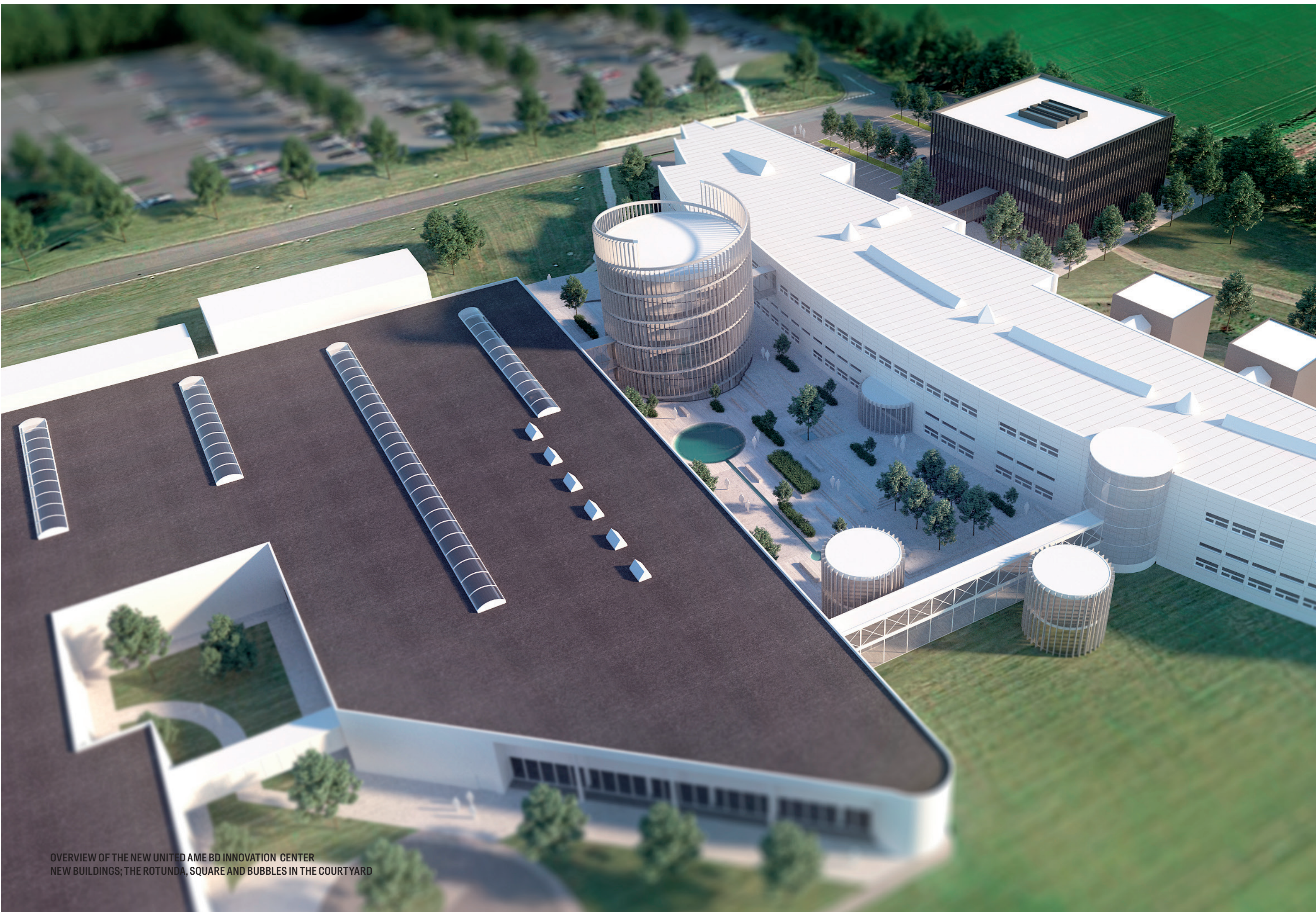


GRUNDFOS 

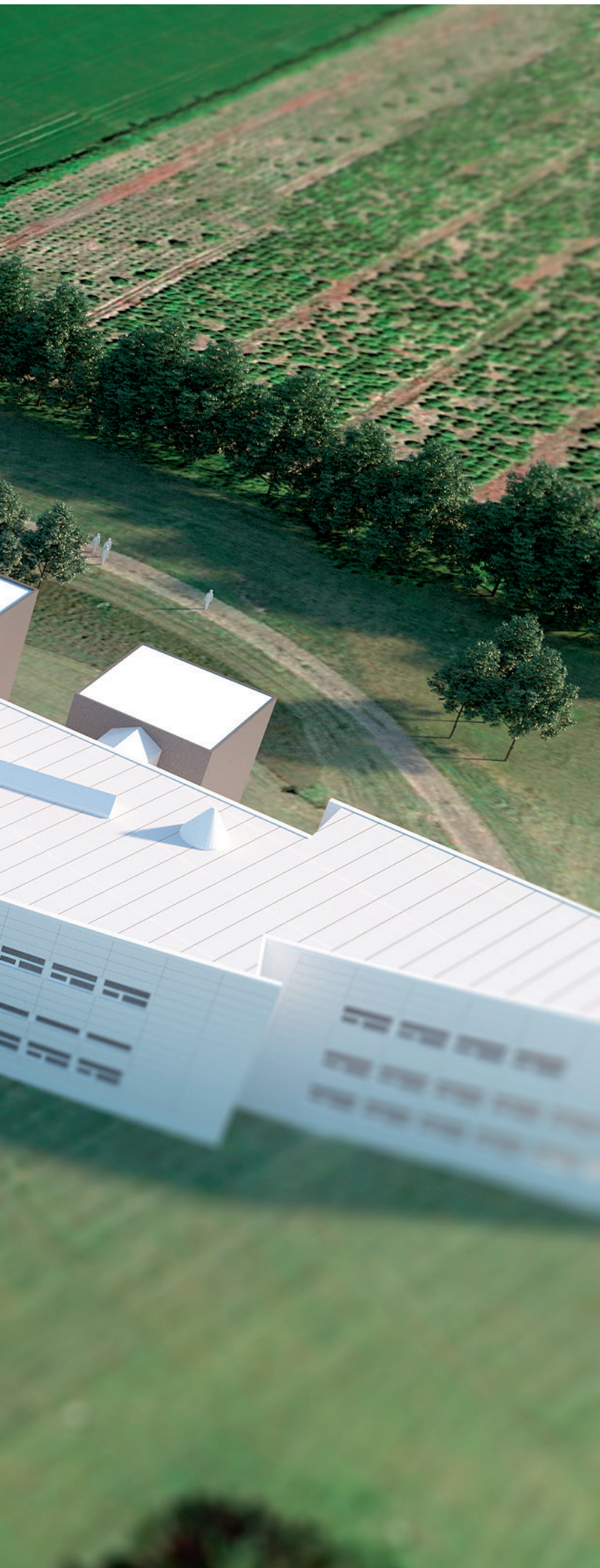
UNITED AME&BD PREMISES CONCEPTUAL DESIGN

06. JULY 2017





OVERVIEW OF THE NEW UNITED ABE BD INNOVATION CENTER
NEW BUILDINGS; THE ROTUNDA, SQUARE AND BUBBLES IN THE COURTYARD



UNITED AME AND BD PREMISES - UABP

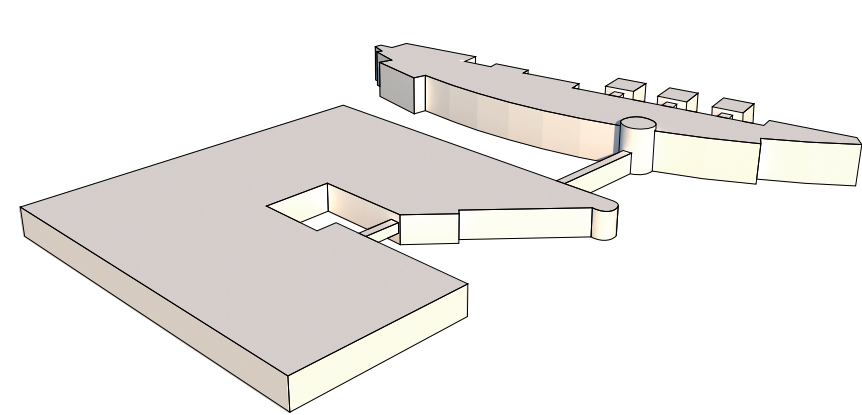
The new extension and existing facilities East 2 & East 3, should create the coherent framework for the united AME and BD, to secure an even higher level of innovation and sharing of knowledge between departments. The new connected premises should attract and maintain skilled employees in an inspiring, creative and innovative environment.

This project approaches the issue of sustainable building design by focusing on finding a balance between Grundfos' business model and sustainable building design. Based on our analysis of Grundfos we have identified three relevant focus areas for sustainability LEED Platinum certification, the building as part of the development and innovation process and circularity.

