



Sustainable Freiham

Objectives, plans and steps of urban planning



Imprint

Editor

City of Munich
Department of Urban Planning
Blumenstraße 28b
80331 München

Experts of the following departments were involved in designing the draft of this brochure:

- Department of Urban Planning
- Department of Health and Environment

Coordinating the content

City of Munich
Department of Urban Planning,
Stefanie Nau

Describing the content and methods

ee concept GmbH, Darmstadt
Matthias Fuchs
Amani Badr
Sebastian Fiedler
Daphne Geibel
Dominik Greger
Martin Zeumer

Translating

Willi Zeumer

Layout und setting

ee concept GmbH, Darmstadt
David Lellinger

Credits

Photo credits

- S. 5 City of Munich, Stefanie Nau
- S. 12 GEWOFAG Holding GmbH
Design Michael Sohm, Alles-
WirdGut Architektur with Dnd
Landschaftsplanung ZT KG,
Wien
- S. 14 Münchner Verkehrsgesellschaft
mbH (MVG), Kerstin Groh
- S. 15 City of Munich, Michael Nagy
- S. 16 City of Munich, Markus Bräu
- S. 17 City of Munich, Michael Nagy
- S. 18 City of Munich, Michael Nagy
- S. 19 City of Munich, Michael Nagy
- S. 20 City of Munich, Michael Nagy
- S. 21 Cloudjumper

graphic credits

- S. 7 Freiham Nord - Rahmenplanung
1. Realisierungsabschnitt, Mün-
chen 2013, Ortner & Ortner/
BSM/Topotek, Berlin/Köln/Wien,
und West 8, Rotterdam
- S. 8 Freiham bekennt Farbe: brand
book, München 2014, Brainds,
Marken und Design GmbH,
Wien
- S. 9 Externe Leistungen Nachhaltig-
keit Freiham / Ökologische Bau-
steine, ee concept GmbH,
Darmstadt / München 2016
- S. 10 ee concept GmbH
- S. 11 ee concept GmbH

	Preface	4
	Sustainability in Freigham	5
01	Urban planning, open landscape, architecture and building culture	12
02	Mobility	14
03	Water & soil	15
04	Biological diversity	16
05	Emissions und immissions	17
06	Urban climate	18
07	Energy	19
08	Economy	20
09	Process	21

Preface

Dear reader,

Our development plan No. 2068 Freiham North – first step to be realized for the new sustainable urban district – has been effective since January 2016. The first building sites were installed; there are already many sites working actively. The primary schools will open up their doors at the beginning of the school year 2017/2018 for the first pupils to come.

The city of Munich needs further housing and accommodation urgently. Freiham will contribute a great deal to achieve this aim in the coming years. Apart from 8,000 flats, all necessary institutions of infrastructure will be built such as day-care centres, primary schools and an educational campus together with a sports park.

This new part of Munich will keep the qualities of the area formerly used for farming and recreation in the immediate vicinity of the city. A large park, „green fingers“ which link the countryside and the residential zones, a green corridor reaching to the out-skirts of the city at Neuaubing plus further smaller park areas will allow manifold urban life in a green and attractive environment.

We, therefore, publish this brochure „Sustainable Freiham“ to facilitate and encourage the topics of sustainability. They have become more and more important in recent years. We want to show how they apply to Freiham. Among other things there are social,

ecological and economical aspects which are taken care of in the planning process for Freiham. There are many more steps which we will carry out for this new district of our city in the future to make sure sustainability will be fully achieved.

The residents of Munich as the essential part of our typical urban society, their future hopes and expectations constitute the centre of our planning. People should love to live at Freiham and find a new home in agreement with nature and environment.

To reach this aim not only town planning with open spaces and green parks plays an important role. We as well have to take in consideration the resources like water and soil. They need careful protection. But we also focus topics like emission and immision, urban climate, biological diversity, questions of mobility and aspects of energy. All of the aspects are covered while planning to develop a sustainable district which will use the available resources economically and effectively.

I would like to express my special thanks to all Departments of the Administration of Munich involved – especially the colleagues of the Department of Health and Environment. They helped to publish this brochure offering their specific knowledge and expertise and adding a lot of very clear and vivid pictures.

Yours,

Elisabeth Merk



Head of the Department of Urban Planning, Prof. Dr.(I) Elisabeth Merk

Sustainability at Freiham

Background and systematic approach



Sustainable Freiham - Planning and Development

Vision sustainable building design

Sustainable development is a process. The term "sustainability" describes a principle of taking actions, which form the basis of a political strategy, in Europe integrating many different aspects and facing global needs. The Brundtland Report published 1987 by the United Nations titled "Our Common Future" paved the way for the principle "sustainability". The report aims at a fair relationship between Man and Nature. Man should profit as much as possible from Nature, but the equilibrium of the global ecological system must not be put at risk and the people being alive must never live at the expense of coming generations.

This topic has become more and more important in recent years, especially for big cities and the regions around them. Although cities cover only one percent of the total surface of our earth, more than 50 percent of mankind dwell there. And forecasts suppose that the trend will go on. In 2050 the share of the population living in big cities is expected to be 70 percent.

Because of the high lifespan of buildings and urban quarters, decisions taken now have long-scale effects. Therefore the course of life for the coming generation in towns is put on certain tracks already now.

Sustainability covers a large variety of aspects, possibilities and alternatives which are discussed and dealt with when developing a new part of town like Freiham. Politicians, administration and people planning have their share. The new urban quarter has not yet been built and can therefore not be on view and assessed, but already in the process of planning the capital of Munich directs all attention to the needs of its inhabitants and aims at developing Freiham as a sustainable urban quarter.

It is our task to mediate between ecological and economical demands and the requests of the people who will be living there in future. We want to document experiences of developments already carried out in the past

and demonstrate possibilities how sustainable developments in a new urban quarter may be driven forward.

Sustainability in Munich

Sustainability has long been a topic for Munich. The capital of Bavaria was one of the first German communities to document its development in an independent report of sustainability. The basis was found in early 2003 when the municipal council laid down nine objectives for the sustainable development of the city.

