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TH001 EUROPAN 9 | TRONDHEIM | **INSIDE-OUT**

KNOWLEDEGE TOWN

Trondheim´s primal asset in establishing itself as its own definition or brand of City of Knowledge relies on the powress of its higher education institutions. Building upon the existing knowledge base and a rapidly developing creative industry, and combined with the town's attractive features, Trondheim can develop the driving force to establish itself as a the focus of regional growth, balancing out to some extent the dominating role of Oslo at national level.
Current debates on the universities' role in such strategy are centred on assessing the potential benefits of co-locating different faculties in a new campus. In fact, arguments opposing this move are at present gaining the upper hand. Our proposal stems from the strategic importance of developing such as an environment, fleshing out the latent opportunities that would be fulfilled through it. These would be:
- A multi-tenanted campus would maximise the exchanges between education, research and industry agents.
- The campus would become an identified centre for interaction between town and university.
- Showcase urbanism.

How can the campus be developed in a sustainable and viable fashion over time? What would be the spatial an programmatic definition of such an urban domain?

ORANGE AXIS + GREEN MAT

KNOWLEDEGE CAMPUS

BRIDGE THE GAP

+

MIX AND MATCH

+

SCATTER AND CONNECT

The knowledge campus develops through a process of colonisation. Bridging the gap between the NTNU park and the riverside green (the study area) a new heteregoneous urban open space is created. Programmed hubs are scattered around pedestrian nodes. The identity of the emerging educational institution results from the interaction between these.

STUDY SITE DIAGRAMS

SCALE 1/6000

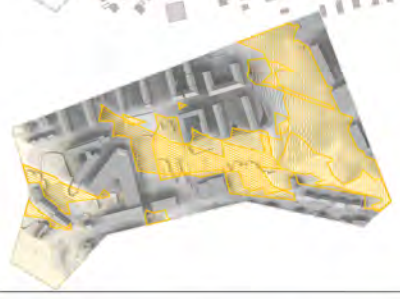
RE-SHUFFLE PARKING LOTS AND GREEN SPACES:

-New lineal underground parking + new circulation

-extended green mat

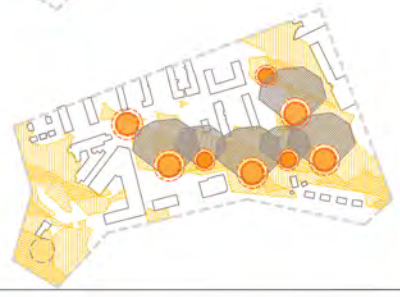
NEW BUILT STRUCTURE:

-Hub buildings amchured on nodes along new public path network



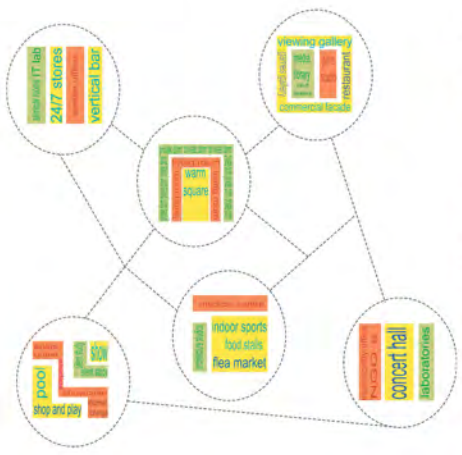
HUBS BUILDING:

-Located so as to maximise solar exposure



HUBS IN THE PARK

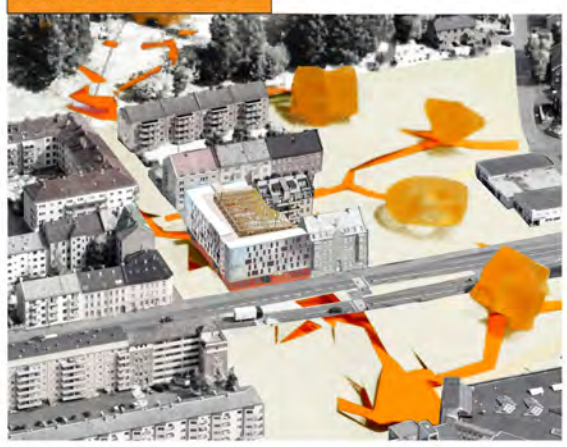
The extended park marks the location of the future campus. It is to be colonised in a loose structure by a number of scattered buildings with diverse programmes packed into robust hubs built around internalised public spaces (atria, galleries,rooftop greenhouses). The formal and programmatic definition of these ' warm icebergs' allows enough flexibility to encourage the occurence of informal exchanges and unchartered encounters.
Each hub, located at the nodes of the camous ´warm path network, is characterised by a certain degree of specialisation. By virtue of their size and separation from each other buildings are allowed to feed off each other. In essence, what is envisaged is a collegiate structure, where each building can operate as an individual mix-use institution within the overall framework of the knowledge campus.