As a standard Grundfos uses the American LEED accreditation system to ensure sustainability of their building projects. Usually a LEED Gold is satisfactory but in this project we aim to achieve a LEED Platinum certification – as a minimum for the new building components.

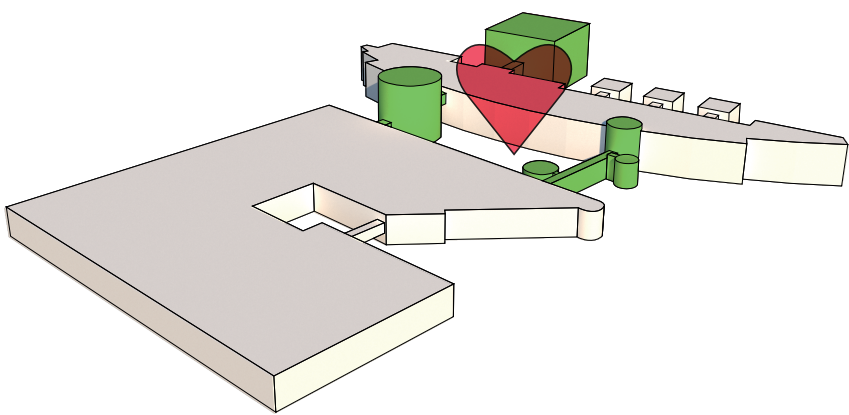
The building as a key element in the development process is another focus area that we have investigated more thoroughly during the concept design phase where a lot of new ideas in relation to building intelligence were introduced to Grundfos. Another perspective for this focus area is happy and satisfied employees. The project suggest a combination of controlled and adaptive comfort by introducing natural ventilation, human centric lighting and building areas with a large exposure to daylight. This enables a more natural indoor environment for the many months of the year when supplementing natural ventilation provides energy-savings and individual comfort.

Circular economy is a central issue in Grundfos' environmental management strategy where old pumps are taken back – no matter the label – and the materials are reused. In the detailing phases of the project the possibilities of implementing a similar approach to materials will be investigated further. A semi-circular approach to water is also taken in the project – not in the form of a living machine but as rainwater harvesting. When it comes to energy a large area with photo voltaic panels may be included in the project.. Last but not least the project aims to preserve and protect as much biodiversity as possible.



TODAY

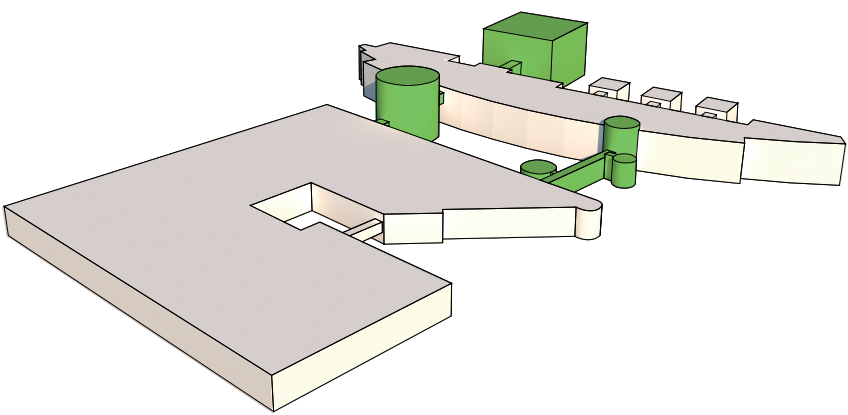
Two buildings – two separate departments
Existing architecture with geometrical shapes



NEW CENTER

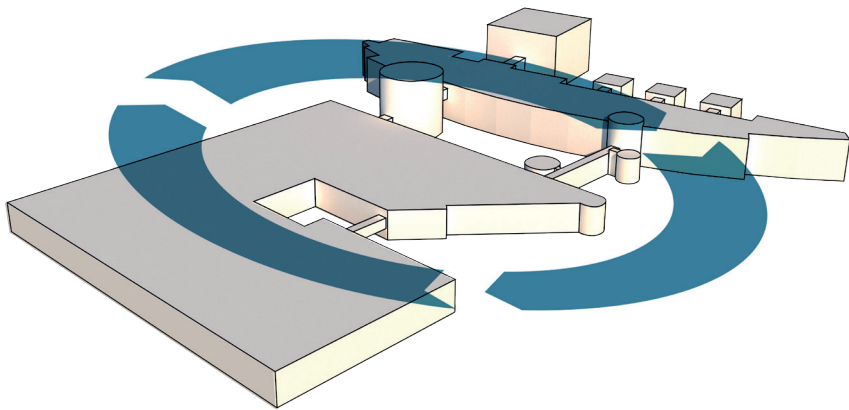
New central point is uniting the buildings – rotunda and bubbles is added
Indoor functions and outdoor oasis

Continue architectural geometrical shapes from existing architecture Rotunda-shape
preserves good daylight conditions in existing buildings



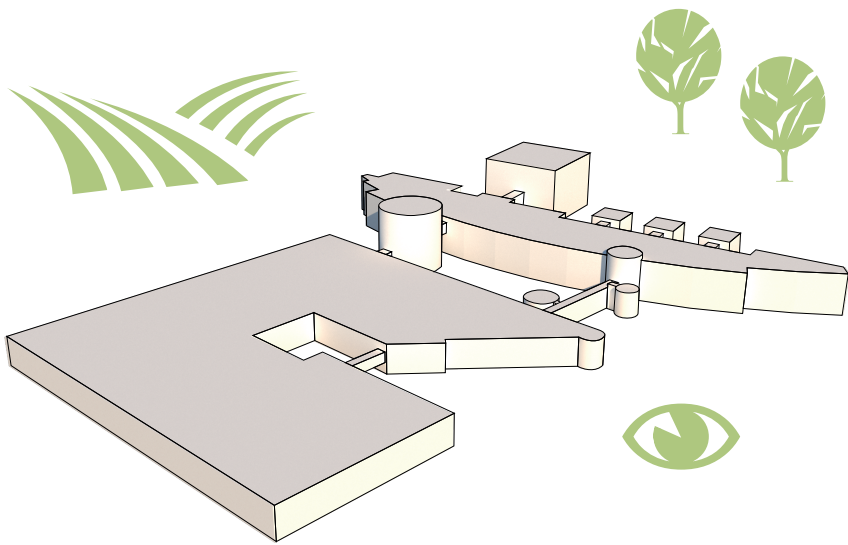
MORE M2

Need for more m2 - square building is added
Continue architectural geometrical shapes from existing architecture



ONE UNITED AME BD PREMISES

Interior flowscape through rotunda and glass corridor is creating a new united premises



SURROUNDINGS

- Preserve and emphasize the magnificent view south of premises
- Preserve and emphasize relation to forest east of premises
- Preserve and emphasize green hill north of premises

LANDSCAPE

VISION

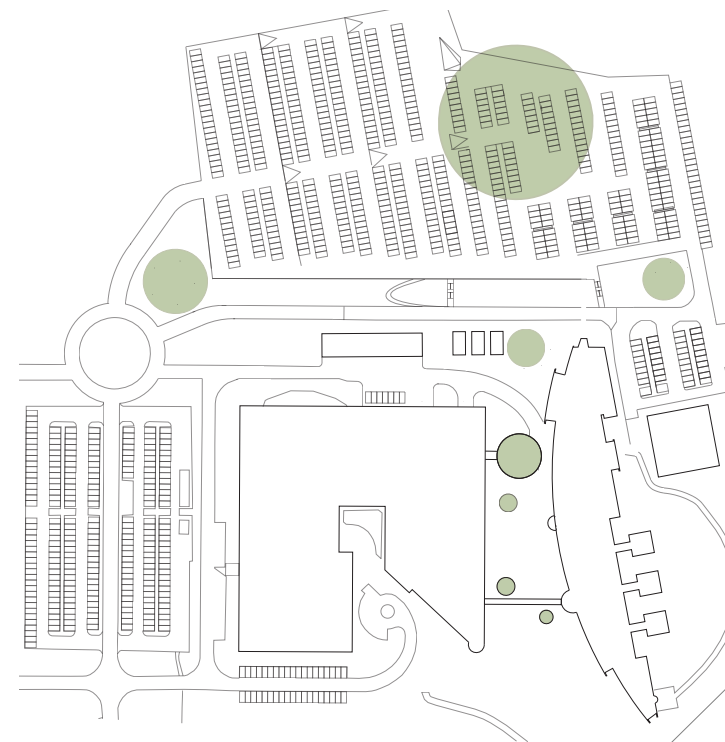
The landscape project is a key component in the vision of a United AME and BD Premises.

The features of the landscape involve spaces for arrival, access, reflection and recreation and support these activities - as do the buildings. The features that are unique to the UABP landscape project hold a uniting character and thereby enhance the sense of common identity.