The latest guiding theme of our urban development concept "Perspektive München" reads: "City in Balance" which means to promote the different and sometimes even conflicting aspects of a sustainable urban development and to balance them as a complex entity.

Munich grows larger and larger. The city had an increase of inhabitants of 26,338 persons within a year, from Dec. 2013 to Dec. 2014. That is a growth rate of 1.8 percent within twelve months. This trend is going to continue in the near future. Forecasts tell us that the growth of the population up to 2030 will be more than 15 percent compared to 2013. If the present trend of growth keeps on going, Munich will have more than 1.7 million inhabitants by 2028. That leads to large difficulties to find suitable accommodation for persons already living in the city as well as for those who would like to move there.

It is a big challenge to cover the present as well as the future demand for accommodation and to achieve our aim in a social, economical and environmentally compatible way. To focus on a few special aspects, for example mobility, will no longer be sufficient. Past experience with cities planned for motorcars as for example in the 1960ties has shown that plans perfectly made, but one-sided could lead to extremely undesirable results. Urban planning, needs of users and social and ecological demands which, of course, tend to change did not match.

We have to think of our towns as

highly linked structures. The available technical possibilities must be understood as elements of a complex system especially in view of our own objectives - protection of the climate and the aims of sustainability. Further qualities must also be included like architecture, identity of people, gender equity or sense of security of the local inhabitants.

Already in 1994 the municipal council decided on the principle of "socially fair use of soil" (SoBoN) and included this idea into the plans of developing the city of Munich. The idea of SoBoN asks for a fair share to the owners of properties to the expenses caused by architecture and infrastructure and directed and coordinated by municipal planning. The idea of SoBoN has been applied consequently to every urban quarter planning in Munich since then and it is an essential part to achieve a fair, high quality urban planning in line with the obvious needs.

The present level of planning

The keynote for planning "compact, urban and green" stipulates the most important planning principles for the whole town. Munich has to be land saving, vivid and green. The new location Freiham will be developed according to this principle. The plans for the first steps have now been finished. The plans "Freiham North" will be the basis of coming construction in this part of the town - similar to a building permission as the legal prerequisite for the construction of a building.

However, the idea of this brochure is not only to show what has already been achieved, but also to point out the direction of future decisions. The following headers look at the different requests and aims quoted in an overall context. They explain the multilateral relations of the sometimes contradictory aspects of planning. Only if the different requests are balanced among one another and integrated into a complex concept of sustainability, the planning process will develop the necessary transparency and finally it will lead to a new part of our city, Freiham, worth living, attractive, advanced and sustainable.



Map of the project Freiham North, first step to be realized, urban planning and planning the green open spaces

Freiham - a general view

Freiham is the last large and coherent settlement area within the borders of Munich, situated on the western outskirts of the city and about 12 kilometres apart from the city centre. This new part of the city will house more than 20,000 inhabitants and provide 7,500 jobs. Freiham is the most important housing project of this decade for Munich, not only with respect to the number of residential units, but also because of the demanding and very particular aims and qualities which should be reached. Freiham is a region as large as 250 soccer fields and is divided into two parts: the southern industrial estate has been under construction since 2006. The northern part is planned for accommodation together with a broad park and a educational campus. The first works for development – to put up prerequisite works for infrastructure - started in 2015. A district shopping centre in the middle will link both areas permanently [1].

The “town with short distances” offers to make use of varying institutions easily. Different types of buildings partly



Manor Freiham, one of its representative buildings and another one for services

designed as an open block allow an interesting insight into the arrangement of buildings. Furthermore extensive space for free and open areas within the town will be supplied. Freiham will distinguish itself as a “town for everybody” by its manifold structure of residents. The neighbourhoods thus created will make the new town even more familiar and lovable. Spacious green areas and a good social and cultural infrastructure will make Freiham an attractive place to live in. While social amenities like day nurseries, schools and a campus for education attract families in particular, the recreations area in the immediate vicinity and the five Bavarian lakes nearby will attract people who love nature. Additionally, the high quality design of new buildings will appeal to an urban public interested in culture [2]. Freiham as the newly designed part of Munich City will convey clear values: ecological, humane, urban and familiar.

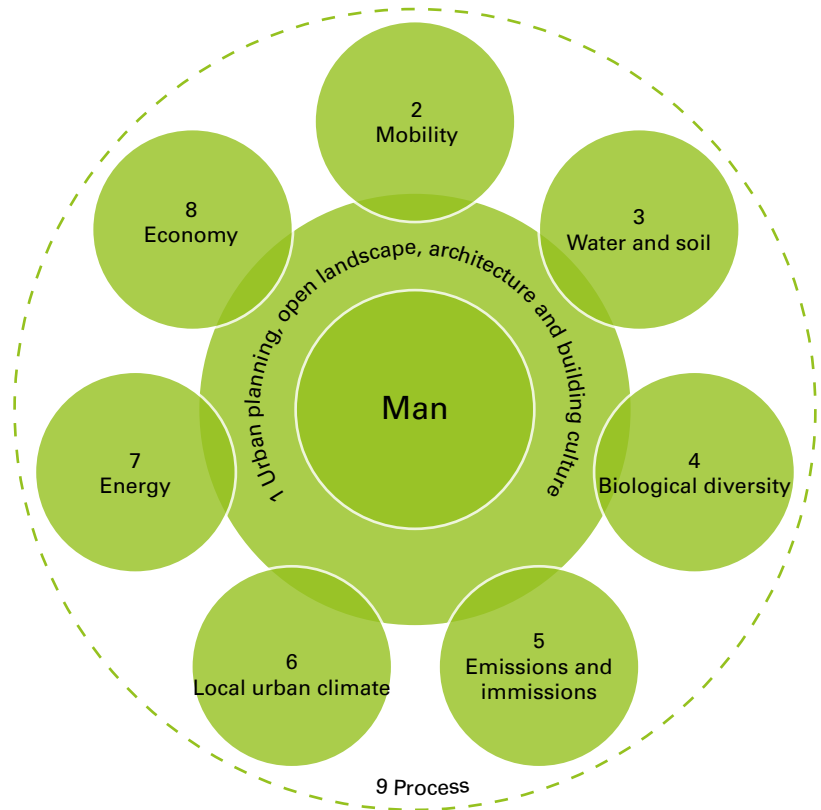
To push forward urban development

All plans for Freiham base on the idea of “extension of the city”. Freiham North as a coming district will be linked



