice cream shop. The whole idea would be to let the organic stores and the restaurant to maintain and assist the area. Inviting people to come over to either do gardening, eat organic ice cream or organic food from the restaurant.



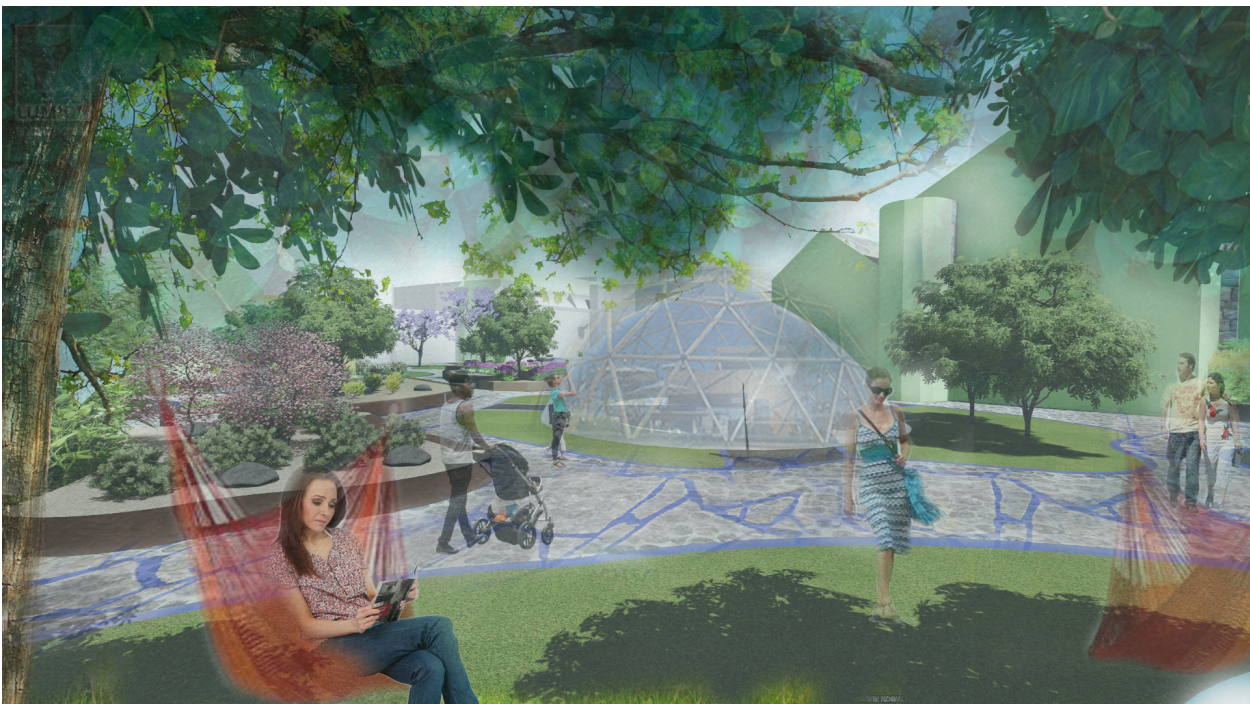
The illustration shows the very south of the oasis, where the water pond will be situated. Most likely filled with gold fishes. You can either go over the bridge or around to either the hotel side, or further along the glassbuilding. In night time the red and orange circles will lit up the area into a colourfull experience.



The illustration shows the North part of the backyard. Viewing the tilted herb flowerbed- allowing the herbs to be exposed to more sun and avoid the cold ground. The path covered in terra cotta tiles is leading towards the dome glass building in the middle.



The glassdome is visible from both the entrance in west as well as the two entrances in north and east. Most likely attracting people to enter the backyard, especially on rainy and cold days. Inspired by the dome of vision in Copenhagen, the dome can be used as a café, cultural activities and meetings. And of course filled with some exotic plants.



