

CONFERENCE AND MATCHMAKING THE FUTURE OF BUILDING - PROJECT VISITS IN VIENNA

Thursday, May, 18th 2017

TOUR 1 – SMART CITY ASPERN SEESTADT



www.seestadt-aspern.at/en

Climate protection and energy supply are among the major challenges cities face. The City of Vienna has therefore launched the Smart City Vienna initiative to develop forward-thinking strategies for all spheres of urban life as well as promoting future-oriented research and building relevant networks. The spectrum of topics under investigation ranges from infrastructure, energy, mobility and ICT to the development of entire new urban neighbourhoods.

Aspern Seestadt must fulfill the requirements of 21st-century lifestyles as well as meeting the City of Vienna's ambitious energy efficiency and climate protection goals. A responsible approach towards the environment is being given topmost priority throughout the entire project. Buildings in Aspern Seestadt have to "pass" the Total Quality Building (TQB) assessment of the Austrian Sustainable Building Council (ÖGNB) with a minimum score of 750 out of a possible 1,000 points. Besides criteria such as cost effectiveness, furnishings and appointments, health and comfort, the assessment also takes into account other factors such as: energy, utility installations, building materials and resource efficiency.

The first phase of construction at Aspern Seestadt comprises offices, retail units, premises for service providers and production facilities, plus a school campus and 2,600 housing units. In addition to other standard quality criteria for publicly subsidized housing – such as affordability and functional mix – the requirement to meet ambitious energy-efficiency standards was an integral part of the tendering process, with building plots only being awarded to developers complying with these standards.

Tour 1 – Smart City Aspern Seestadt will provide you with the latest information regarding the concept of a planned *Smart City* with its 3 key elements: ENERGY | KNOWLEDGE | SOCIAL

09.00 – 09.30 MEETINGPOINT U2 SEESTADT | EXIT DOWNSTAIRS

Welcome & Introduction

09.30 – 09.45 WALK TO CO-HOUSING PROJECT JASPERN

09.45 – 10.30 CO-HOUSING JASPERN | Hannah-Arendt-Platz 10, 1220 Vienna



pos architects developed together with the future residents in Aspern an ecological and energy efficient building concept with multifaceted spaces. The residential building stands out with highest energy and ecology standards, particular user comfort, and innovative socio cultural approach to living in the community. Therefore, the whole roof terrace with a lounge, urban gardening area and washing salon is used by everyone. A community salon with an equipped kitchen, a spacious bicycle garage and a workshop complete the offer of community spaces. In addition, every apartment has a roomy balcony in each storey and the

layout is individually adaptable. The high living quality is also ensured through the exceptional room heights. Heights of 4m in the ground floor and 2,8m in the upper floors also allow alternative uses. The building hosts 18 bright apartments. Carefully chosen construction materials guarantee healthy living spaces. Integrated upgrade and conversion possibilities prepare its residents very well for the future. For instance, the walls, made by recycled stones, can be flexible moved in each storey. From bathtub to the windows, any maintenance or renewal is easy and cheap to realise. And still the mixed use building could be built economically and was therefore subsidized. That is only possible, because architecture integrates a clever energy concept and minimizes the technology demand. In winter the integral design keeps the solar heat as long as possible in the building. Only when the temperature drops below -5, district heating is additionally used. In summer, on the other side, the balconies work as a constructive sun protection and keep the interior naturally cool. All connections for a 450 m² solar panel facility are prepared. The implementation can upgrade the building in no-time to a plus-energy-house. That way the building will produce more energy on the house than needed throughout the year.

www.pos-architecture.com

10.30 – 11.00 LECTURE ON SOCIAL CONCEPT ASPERN | Hannah-Arendt-Platz 1/2, 1220 Vienna

11.00 – 11.15 WALK TO GREENHOUSE | Sonnenallee 41, 1220 Vienna

11.15 – 11.45 LECTURE WEATHERPARK | Simon Tschannett

"Well-being in the city" - this is the mission of the meteorologists and technicians at *Weatherpark*. Their aim is to establish pleasant wind and human comfort conditions as well as a comfortable microclimate in cities and districts.

For the new urban district in Vienna's Urban Lakeside "Seestadt Aspern", *Weatherpark's* experts analysed the wind comfort conditions on pedestrian level and developed measures, not only around the tallest high-rise timber building of the world, the Holzhochhaus "HoHo Tower", but also for the master plan.