- 1136** first mentioned as a home for a noble person; the place was then named „Villa Friham“ (free home)
- 1420 - 1785** several owners are documented
- 1818** Freiham becomes part of the newly founded community of Aubing
- 1865** the castle is redesigned as it can be seen today
- 1963** the capital of Munich decides on a plan that Freiham will be a development region for further urban settlement
- 1966** foundation of a federation to develop Freiham; the federation buys 170 hectares of land at Freiham
- 1983** competition to develop the entire area following aspects of urban planning and environmental development
- 2002** start of the plans for an industrial estate „Freiham South“
- 2005** Resolution of statutes and articles for the development of the industrial estate „Freiham South“
- 2007** Structured plans for the first step to be realized
- 2008** the estate Freiham is bought by estate associations
- 2011** competition for development Freiham following aspects of urban planning and environmental development in a first step
- 2013** the suburban train to Freiham is started
- 2015** resolution of statutes and articles for the binding site plan

History of Freiham



Concept of sustainability at Freiham

at the east by a belt of greens to the outskirts of Neuauubing. At the western edge of Freiham there will be a large Landscape park with a lot of facilities for recreation. Green areas like „green fingers“ covered with many footpaths and cycle tracks lead to the old and new residential zones. To the north the area extends up to the district Aubing which is known for its beautiful village. Connecting various requests, e.g. high quality of accommodation and urban flair, is a main objective for Freiham. A representative building next to the station of the suburban fast trains will welcome people to Freiham and form its vivid town centre. Cafés and bars will invite people to talk and meet, shops with interesting showcases will make them walk along and watch, all arranged similar to the urban model in the city centre. Differently designed buildings with varying storeys will be grouped around a spacious central place to enable people to come together. On the upper floors you will find offices and flats.

On the ground floor of the new buildings you will find a good variety of shops offering all sorts of consumer goods and articles needed daily as well as services needed every day. The great variety of shops and an easy access to private and public basic supply facilities are an essential advantage for everybody living in this town. Daily purchases and procurement can be done easily, fast and without expenses in this town of short distances.

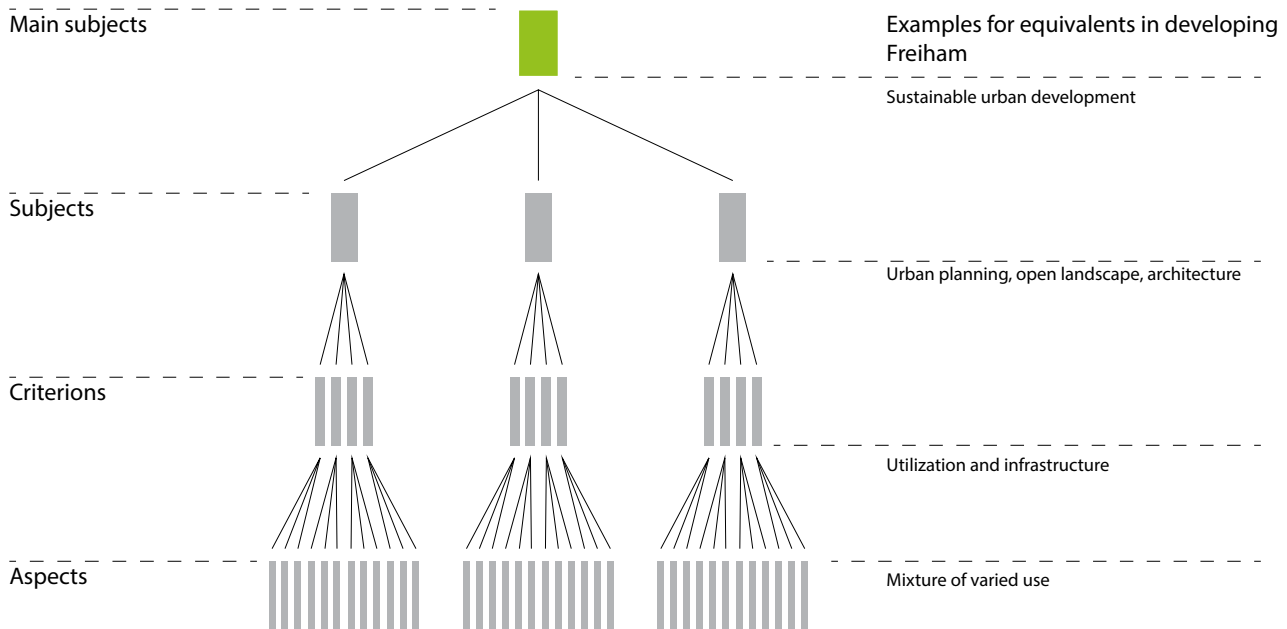
Manor Freiham as origin

The new part of the city traces its origin back to the nearby estate documented for the first time as “Villa Frihaim” in 1136. The manor house gives a formative character to the extensive surrounding. There are the castle from the 17th century with its neo-Gothic front, a private chapel from the 15th century, the Holy-Cross-Church erected in the 14th century, a castle pub as well as a lot of further adjoining buildings and, of course, magnificent avenues.

The place is very popular for excursions; the complete set and some specific buildings are listed as historic monuments and must not be changed. The place does not only offer a unique identity to the new part of the city, but to the complete western outskirts of Munich. The surrounding area of Manor Freiham will combine with the further new green areas and will go as far as the residential areas. The green areas will set the tone for the complete new part of the city. The core of the green system will be the park 55 hectares large and situated west to the residential areas.

Sustainability at Freiham

Since the official start of the planning stage in 2007 the administration of the City of Munich has developed Freiham as a sustainably designed new urban quarter. When developing the ideas of sustainability the process of planning was carefully analyzed and every detail up to the local legally binding site plan was checked.