The expression of the UABP identity is seen in elements that involve nature, technology, sustainability, high quality and invention.

The arrival to the new parking space offers either a slow pan across East 2, East 3 and the new buildings Rotunda and Square or a shallow ascend to the new parking area with vistas of the surrounding rolling landscape and the United AME and BD Premises.

The access for employees to the Premises is primarily from the north or alternatively, via the existing parking, from the west. Guests will arrive to the visitor entrance at the location of the main entrance to East 2 of today.



CIRCLES AS AN ELEMENT IN THE LANDSCAPE



SITUATIONSPLAN 1:1500

The landscape work near the buildings has two principles: Firstly, the surrounding landscape has a natural presence near the buildings and represents sustainability with indigenous plants and allusion to outdoor activities. In addition, this form of landscaping is sustainable in the fact that it requires quite modest maintenance. This principle is in line with the Grundfos grounds policies (as described in the Grundfos pamphlet “Vært for det vilde”)

Secondly, the interior landscape in the courtyard between East 2 and East 3 has a more deliberate design. This space is a more elaborate design which plays on the interaction between circular and orthogonal elements. The courtyard interacts with the interior spaces of East 2, East 3, the Bubbles and especially the new canteen.

The work with the landscape design has been committed to producing solutions that can be maintained without a need for too much manual labour. The landscape will require some degree of maintenance but plants that generate very much growth, which needs cutting back, have been avoided and the use of deciduous plants and trees, that require removal foliage, have been minimised.



EXISTING VIEW AND CHARACTER



REFERENCES, PARKING AREA WITH GREEN CHARACTER



PARKING

East 2, parking West (today 167)	167
East 2, entrance parking (today 24)	43
East 3, parking East (today 103)	38
Parking North (today 178)	624
Total (today 472)	872

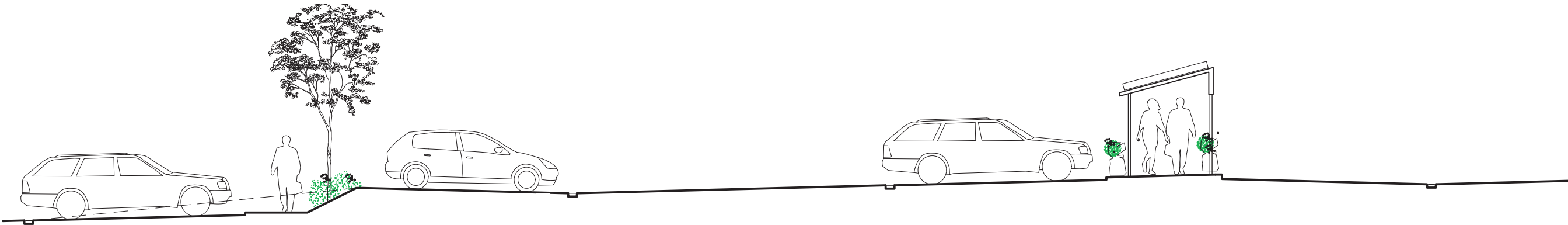
ARRIVAL AND PARKING – ACCESS TO UABP

There are two main roads leading to the parking areas: one from the south, via the western existing parking, and one from the west. Both arrive at a suggested roundabout which is not a part of the current UABP project. From the suggested roundabout one road winds around a circle of trees and one leads past the northern side of the buildings and arrives at the eastern end of the new parking facility. This road will need to be re-paved with pavers and speed regulating elements will need to be implemented.

The new parking facility is designed with thought to comfortable parking and with subtle allusions to technology and sustainability. It contains solar energy installations, covered walkways, shaded areas, green elements, drainage to swales via a water cleaning installation. The parking consists of three main elements, of which two are new: The Sloping Plateau and the Grove. Together with the existing parking, these elements constitute the new parking area to the north of the UABP. The three elements represent different approaches to parking and complement each other while reducing the scale of the entire parking space.

The Sloping Plateau, the largest area, is characteristic in having covered walkways with solar panels alternating with walkways with few smaller trees. The Grove is characteristic because of its large circle of trees which provide shade for the parked cars.

The existing parking, the high plateau, is characteristic because of its openness with beech bushes perpendicular to the rows of parking. The buildings of the UABP are accessed from the parking area via stairs and covered walkways. There are separate entrances to East 2 and 3, as today. One main entrance in East 2 near the new canteen is added.



PRINCIPAL SECTION 1:100 / COMFORTABLE PARKING

THE COURTYARD

The courtyard is at the heart and centre of the United AME and BD Premises and contains spaces for reflection and recreation with greenery and water features. The space provides ample opportunity for walk-and-talk meetings as well as contemplation, and it also serves as a focal point from the office spaces. The Rotunda overlooks the Courtyard and the Bubbles are an integral part of the courtyard space. The space is a composition of circles and orthogonal figures that flow from the levels of the Rotunda and onto the surface of the courtyard. Here the orthogonal figures compose flowing steps that divide the space in two levels and accentuate the difference in height from one side of the space to the other. The higher level provides access to the façade of East 3 and the lab-floor. The stairs contain a group of plane trees and a form a space for gathering which is marked with a magnolia tree.

The lower level contains a dynamic water folly which shoots water from small jets as a reflection of the level of solar energy present. The lower level also provides access to the canteen and contains an area for sitting outside the canteen by the Rotunda next to a mirror pond. The Courtyard is a space for the employees to use and enjoy, and it will be a strong identity marker for the United AME and BD Premises.