MULTI-TENANT CAMPUS-MIXED

PROGRAMME HUBS

WARM AXIS IN WINTER

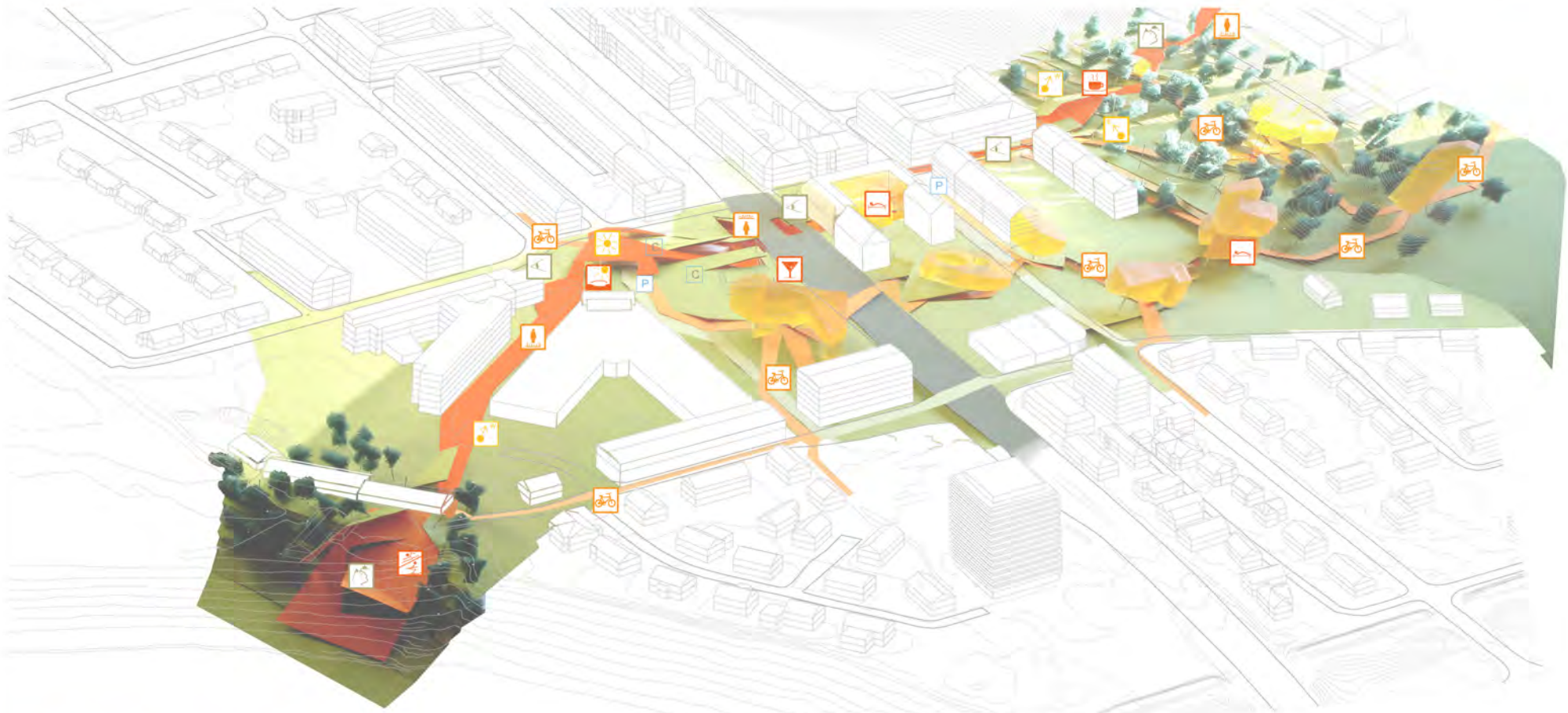


A PATH FOR ALL SEASONS.

The competition brief touches upon an important array of questions and expectations, ranging from the very specific to the highly speculative. This is but a reflection of the scope of the potential agents involved and their differing needs. Add to this the diffused and disjointed urban environment where the site is located and it becomes apparent that any urban intervention must operate from a set of internalised parameters. The orange axis (as opposed to the green one proposed by the local development plan) is introduce as a somehow alien element that nevertheless establishes a clear line of action.
The link between the Gloshaugen plateau and the Nidelva river is designed as a continuous linear public space dotted with a sequence of varying programmes, including the proposed students' hall of residence. It is envisaged as an acclimatised street, a warm path with below surface heating that allows for an all-year usage.
The orange axis constructs an easily recognisable image of the new campus, restructures the existing urban structure, and provides an infrastructural anchor for future development.

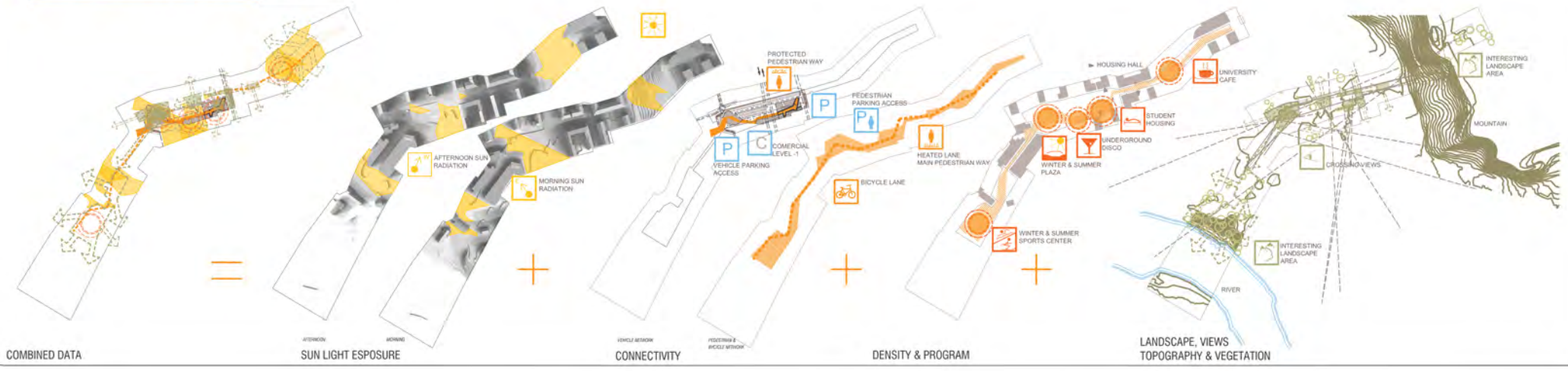
HARDEN AND SOFTEN

A two tier strategy accommodates short and long term solutions, allowing for simultaneous processes of urban growth and regeneration and the use of specific planning tools for each of these. Two strands, one hard (orange), the other soft (green). The first addresses the connection between the NTU campus and the river. A built axis that, by including a large underground car park, frees up the plots for future development (highlighting in fact the need to take action). A linear infrastructure that concentrates pedestrian and vehicular flows, becomes the ready-made image of the new campus, and anchors vital connections for future development. The latter strand relies on an extension of the existing hillside park, creating a green mat that will mature over time and become the focus of the second phase development. A single plot that literally serves as the baseboard to discuss the image and programmatic structure of the future knowledge park.