Die unterschiedlichen Ebenen der Systematik des Zielsystems

Additionally, external experts compiled and developed a system for energy efficient and sustainable urban planning in Munich. Since 2014 this system has been transformed into a complex system of its own for Freiham using the term "Ecological Components" and listing all its targets. The essential task of the system was to find out and formulate qualifying criteria to measure the development of sustainability. Such criteria may include qualitative (describing) facts but also quantitative (calculating) ones. The system is subdivided in categories, criteria and aspects in order to portray a simplified, but object-relating mapping of the reality in more details. The idea is also to reduce the complexity to a minimum to allow rational decisions in urban planning. At the same time the structure of all criteria and indicators belonging to them form a safe basis for the process of developing sustainability for residential blocks and the district as a whole. In this way the process will be goal-directed and transparent.

The human being, the citizen, is put in the centre of the system of sustainability at Freiham. Urban planning, ideas of open spaces within the city and the

types of construction link to further topics like mobility, water and soil, biological diversity, emission and immission, urban climate, energy and economy. And "How" all the aims will be realised is covered by the process which is constantly checked.

There are nine subject areas and each is divided in criteria and aspects. The aspects are verified by aims of the city of Munich and shown by their crucial solutions (for example: the city of short distances by minimizing traffic). The methods of assessment for Munich and Freiham allow presenting the qualities and potentials of sustainability easily in the new urban quarter. The elaborated standard of planning makes it possible. The detailed wording of the systematic plan was achieved by a very close cooperation of all departments of administration in Munich.

To secure the long-scale process, the above mentioned system has a clear structure used in this descriptive brochure. However, what has been planned so far, does not mean it will be realized exactly as it is planned. Long-term planning needs free scope for future developments that can only be

Examples for equivalents in developing Freiham

Sustainable urban development

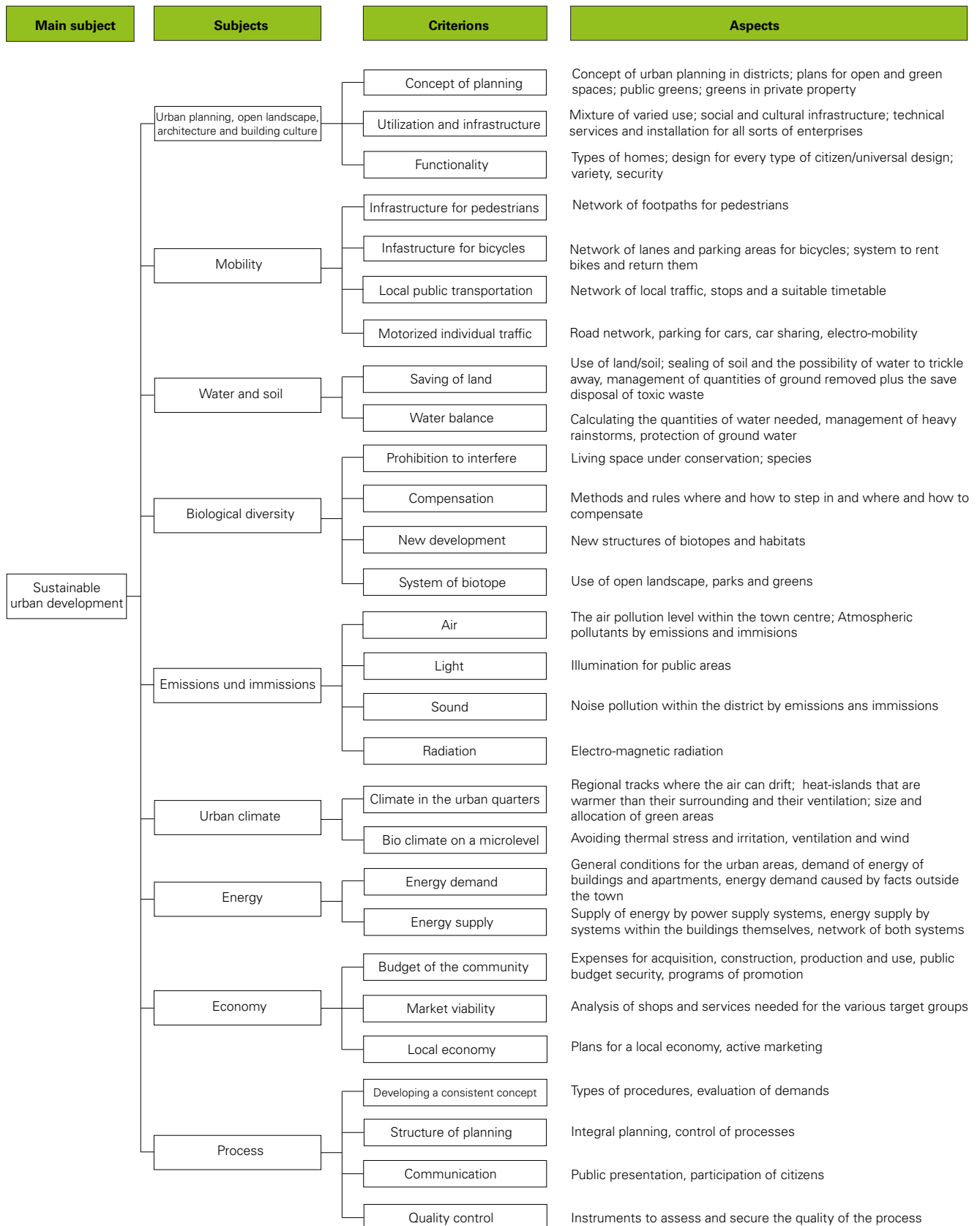
Urban planning, open landscape, architecture

Utilization and infrastructure

Mixture of varied use

seen in the process of building and sometimes even later when used.

The brochure unites single topics to larger contexts. Doing that, coherent facts can be described more easily and completely. You will find a structured outline of the criteria in question, presented in form of a table.