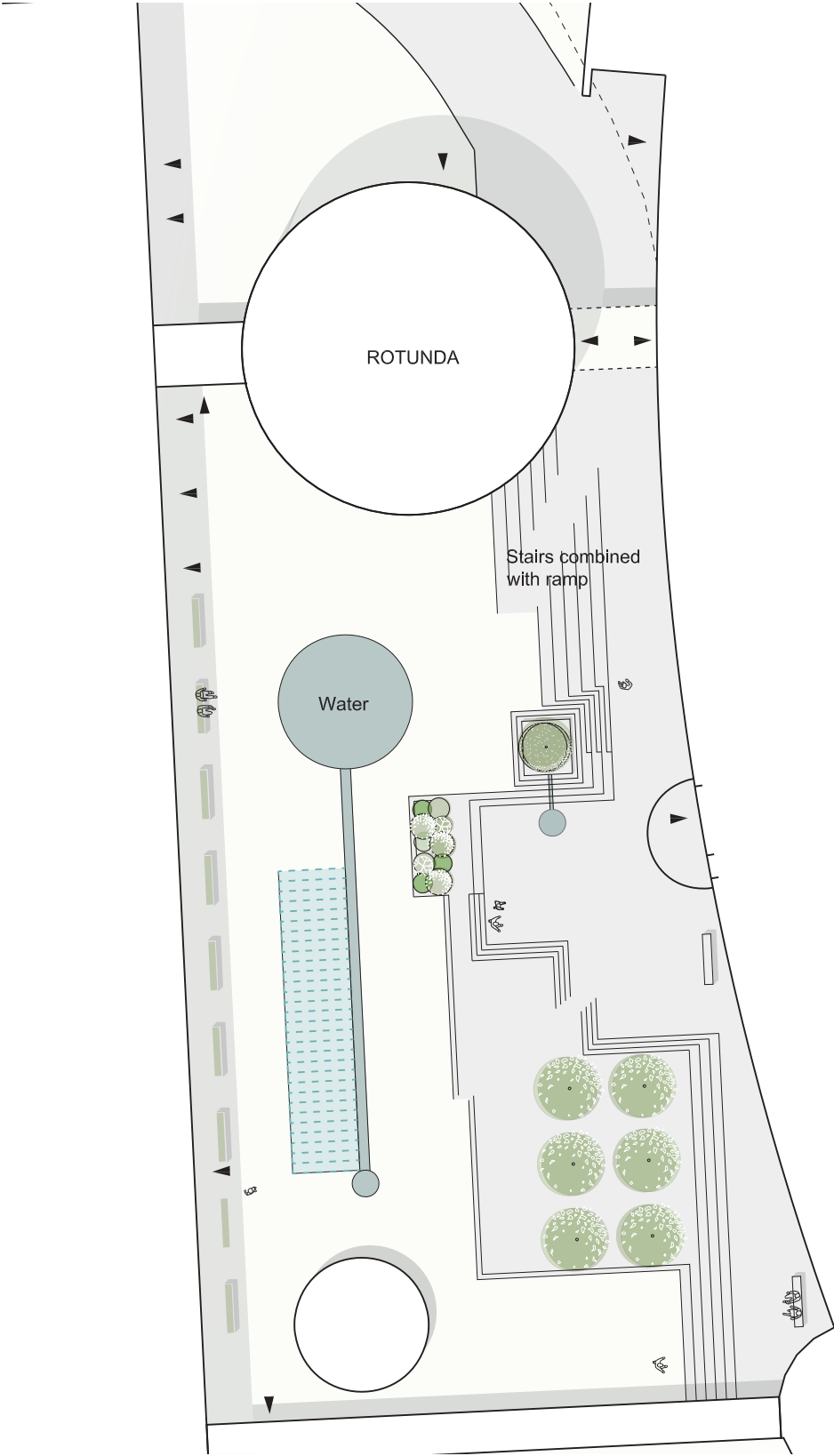
STEPS INTEGRATED TO A LANDSCAPE



HIGH GRASS



WATERELEMENT



SITUATIONSPLAN / COURTYARD ZOOM / 1:400

THE SQUARE

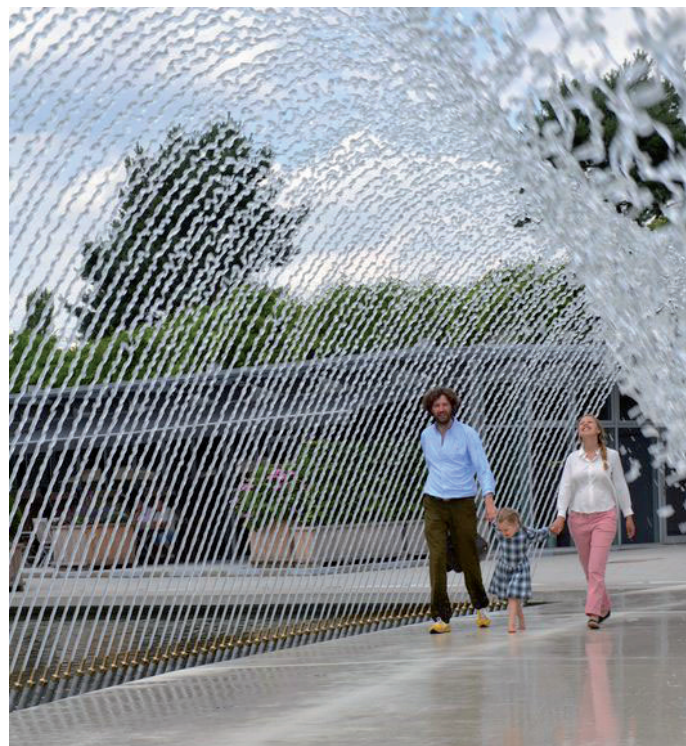
The Square is accessed from the north. The surrounding landscape meets the UABP in its natural state. The plants here are indigenous grasses and flowers, such as poppy and lupine, that could be naturally found in the surrounding area in meadows, slopes and troughs. At the perimeter of the building the growth is mowed.

In this way, the landscape maintains its biodiversity and the ground can be kept in a very sustainable way.

The flowing landscape comprises a dualistic contrasting relation with the concise design of the Square where the elements accentuate each other. Furthermore, the vertical element of the panopticon in the interior in the Square is a contrasting enhancement of the horizontal nature of the gently sloping landscape around it.