They also looked into the diagnosis of wind conditions along facades and on the roof of the Federal School in Aspern to find out which sun protection device would be suitable for the wind conditions along the facades. Consulting services regarding choice of suitable sun blinds then followed.

www.weatherpark.com/en

11.45 – 12.00 WALK TO FEDERAL SCHOOL ASPERN

12.00 – 12.45 FEDERAL SCHOOL ASPERN | Hannah-Arendt-Platz 8, 1220 Vienna



Aspern Seestadt, a green district by the lake - this image inspired architects *fasch & fuchs*. They designed a "walkable educational hill", the building became part of the landscape with terraced buildings. This concept could only be realized here, at the public park and square. The architects, with their design, take up the master plan of Tovetta and interpret the grounds at the Hannah-Arendt-Park and Maria-Trapp-Platz as part of the public space. The margins of the school premises thus become

open zones, rather than being delimited. In the call for tenders a public transit was provided in the southern third of the property. The architects succeeded in producing a quality despite this restriction and placing the necessary building volume north of the passageway. Interiors and freerooms are oriented towards the west to the park. The forecourt and the main entrance are located in the north east of the square. The design was inspired by the landscape and modeled into the freerooms. The school building looks as if it were a terraced landscape. It is part of the park, due to the open-air school, the green roofs and the stairs. The interaction and the flowing transitions between indoor and outdoor spaces also play a role in the building configuration. In the summer, central living areas can be opened in order to intensify the interaction. In the center of the compact building a further open space was created: the "Schulwäldchen" (small school forest) contributes to the better exposure of the interior rooms and lends an almost meditative atmosphere to the library, dining area and multipurpose room. On the other hand, the spirit of the school should be expressed through openness, clarity, networking, generosity and light-flooded friendliness. The indoor campus with the auditorium between the entrances as a hub for events, meeting places and development contributes to this. The federal school building for 1,150 pupils is the most successful proof for the thesis that in Aspern Seestadt a special quality of the open space and the architecture is created in Vienna. A school of the city of Vienna is being built right next to it, so that the symbiosis of parks, squares and buildings of the education quarter will inspire future generations.

www.aspern-seestadt.at

12.45 – 13.45 LUNCH AT RESTAURANT ÖEINS | Hannah-Arendt-Platz 1, 1220 Vienna

13.45 – 14.30 SCHOOL CAMPUS PRIMARY SCHOOL | Hannah-Arendt-Platz 8, 1220 Vienna



The four-storey building complex with sunny terraces and a spacious garden consists of a nursery school for eleven groups, a full-day primary school with 17 classes and eight classes designed for children with special educational needs. The nursery is housed in the garden and ground floor while the school and the school for children with special educational needs can be accommodated in the two upper floors. The gymnasiums in the garden floor are shared. Thanks to

a cooperation with Aspern Smart City Research (ASCR), a research company mainly from *Wien Energie* and *Siemens*, the new building is almost self-sufficient. In addition, different alternative energy systems are used for heating and hot water. A groundwater heat pump, a solar thermal system on the roof as well as heat recovery from the exhaust air are used for heating. The photovoltaic layer on the roof generates the required electricity. For fresh air, controlled room ventilation is provided throughout the building. In addition, the school campus is protected against overheating by automatically controlled external blinds. The light control ensures optimal lighting when it is too dark and also when someone is present. The garden plants are irrigated with industrial water from the well. Through all these measures the house is certified according to TQB - Total Quality Building - the Austrian Society for Sustainable Building (ÖGNB).

www.big.at

Foto: © Gisela Erlacher

14.30 – 14.45 WALK TO ASPERN IQ | Seestadtstraße 27, 1220 Vienna

14.45 – 15.30 LECTURE ASPERN SMART CITY RESEARCH

Aspern Smart City Research GmbH & Co KG (ASCR) is a joint venture between a network operator, an energy generation and supply company, a technology company and the City of Vienna. This cooperative partnership was established to develop some of the technical solutions that are required for the future energy environment and especially in a new real life urban district with active customers. This involves innovative approaches towards building automation systems and using the energy flexibility of buildings and the energy market in ways that enable residents to cooperate and accept the new systems. Furthermore, optimal methods are being developed to capture detailed network status data and also use it for network planning. All these solutions are based on comprehensive ICT, testing and developing convenient big data models, and suitable analytics.

www.ascr.at/en

15.30 – 15.45 WALK TO POP UP DORMS

15.45 – 16.20 POP UP DORMS | Sonnenallee 28-30, 1220 Wien



The PopUpDorms are student dormitories in Vienna. Built in record time, they are of Passive House quality, with construction costs being 12 % lower than the usual local cost for social housing – proving that anyone can achieve the Passive House Standard and that it could even be used for refugee housing. After a record-breaking short construction time, of only one week, the student accommodation "PopUp – GreenFlexStudios" for 40 students was built in Aspern – Vienna's Urban

Lakeside. It proves how fast and cheaply the highly energy – efficient passive house standard can be constructed.

<http://housing.oead.at>; www.passivhaus-austria.org

16.20 – 17.00 LECTURE CONCEPT ON ASPERN | Nicolaus Summer | City of Vienna

17.00 WALK TO UNDERGROUND STATION | END OF THE TOUR individual departure