The systemic planning at Freiham - outline of subjects, criteria and aspects



Urban planning, open landscape, architecture and building culture

a new part of the city develops

01

Concept for urban planning and open areas within town

- Setting up a true and realistic concept for accommodation and open areas within town
- Appropriate density of buildings for urban areas and sufficient green spaces in between
- Concept of "Enlarging the city of Munich" and realizing the „Town of short distances“
- Tuning the concept of mobility to the ideas of urban planning and open landscape areas
- Treating nature, environment and landscape with great care
- Energy and CO₂- saving style of architecture
- "Socially justified use of soil", therefore 50 percent of residential buildings supported by public funds

Public green and open spaces

- Structure of green, open areas of high quality and quantity
- Connecting the green and open areas, setting up a variety of possibilities

to use them e.g. playing, games, sport and recreation; preventing the generation gap

Private open spaces

- Care for private open space of high quality and quantity
- Structures to promote community within neighbourhoods
- Providing manifold offers to use the area
- Availability of spaces for strictly private use

Mixture of utilization

- Making the urban quarter lively by a well-balanced mixture of utilization
- Supply of housing, variable and directed to all target groups
- Local supply of consumer goods within the residential areas
- Community centre for all sorts of meeting in the urban quarter
- Shops and services plus the green areas, easily reached from all parts of the new urban quarter





„We want to live urban like in a city, but healthy and green like in the country.“

Prof. Dr.(l) Elisabeth Merk

Social and cultural infrastructure

- Institutions for social and cultural infrastructure of high quality should be near to the housing areas
- Offers for everybody: children, youth, adults and senior citizens
- Setting up institutions for education for all generations
- Linking them well to the local public traffic system

Technical infrastructure

- Technical infrastructure - modern, secure, and sustainable (supply of energy, telecommunication, disposal of waste)
- Flexibility of the network of infrastructure
- Integrating the technical plants into the urban sight by design

Infrastructure for the local economy

- Expanding local job opportunities
- Mixing the sectors of trade and industry properly
- Supporting settlement of enterprises
- Working places within easy reach
- Inclusion of handicapped persons to workplaces

Types of housing

- Creating calm housing areas
- Supplying houses well-balanced for all target groups
- Socially fair supply of housing
- Flexibility for the types of housing
- Supply close to the housing areas
- Inclusion of all people living within a building

Universal Design

- Easy accessibility and intuitive handling of all public facilities
- Structures to encourage community in the neighborhoods
- Strengthening the inclusion of handicapped persons
- „Universal design“ as an overall principle

Security

- Strengthening the feeling of security on public greens and open public areas as well as on the roads
- Developing a concept of illumination - energy saving but also providing the security necessary in public
- Setting up helpful signposts everywhere in the new urban quarter

Mobility

being mobile at Freiham

02



„Right from the beginning the project of planning traffic at Freiham was dedicated to minimize distances and make residential mobility as easy as possible.“

Georg Dunkel, Dipl.-Ing.

Integrative concept of traffic

- Setting up a concept of future-oriented mobility
- Different options of means of traffic
- Fostering aspects of security
- Linking all means of traffic among one another and with the outer environment
- Short distances and easily to reach stops and parking areas
- Easy accessibility and inclusive utilization for all inhabitants on all means of traffic and on the roads and paths
- Integrating charging points for electro-mobility in urban space

Network of footpaths

- Providing a network of footpaths tightly linked
- Fast and secure access to all destinations in the urban quarter

Network of cycle tracks

- Supporting cycling
- Continuous and secure network of cycle tracks
- Links to the traffic in the region adjoining
- Marking and signposting cycle tracks

Electro-mobility, systems to rent bicycles and where to return them

- Sufficient parking places for bikes at stations of the local traffic, at official public buildings, within the urban quarter and near residential areas
- Protecting the parking places against theft
- Offering facilities to charge pedelecs
- Convenience at parking places by illumination and roofing etc.
- Stations for Bike rental to be handled easily

Network of the public local traffic

- Linking important places and servi-

ces within the town

- Link to the city centre of Munich
- Connecting all possibilities of public traffic

Stops and timetabling

- Stops should be easily reached from all places at Freiham
- Safe and free access to stops
- Attractive timetabling
- Comfortable and safe design of stops

Road networks

- Connecting Freiham to the road infrastructure in the region
- Designing the road network giving more or less relevance to the roads according to their importance
- Reducing the road network to a minimum

Car-Sharing, electro-mobility and parking places

- Car-sharing at various strategic points at Freiham
- Avoiding over-ground parking places
- Strengthening electro-mobility by filling station for electricity
- Encouraging alternative systems of traffic



Water & soil protection of natural resources

03

Water balance

- Holding back the rain by green areas and green roofs
- Minimizing the sealing of the soil and letting the water trickle away into the ground
- Helping the ground water to revive and the water on the surface to evaporate
- Using covering material that may easily be penetrated by water

Management of heavy rain storms

- Adapting to the change of climate
- Reducing the danger of very short, but heavy sudden floods
- Establishing a concept to hold back rain water and let it trickle away
- Monitoring the level of ground water in extreme situations

Protection of ground water

- No endangerment as to ground water in the town district
- Removing every existing contamination
- Regular inspection of the levels of ground water by long-term monitoring

Saving of land and avoiding sealing the ground

- Economical use of soil
- High density for urban buildings
- Avoiding sealing the ground
- Maintaining the functions of ground
- Building underground car parks on already built-up areas