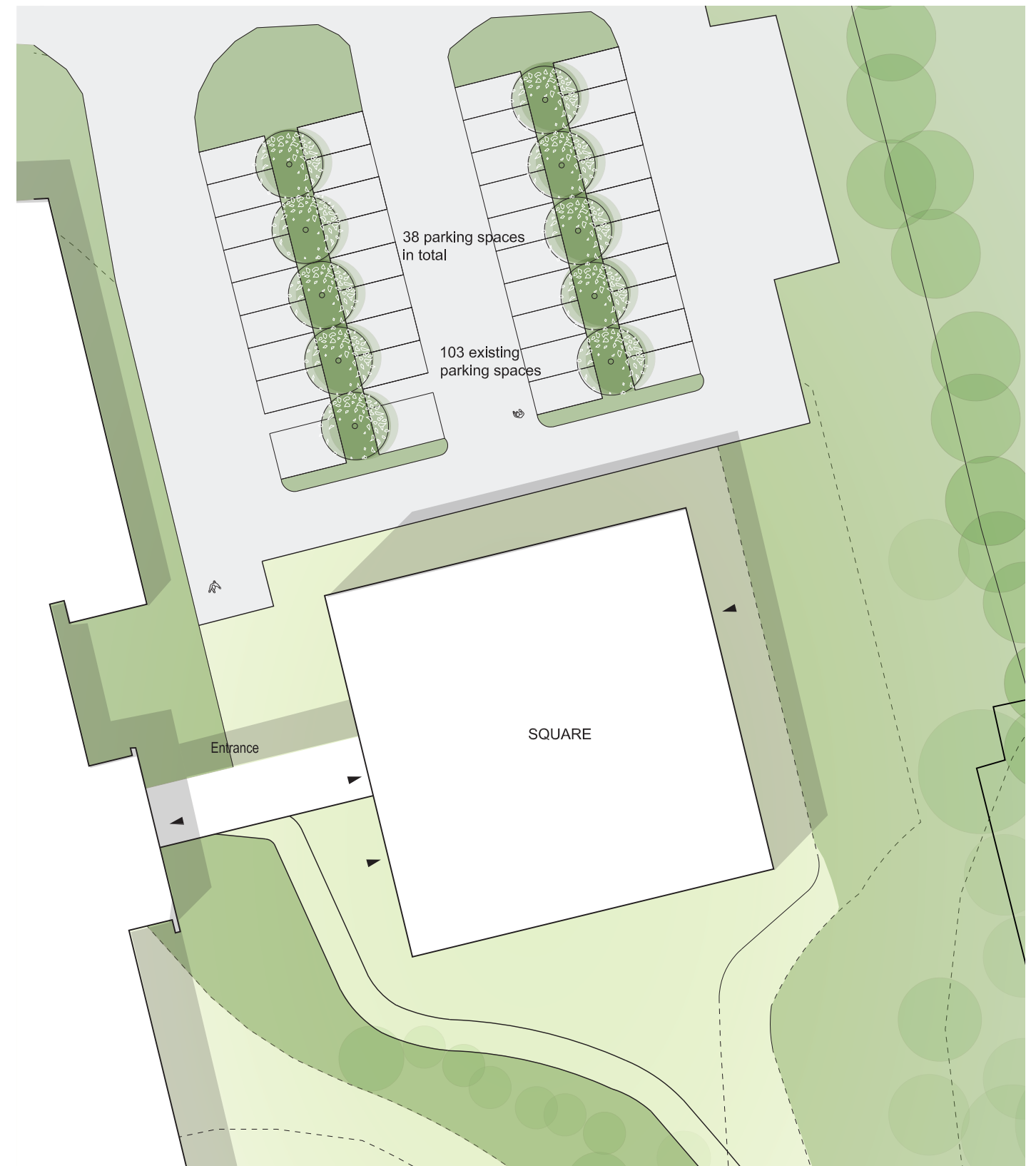
EXISTING VIEW AND CHARACTER



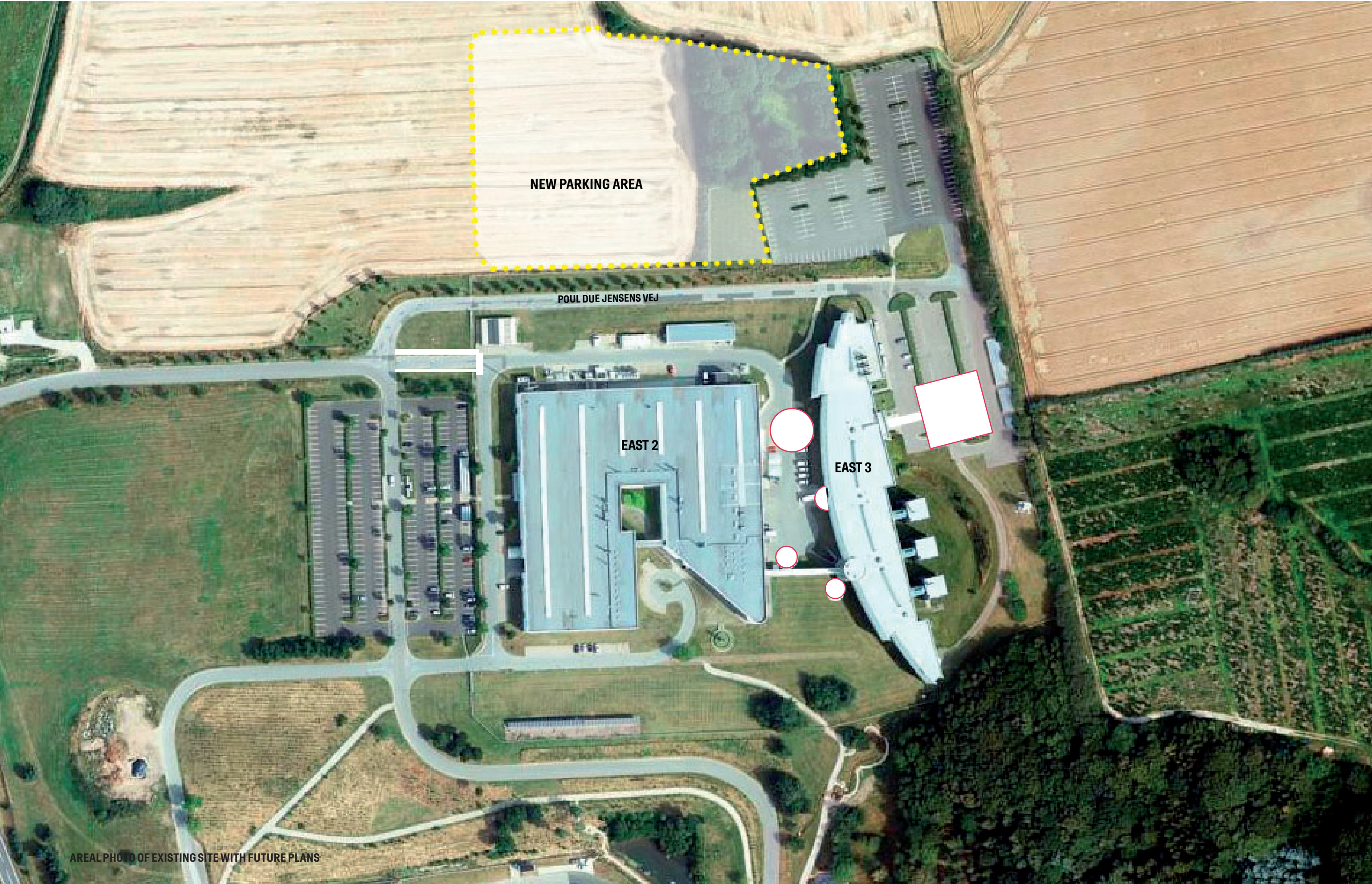
WATER ELEMENT



COLORFULL FLOWERS



SITUATIONSPLAN / "SQUARE" ZOOM / 1:400



AREAL PHOTO OF EXISTING SITE WITH FUTURE PLANS

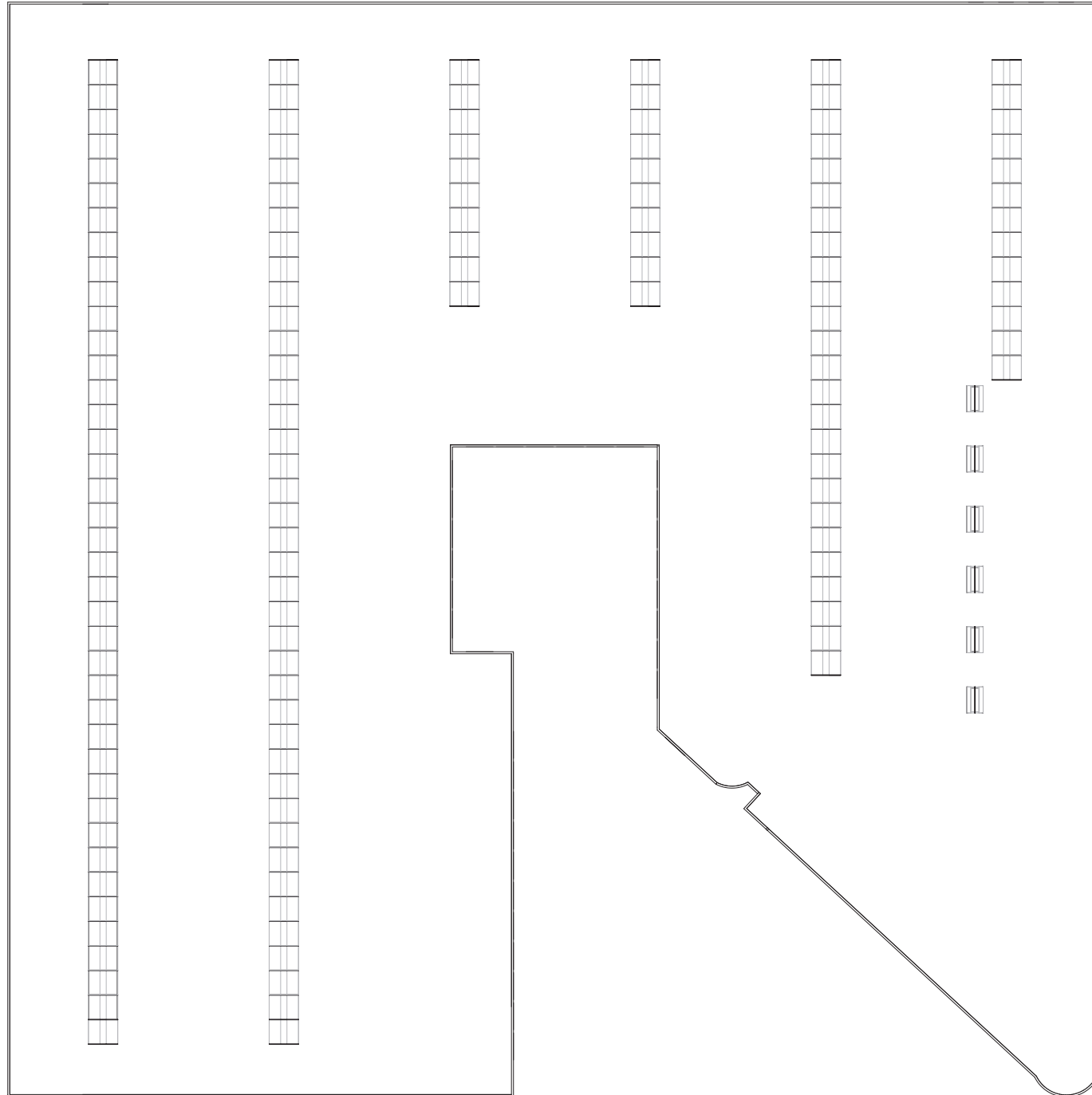
PLANS



PLAN LEVEL 100, 1:600



PLANS

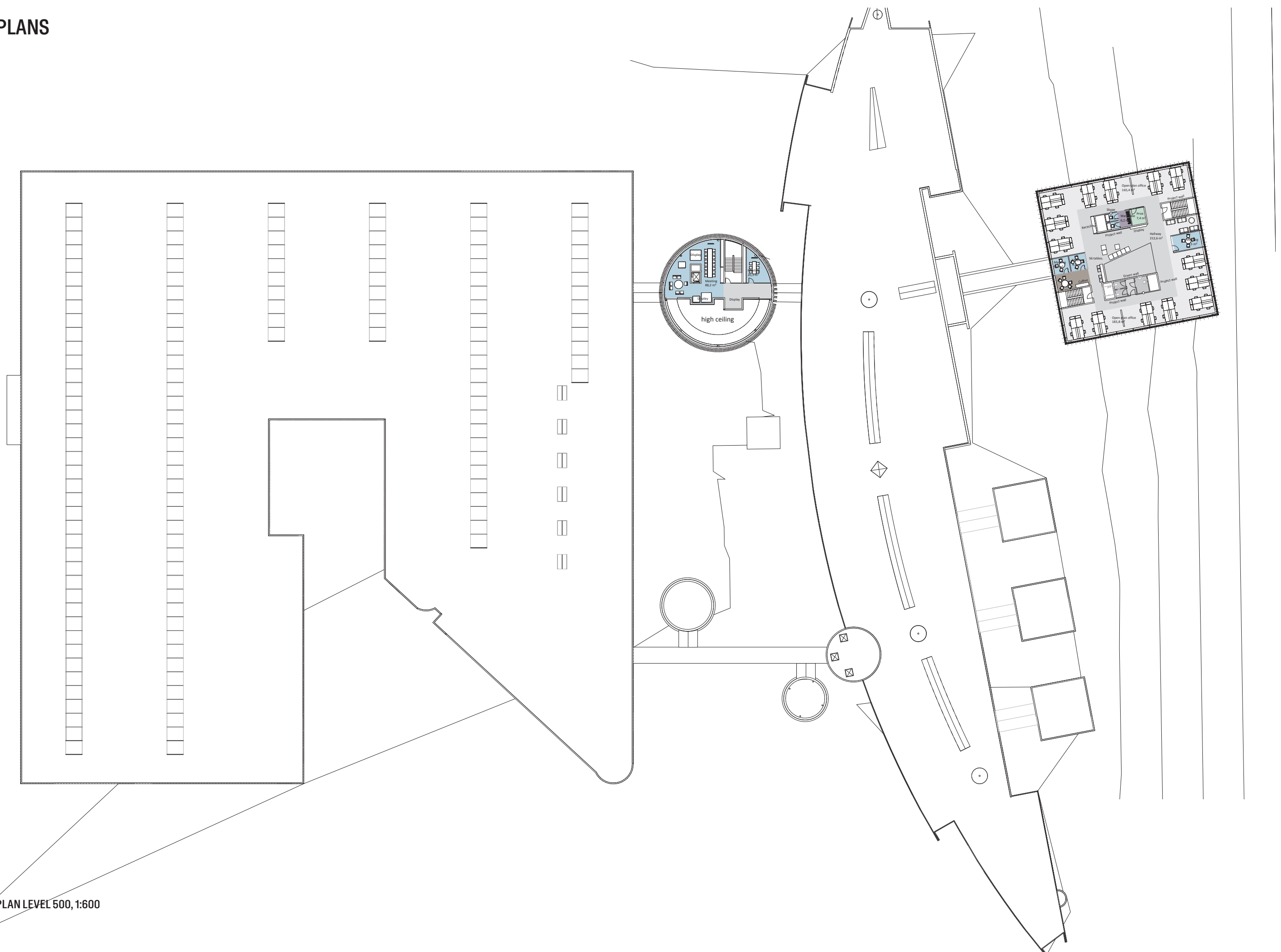


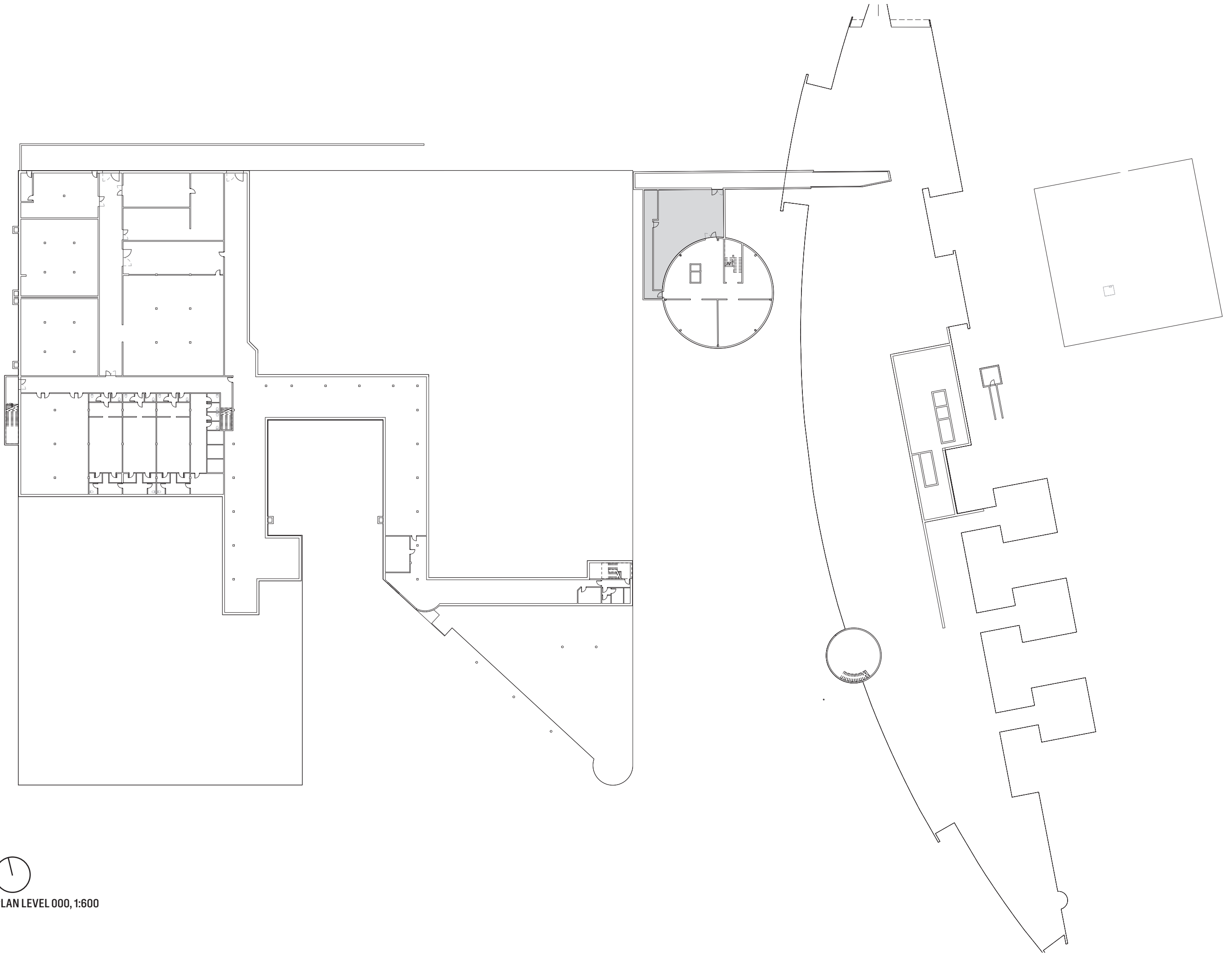
PLAN LEVEL 300, 1:600



PLAN LEVEL 400, 1:600

PLANS

~~PLAN LEVEL 500, 1:600~~