DIAGRAMS ORANGE AXIS

SCALE 1/5000



COMBINED DATA | SUN LIGHT ESPOSURE | CONNECTIVITY | DENSITY & PROGRAM | LANDSCAPE, VIEWS TOPOGRAPHY & VEGETATION

2

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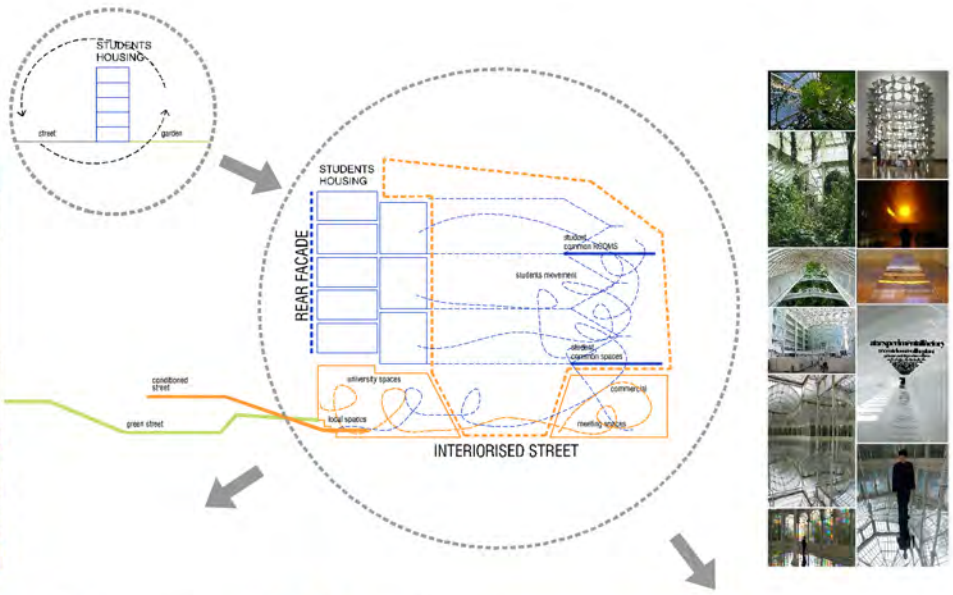
EXTERIOR VIEW FROM ALBERSGATE

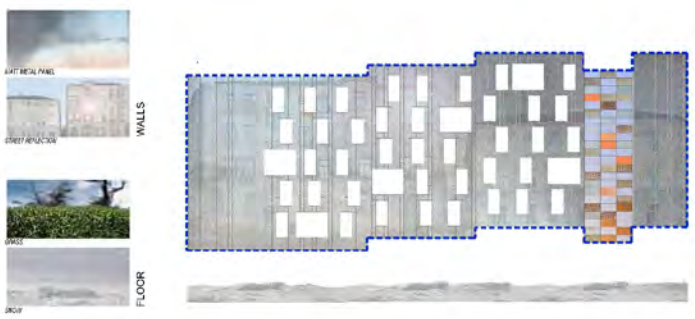


INSIDEOUT ARCHITECTURE

Turn architecture inside out and it becomes urbanism. The student residence is plugged into the orange axis, internalising the public space which is borrowed deep in the heart of the building. The internal arrangement of the building is inverted so as to line the internal façade with the large common living rooms (or rather, the *superkitchens*). A large metal and glass cage encloses the public atrium, thus allowing for the introduction of climate control mechanisms.
The public atrium is designed so as to build a particular atmosphere through a multiplicity of reflected lights and images. Metal, glass and mirrored surfaces titillate with variations of natural and artificial lights. The crystalline interior reverberates with the movements of dwellers and passers-by. The glazed façade becomes in effect a giant screen subdivided into a smaller grid of colours and reflections.