Management of ground that needs removing and handling brownfield deposits

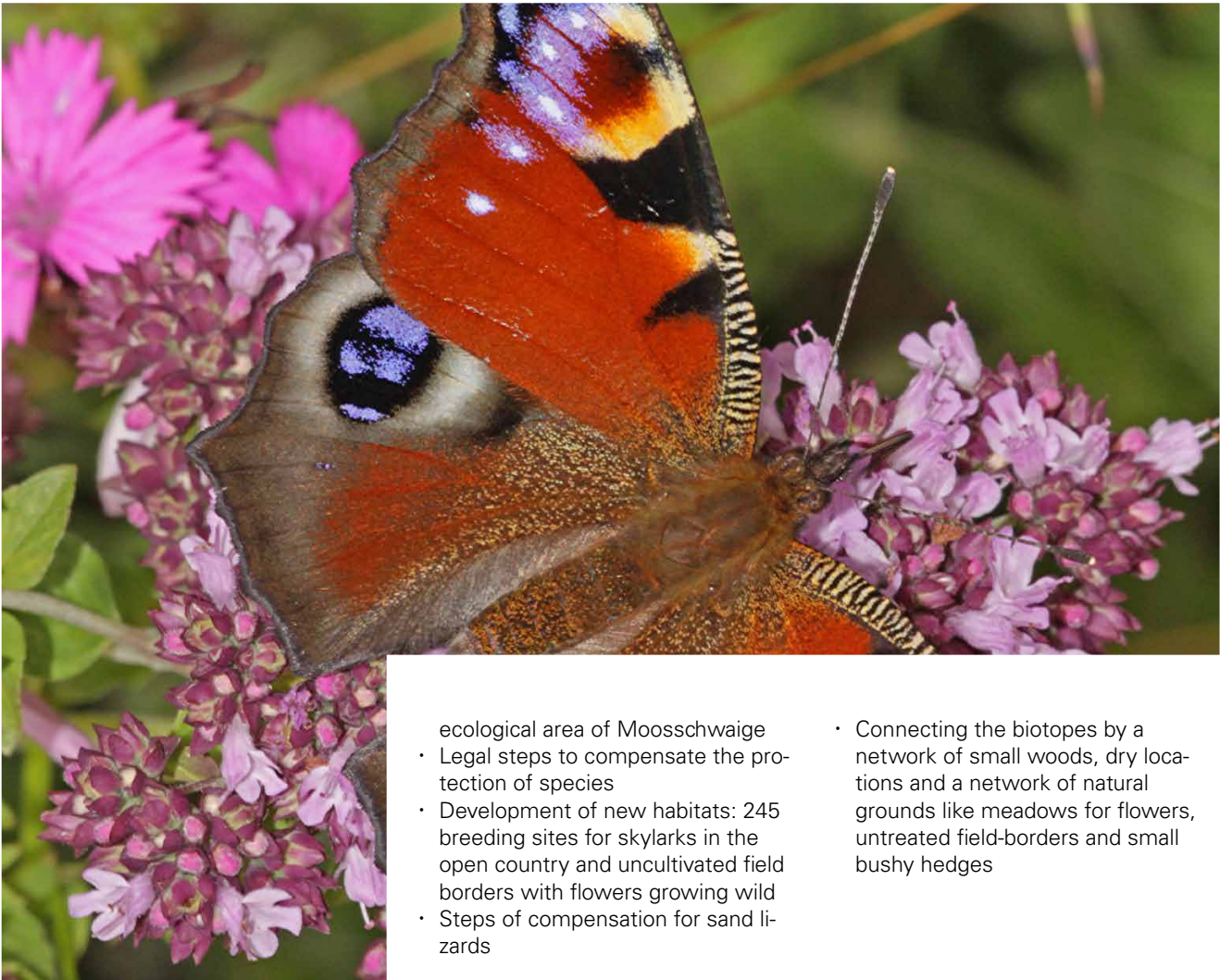
- Minimizing the amount of ground cleared and transported away
- Re-using that ground as near as possible to the area where it was removed
- Disposing the present old deposits within the building area

„We all appreciate naturally running waters like the rivers Isar or Würm or artificially made waters. Especially on hot days in summer places with water attract us very much.“

quotation from the report

Biological diversity reconciling with nature

04



Biosphere

- Protection of natural biosphere
- Minimizing any interference and any steps must be executed with great care

Species

- To decimate, damage or kill protected species is strictly forbidden
- Improving the living conditions of the species in question

Rules of interference

- Complete, legally dictated compensation of land (45 hectares) in the

- ecological area of Mooschwaige
- Legal steps to compensate the protection of species
- Development of new habitats: 245 breeding sites for skylarks in the open country and uncultivated field borders with flowers growing wild
- Steps of compensation for sand lizards

New structures of biotopes and habitats

- Choice of various kinds of trees
- Planting new and already large trees in Freiham
- Green roofing is stipulated area-wide
- At least 20 percent of the open public spaces will be shaped close to nature

Link between green and open areas

- Linking the living areas of animals even beyond the borders of the town
- Removing any obstacles to allow animals to roam about within the various parts of the landscape

- Connecting the biotopes by a network of small woods, dry locations and a network of natural grounds like meadows for flowers, untreated field-borders and small bushy hedges

„When developing Freiham there is an important question for the city of Munich: How can the new part of the city contribute to the protection of the biological diversity - concerning the current legal requirements and even more than that.“

quotation from the report

Emissions and immissions 05

hardly contaminated, little contaminating



Air pollution by emissions within the new district of the town

- Producing maps of air cleanliness to measure nitrogen oxides and fine dust
- Taking in consideration different scenarios of traffic
- Reducing air pollution at Freiham below the legal requirements
- Setting up a concept to minimize mobility by offering shops and services nearby
- Providing energy nearly emission free

„The concept of urban planning at Freiham aims at a full reduction of air-, sound- and electro-magnetic emissions.“

quotation from the report

Air pollution by immissions within the new part of the town

- Reducing air pollution
- Making the new part of the town as green as possible to agree with requirements of air cleanliness in town

Illumination of public areas

- Improve the feeling of security in public areas
- Reducing light pollution to the necessary minimum
- Prohibiting very bright and constantly changing light advertisements
- Energy saving lamps
- Illustrating the situation of lighting within the town for monitoring

Sound pollution within the town

- Reduction of sound and noise on the spot, where it is caused
- Fixing the legal index of noise (BlmSchG) of 55 dB (A) in the public areas and possibly even lower than that
- Reducing the speed limits on roads in the residential areas

- Laying rails on the Aubinger Allee in grass
- Monitoring and control of sound pollution