PLAN LEVEL 000, 1:600



VIEW FROM NORTH TOWARDS THE NEW SQUARE BUILDING



SQUARE

The Square sits in the landscape as a grander form of the existing cubes. It takes its place in the current composition and the rational structure accentuates the softness of the rolling landscape.

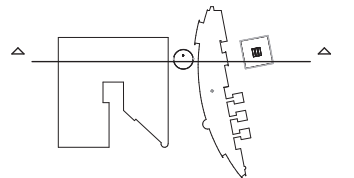
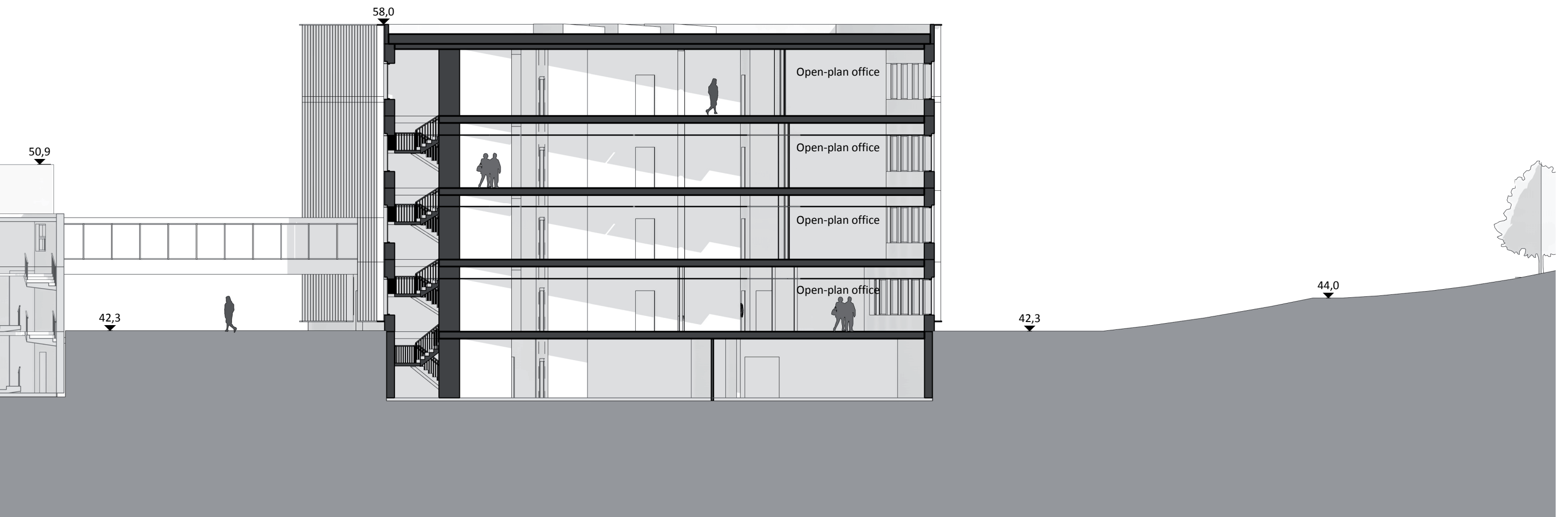
It connects to the East 3 building and is its own entity with AME and BD electronics workstations as a beacon for the new united AME and BD feeling.