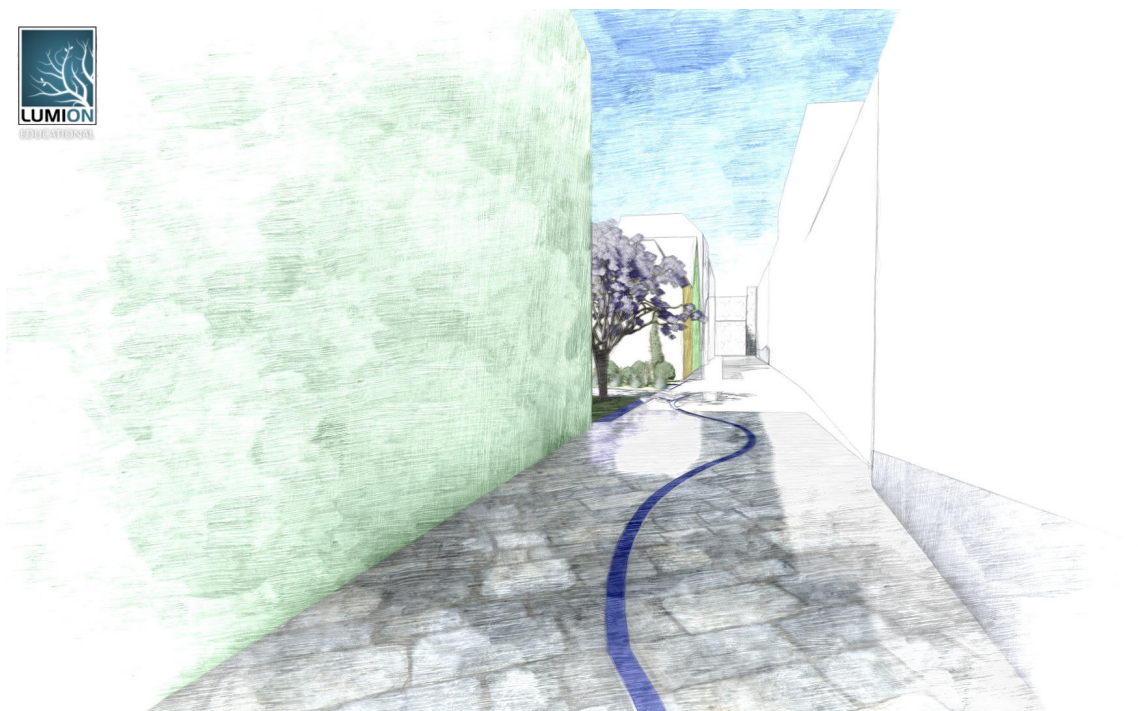
On sunny days, the hammocks in the trees can be used for people who seek shadow and some alone time.



The water pond seen in daylight.



The entrance in west- seen from one of the main streets from the literature house.



The "blue ribbon" is leading us in through the narrow street called Østre Skostredet.



Discussion

In this part I will describe for which reason I have chosen to create an oasis in the backyard. In addition, why I have chosen the design moves in the backyard up against the principles and theories to the different fields. With a focus on the key elements from the design overview at page 90; plants, trees, materials, façades, shapes and colours.

The backyard is as mentioned previously, a listed place as most of the surrounding areas. There is also a dualism of wishes for the area; where on one side the street structure and buildings are wished to be maintained, but on the other side a request to develop the area into something different. Therefore, I have tried to negotiate between these wishes and at the same time tried to bring in something positive and different to the area. In the cultural heritage law, there is a wish to maintain the identity of the place, which is a good and valid thought considering Bergen is well preserved in most areas. But looking back to the history; one of the bishops in the area Vågbunnen, had a park near Skostredet where he ordered in new exotic plants to bring something different into Bergen. This park as previous mentioned is considered to be one of the finest parks during those times. The park does not exist today anymore, but bringing back something old but at the same time something new, can be a great way to give memory to what once was in the area.

Now the section will proceed to explore the different designelements:

Plants:

In the design proposal, I tried to fulfil the standards of both Sensory garden literature and Feng shui regarding plants. Both the different literatures, are interested in stimulating the senses, but in Feng shui there should be a border between edible plants and ornamental plants. In sensory garden, the taste is an important component of a garden. So, I therefore made zones for gardening and edible plants, and zones for ornamental plants with an emphasis to stimulate the 4 other senses. I could have designed a full garden of all edible plants and designed it just for gardening but it would then exclude other people that might just want to sit down and enjoy the garden alone. And with more edible food and harvesting, the backyard would probably have to be closed in the evening to avoid potential stealing or vandalism. The largest zone for gardening is in its own corner attached to a greenhouse/glasshouse where plants can be carried in for the evening in wintertime. And because of the outline of the buildings, it is a possibility to close off the gardening area for the evening with a grind if necessary. But still leaving the rest of the backyard open for passage in the evening.