Sound immissions within the town

- Protecting sensitive areas by specific steps of urban development and architecture
- Shielding of unavoidable sources of noise
- Arranging housing to inner courtyards of the blocks
- Using technical solutions for noisy facades by mechanical ventilation of the buildings

Electro-magnetic radiation

- Measuring and meeting the legal limits provided by law (BlmSchG)
- No day nurseries, schools, hospitals and houses at close range to railway lines run by high voltage electricity
- Checking the danger caused by electric power supply, distributing boxes, transformer stations and pylons for mobile phones

Urban climate

in between macro and micro climate

06

„The newly set up green areas (green fingers) are an important part of the system of urban climate.“

quotation from the report

Tracks where air may drift and exchange

- Air exchange within the greater Munich region
- Linking areas where there is fresh air by corridors

Heat islands within town and ventilation

- Architecture matched to the local climate conditions
- Considering future climate change
- Balanced relation between sealed and free, green areas
- Producing areas of evaporation within the green and open public spaces

Size and distribution of greens

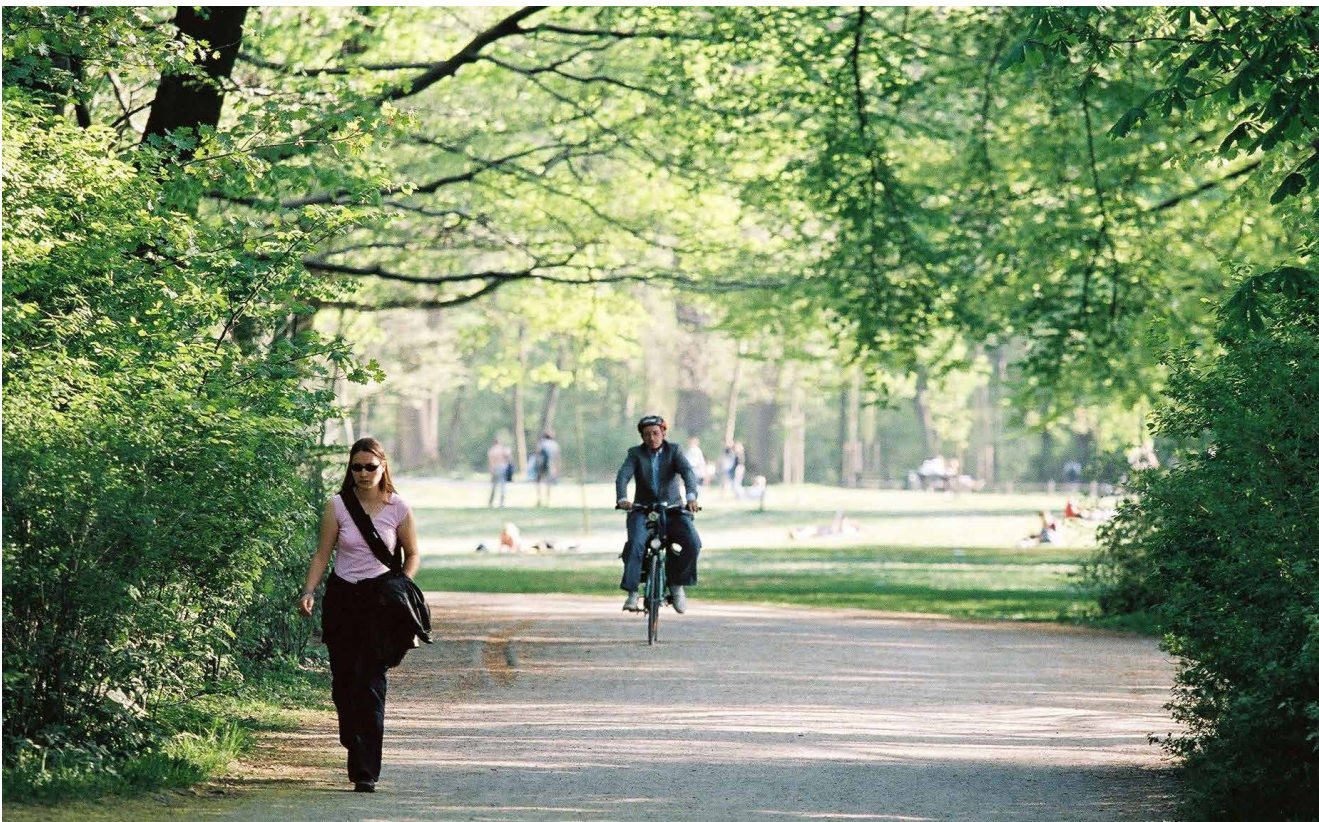
- Continuous and dense vegetation everywhere
- Small lakes and ponds and planted green areas to clean the air

Thermal comfort and irritation

- High variety of micro-climates within the town
- Avoiding stress by heat islands
- Large sized areas for trees and vegetation
- Fostering green roofs, green fronts etc.
- Light and bright surfaces for increased reflexion

Ventilation and wind

- Exchange of air along the lines/tracks of fresh air
- Avoiding obstacles against drifting air by buildings
- Avoiding high speed wind and gusts



Energy efficient and renewable

07

Framework of urban development

- High density of urban development and efficiently designed infrastructure and means of traffic
- Low loss of heat by compact construction of buildings
- Increased solar gains of buildings by urban planning

Energy demand of building

- Reducing the energy demand of buildings by energy saving solutions higher than the ones legally required
- Central and sustainable supply of heat by geothermal energy
- High standards of insulation for buildings
- Increased use of renewable raw materials

Induced energy demand

- Minimal energy demand for the infrastructure of supply and waste
- Lighting in public areas energy sa-

ving

- Alternative concepts of traffic such as car-sharing, electro-mobility and local public traffic

Network of supply of energy

- Increasing the use of renewable sources of energy
- High coefficient of performance of planning the buildings energy saving

Supply of energy for building

- Energy efficient building technology
- Reducing the CO₂ emissions by producing electricity decentralized
- Financial support for local production of energy e.g. for photovoltaic plants

Network

- Management to balance supply and demand of energy
- Developing technologies to store surplus energy