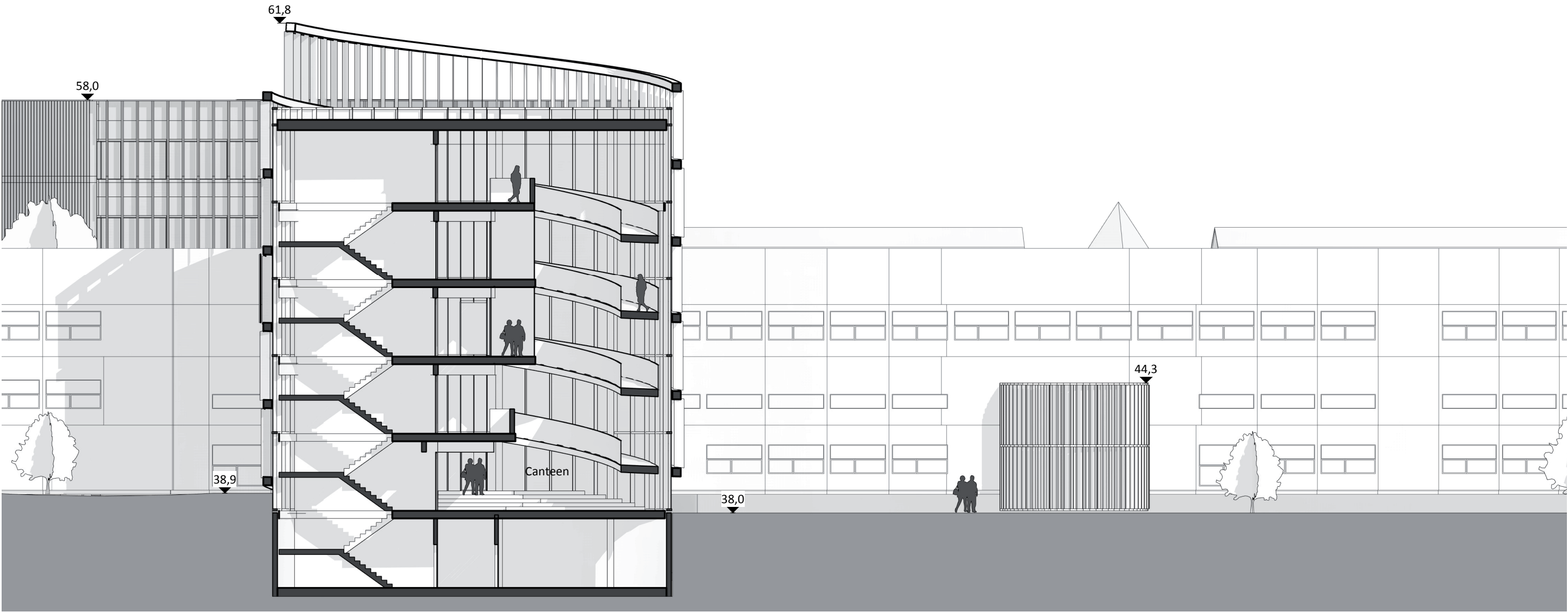
The façade is highly rational and technological in its design and should reduce the need for solar shading, even though mechanical exterior blinds are integrated.

SECTION AA

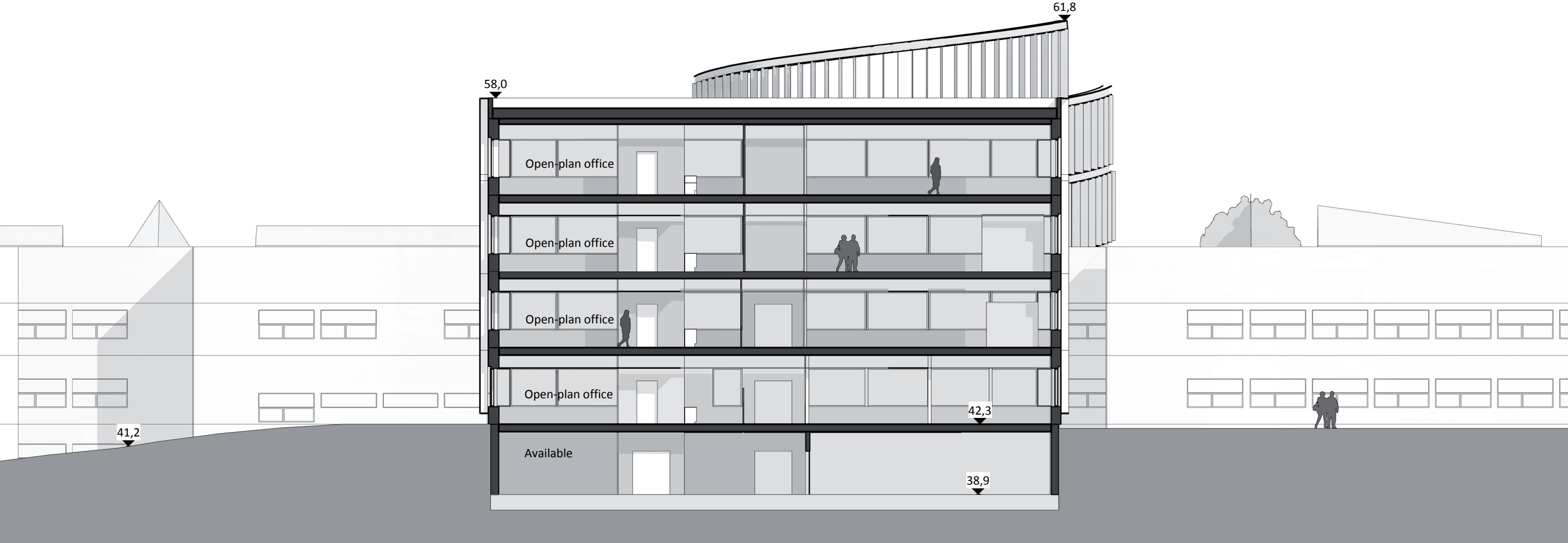


SECTION / UNITED PREMISES / WEST EAST / 1:300





SECTION / ROTUNDA, SOUTH/NORTH / 1:200



SECTION / SQUARE, SOUTH/NORTH / 1:200

EXTERIOR

COURTYARD

The courtyard is at the heart and centre of the United AME and BD Premises and contains spaces for reflection and recreation with greenery and water features. The space provides ample opportunity for walk-and-talk meetings as well as contemplation, and it also serves as a focal point from the office spaces.

The Rotunda and the Bubbles buildings in combination with the fountain add to the dynamic feel of the Courtyard space.

The Rotunda has a highly technical louvre façade design which comprises an allusion to the Archimedean screw and a tribute to the core of Grundfos, the pump.





INTERIOR





CANTEEN

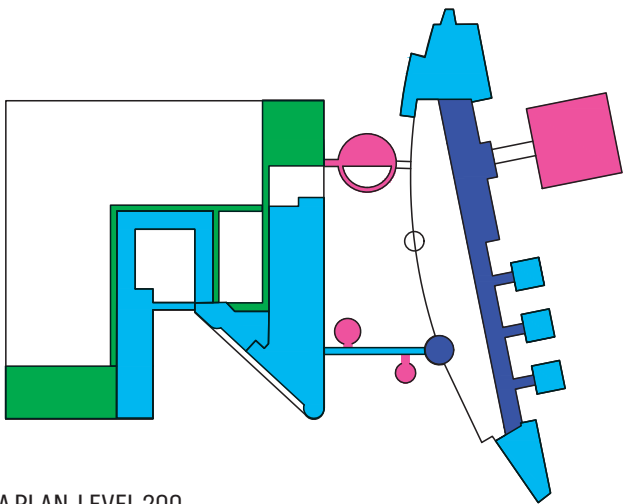
The new canteen is placed in the East 2 and Rotunda buildings. The East 2 space provides access to the Rotunda and opens to the Courtyard. It is a place for all types of employees to mingle.

The space is suited for large information gatherings and will provide areas to display tech-inventions to arouse the technical curiosity of employees.

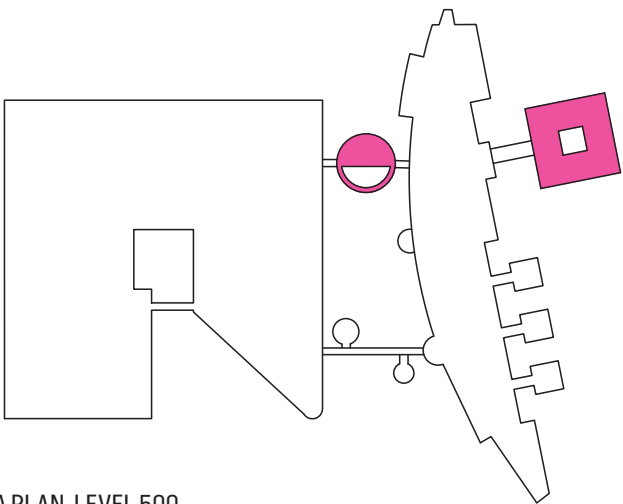


AREA AND CONSTRUCTION BUDGET

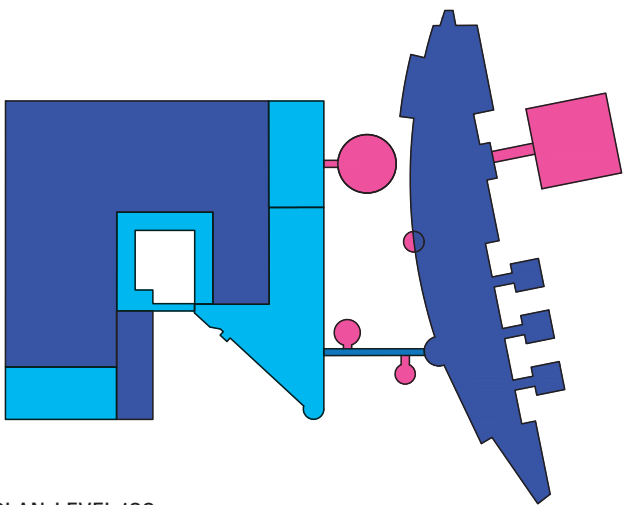
The areas and the construction budget have evolved with the project. The underlying assessment contains many variables, and these are the main figures.