Speaking of safety in the evening; most of the backyard is filled with as much vegetation as possible without losing sight of paths and views. However, the “bamboo bath” might be seen as uncomfortable to enter during night time and evening. While it will be lit up by lights and tried to be pruned regularly, I can understand if some people might choose to walk on the main paths to feel more safe. However, the “bamboo bath” can for many still be a positive sensory experience in the daytime and is also been used in several of other sensory gardens where it works well.

Trees: when choosing tree types, I have tried to choose trees that is acknowledged as preferred trees among most people. Therefore, I placed trees with spreading branches like cherry trees, magnolia and apple trees. I could have chosen pine trees that is valued as a healing tree in Feng shui. It would also be convenient to have evergreen trees to bring in more colours in winter time, but pine trees can be quite big and might not fit in to the size of the backyard. Besides pine trees gives a certain atmosphere that can give strong associations to forests which Bergen already has enough of around the city. I also wanted to create a place where people can experience different seasons through the vision of the trees; autumn leaves, springs blooming and the summers fruit.

Materials:

Even though the seasons change and the colour of the plants may faint, the colour of the materials is almost always present. To create a sensory experience, I tried to use a variety of paving to stimulate the tactile sense as well as the vision. I used eight different paving's including grass. The key material was stepping stone which gives an irregular and natural feel to the backyard. It might not be easy to run over if using a wheel chair, roller blades or if having other limitations. But according to Feng shui it will slow the flow of energy and can also slow down the walking pace to people. Which can be good when the whole point is for people to feel calm in the backyard. I also chose to have the blue ribbon in between the stepping stones to bind the different zones together visually. There were also an option to use grass in-between, but when heavy rain appears, which is often in Bergen, it might be slippery to walk on.

Facades:

Today the materials of the facades are in wood or brick which according to Feng shui is appropriate in a cold area where the buildings need materials that can keep stable temperatures indoor. And since materials as steel, metal and glass is seen as dull and without extent in colour literature, it can be an idea to maintain the original materials in future building plans. In the design proposal, there were glasshouses, but since most of these is an attachment to the buildings or meant for public places, were the whole idea is to bring nature closer to inside, there should not be any problems too far to handle.

As described earlier, most of the facades in the backyard, is from natural materials where some of them also has colour. However, it still looks as if it needs more colour and renovation. In the design proposal, most of the facades got more colour or vegetated walls. Despite most of the literature from colour psychology suggest that white, black and grey is without no therapeutic effect (Mahnke 1996; Thurmann-Moe 2017), I decided to keep some of the facades in white to give a variation. But also maintain one of the colours that was worshipped back in 1700 in Bergen city centre. However, those facades without windows, that was covered in white and dull colours, I decided to cover with either climbing plants or green walls.

All though Climbing plants and green walls are visually very attracting and good for the outdoor environment, climbing plants according to Feng shui is not beneficial to the indoor environment and people living there, because it can ruin the materials in the facades (Chuen 1996). This is not only true in Feng shui, but it is a fact that plants placed too close to the building can cause mould and humid problems to the rest of the building as well (langeland 2017). Therefore, the climbing plants were arranged at least 80cm away from the façade, or placed on fences and on the pergola instead of the facades. On the facades on the other hand, green walls were arranged since these can be installed in a way without disturbing the facades quality. But to be on the safe side, the green walls were only placed on public buildings used for offices and similar where no one is living permanently.

Shapes:

As visualised in the illustration plan, the design contains many soft and irregular shapes. Organic and meandering shapes may be time consuming to make, but can give that extra feeling of extent and fascination to the people exploring the place. It can also make the area seem larger than its actual size. On the other hand, meandering paths, may also make it more challenging to navigate and get quick through the area. But can also fulfil the aim of slowing people down, to make them stop and get in contact with their senses.

Even the outline of the buildings gives a characteristic shape where some parts seem more narrow than others. Like for example in south the place seems smaller and smaller the further one get closer to the entrance. And it therefore may seem odd to extend the building with a glasshouse. But according to Feng shui as described earlier, it is for the better for the people living inside the building to have a fully shape; for a healthier flow of chi. However, it would make more sense to give extra space for vegetation. But considering Bergen is frequently disturbed by rain, the people living there, will likely have more joy in for instance a winter garden.