„We must reduce our consumption of energy dramatically and will rely in future on a mix of renewable energy.“

Prof. Dr. Ursula Eicker, Physikerin,
HFT Stuttgart



Economy

economical and safe for investment

08

Expenses for acquisition, production and use

- Reducing the life cycle costs for infrastructure and public institutions
- Cost-benefit ratio optimized on a long-term basis
- New urban quarter with low follow-up costs for a long time

Public budget security

- Financially clear town development
- Keeping the budget and taking care of follow-up costs
- Calculating all costs and their financing to optimize planning

Promotion programs

- Using all promotion programs of the federal government, the land Bavaria and the community
- Promoting innovative and sustainable technical systems
- Offering the promotion programs to third parties (project developers, interested individuals)

Analysis of the specific market and of target groups

- Analysis of local demands
- Developing a mix of businesses according to the target groups

Concept for the local economy

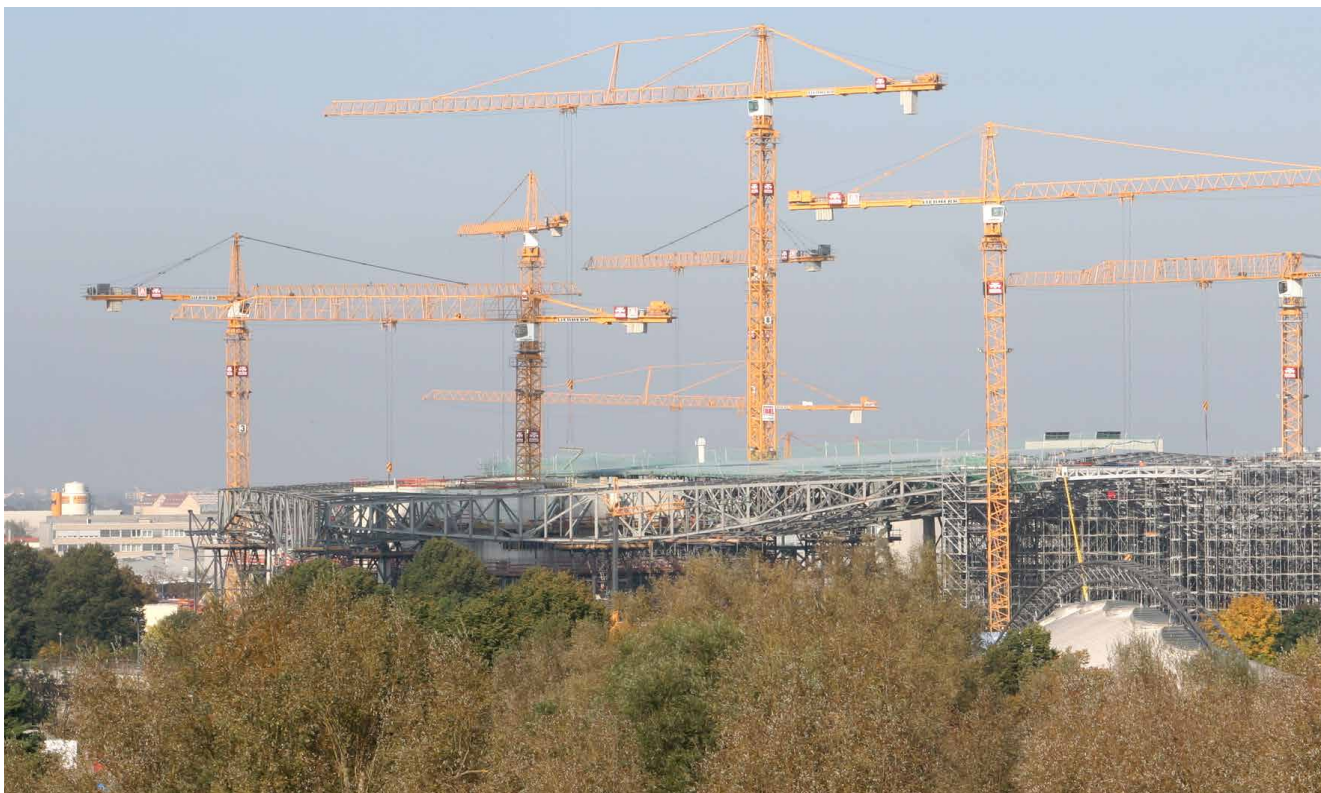
- Helping up local service industries and retail trade
- Using the ground floor space for shops & stores
- Offering smaller spaces for various skilled trades and for entrepreneurs
- Supporting direct marketing of locally produced goods
- Promoting help within the neighbourhoods

Active marketing

- Activate investors for the new urban quarter
- Mission statement by a brand-book for the new town
- Organize specific and typical events

„The metropolian area of Munich is one of the strongest regions in Germany as to its economy. The purchasing power of the population is nowhere higher in entire Germany.“

quotation from the report



Process complex planning

09

„Our citizens, men and women alike, are the very experts of their daily life.“

Angelika Heimerl, Dipl.-Soziologin, Referat für Stadtplanung und Bauordnung of the city of Munich



Determine the demand

- Planning of all buildings according to demand
- Flexibility of the concept

Types of procedures

- Using multistage procedures
- High variety of planning versions by competitions etc.
- Public participation and intervention in the current process

Project control

- Central coordination while the process is going on
- Outline of deadlines and costs
- Securing the aims agreed on, among others the aims of sustainability

Integral planning

- Interdisciplinary development of solutions
- Regular meetings of all people and partners involved
- Developing process by planning scenarios and alternatives
- Integrating gender mainstreaming in

planning process

Participation of citizens

- Offering possibilities to participate to all relevant target groups and interested persons within good time
- Documentation of comments and statements given
- Finding reasonable methods of consensus and arbitration

Public presentation

- Communicating all the qualities of Freiham to the public
- Producing a positive image for marketing
- Open transparency to the public

Instruments to assess the quality of the process

- Constant quality assurance
- Integrating obligatory instruments to assess quality
- Implementing aspects of sustainability into all steps of the development