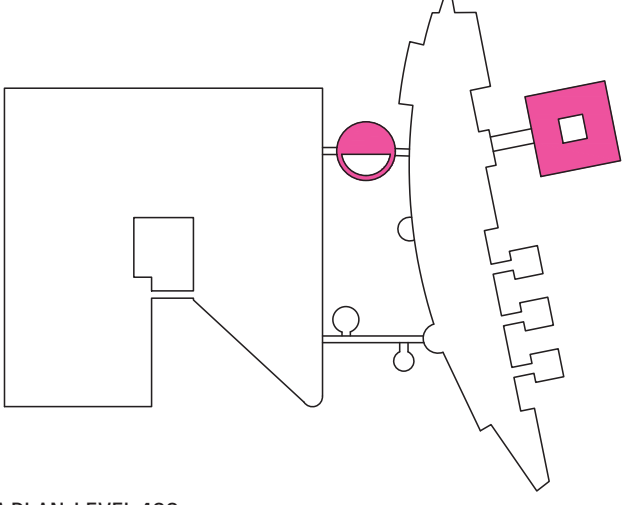
AREA PLAN, LEVEL 200



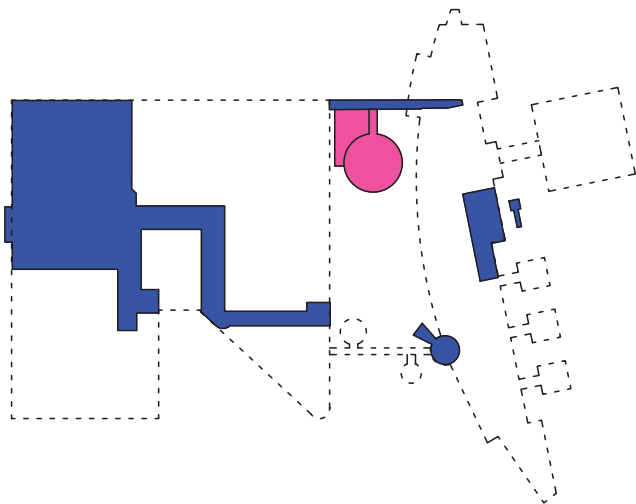
AREA PLAN, LEVEL 500



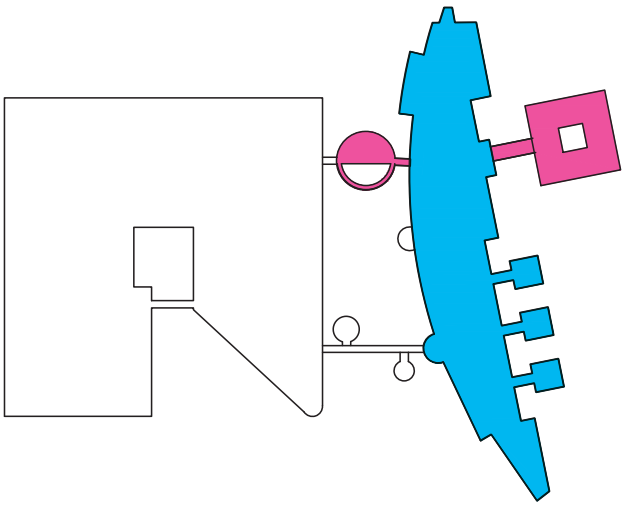
AREA PLAN, LEVEL 100



AREA PLAN, LEVEL 400



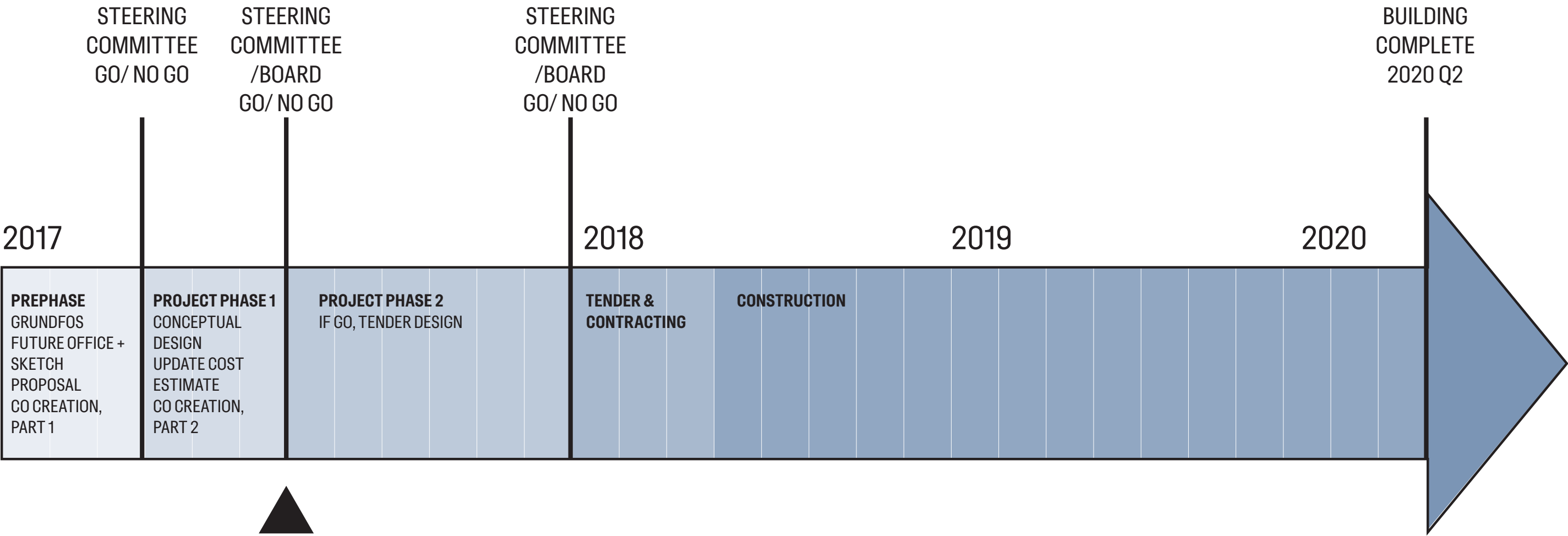
AREA PLAN, LEVEL 000



AREA PLAN, LEVEL 300

BUILDING	plan 000	plan 100	plan 200	plan 300	plan 400	plan 500	total
EAST 2							
as today, maybe small interior changes	3368	6510					9878
rebuilt	0	3559	2638				6197
new built	0	0	1578				1578
GLASS CORRIDOR + BOBLES							
rebuilt		80	80				160
new built		160	110				270
ROTUNDA							
new built	491	325	232	232	225	225	1730
EAST 3							
as today, maybe small interior changes	358	4100	1266	0			5724
rebuilt	0	0	1206	4073			5279
new built	0	0	0	0			0
SQUARE							
new built		828	774	774	703	703	3782
LANDSCAPE							
parking and misc (trees only at perimeter)		18000					18000
rework existing parking (square)		3000					3000
courtyard		2200					2200
Covered walkways at parking (~600 mtrs)							1
MISC. MODIFICATIONS IN EX.							1
FURNITURE (new areas +)							12500
SPECIAL SUSTAINABILITY FEATURES							
Solar panels 800 m² (parkingspace)							800
Solar panels 300 m² (Square)							300
EXTRA FEATURES							
Bridges - covered exterior (60 mtrs + 30 mtrs)							90
Tunnels ex. lifts (60 mtrs + 30 mtrs)	NB: NOT INCLUDED						90
as today / all in all							15602
difference relative to 27.03.2017							-7194
rebuilt / all in all							11636
difference relative to 27.03.2017							7940
new built (east 2 and 3)							1578
difference relative to 27.03.2017							-261
new buildings							5782
difference relative to 27.03.2017							981

TIMEFRAME



TIMEFRAME

The expected timeframe of the project is illustrated above.
The principles of the construction flow have been taken into consideration.