Speaking of winter garden, I also decided to place a glasshouse shaped as a dome/circle in the middle of the backyard. One of the reasons, was to continue the organic design pattern, but also make a balance between the square and the circle after the Feng shui principles. Placing a building shaped like a circle, can be very place consuming, especially if other buildings is nearby, but in this case the oasis is intended to have a variety of different functions and opportunities within the backyard. The glass dome will also be an extension of the vegetation; where the dome will be filled with exotic plants and at the same time have the view of the rest of the backyard everyday as well as on rainy days. There was also the possibility to place the glasshouse in a rectangle, attached to the existing houses, but considering these houses are private houses it would be challenging to make the glasshouse into a public space. Plus, it would be blocking people's view from their house into the backyard.

Colours:

To make sure that the view from both inside the buildings, and from different angle is aesthetically pleasing to the eye, most of the colours on the facades has the same hue. According to colour theory, colours should harmonies through similar colour hues, but in the surrounding area it seems as if each street has different hues. One street is verging over to black, while the other has clearer primary colours or pastel colours. It has therefore been confusing to harmonise with the existing area. But since the main aim is to create an atmosphere of calmness and wellbeing; I have chosen colours of pastel to support the calming experience and in between chosen colours tilting to primary colours to give life to the area. There were also a possibility to choose darker hues like one of the existing streets nearby, but considering Bergen is a city with lots of grey weather and the area is small and dark, pastel and primary colours are more suitable as a compensation to the dark and grey atmosphere.

Even though, some buildings already had colour, I decided to change one of the building's facade to follow the five elements theory. The building in south were already yellow/orange, but since this colour is seen as unfortunate in the south I changed it. But not only because of the theory, but also because the blue /turquoise colour suit better in marking the symbol of the former quay that once were there. Together with the water pond and water features the colour emphasize the atmosphere of water. However, keeping the original colour of yellow could also have been convenient since the adjacent area is often under shadow because of the tallness of the building. But because of the glasshouse, the façade and colour will only be visible in the entrance and in the middle of the oasis.

Potential limitation with the chosen location:

There are also other potential challenges that might appear. Today, half of the backyard is used for parking for people working or living in the area. The question will naturally be; where to place the cars if the backyard is blocked by vegetation. At the moment, I don't have any clue where they may park, but I guess the today's planner of the area has an intention, since they are also planning to have the area car free.

Another question is maintenance; who will look after and assist the backyard? The zone for the gardening might be maintained by the organic stores nearby. But the rest of the park would have to be maintained through either the private owners who already owns the area around the hotel, or the municipality who also has a wish to offer more parks for the people in Bergen.

Another problem that may arise, is drug addicts. Most of the parks in Bergen is often occupied partly by drug addicts which can be an issue regarding the feeling of safety. However, the backyard will always be supervised and seen since it is close to the hotel, the stores and the buildings around. So, it might not be an issue at all. If an issue, the backyard can be closed off by a gate or grind in the night-time.

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Figures:

Figure 0.1: Self-composed Method diagram

Figure 1.1: Self-composed diagram: Wellness in city

Figure 2.1: Adapted by: Chuen, M. L. K. (1996). The Feng Shui Handbook: Gaia books limited.

Figure 2.2: Adapted by: Hagen, R. A. (2015). Se Opp Se Ned- Guide til klassisk Feng Shui: Eufemia forlag & Chuen, M. L. K. (1996). The Feng Shui Handbook: Gaia books limited.

Figure 2.3: Adapted by: Hentschel, C. (2006). Feng shui i trädgården: Forum & Shen, Z. (2001). Feng shui Skap harmoni i ditt indre og ytre rom: Dorling Kindersley publishing, Inc.

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Figure 3.1: Self-made diagram: sensory garden with old facades

Figure 3.2: Self-made diagram: sensory garden with new facades

Figure 3.3-3.13: Adapted by: Rønning, R.K (no year), Ittens fargesirkel, (Digitalised Photography)
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Figure 4.1: The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 4.2: Walkscore, Skostredet location Bergen, Accessed: 12.03.2017

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The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 4.4: The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 4.5: The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 4.6: The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 4.7: The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 4.8-4.12: The maps and info are from FKB-data and Matrikkeldata in UTM32 Euref89 and is downloaded from Norgedigitalt, may 2016

Figure 5.1-5.16: Self- made diagrams

Figure 5.17: Diagram Adapted from Hentschel, C. (2006). Feng shui i trädgården: Forum & : Hagen, R. A. (2015). Se Opp Se Ned- Guide til klassisk Feng Shui: Eufemia forlag,

Figure 5.18-5-34: Self- made diagrams



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