The theatrical environment of the interiorised street is enhanced by the spatial organisation of accesses to the student flats. These are concentrated around a single circulation chore from which stems a series of light bridges that lead to the flats' front doors. A long and wrinding route that builds a Piranesic interior criss-crossed by metal platforms.

REAR FACADE



INTERIORISED STREET

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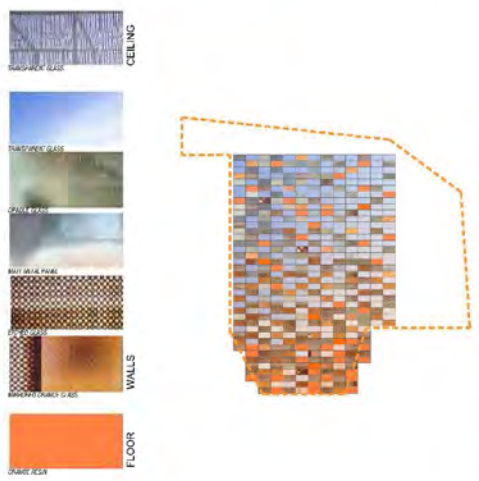
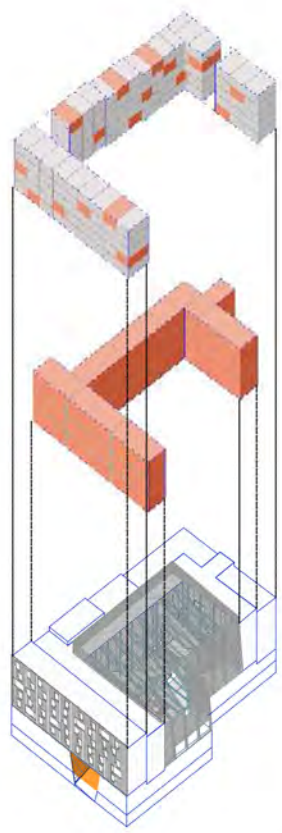
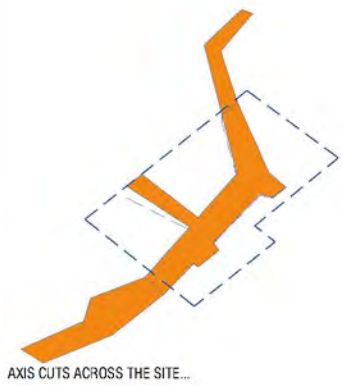
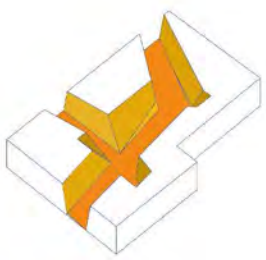


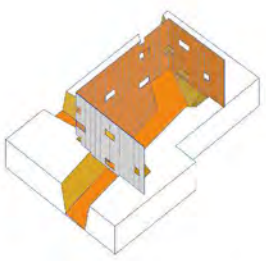




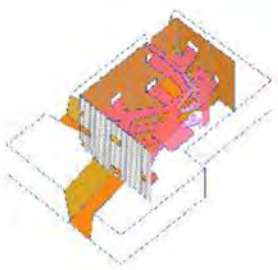
AXIS CUTS ACROSS THE SITE...



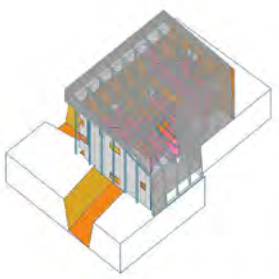
...BUILDINGS CROP UP AROUND IT...



...WRAP A PANELLED SKIN ABOVE THE ALLEY...



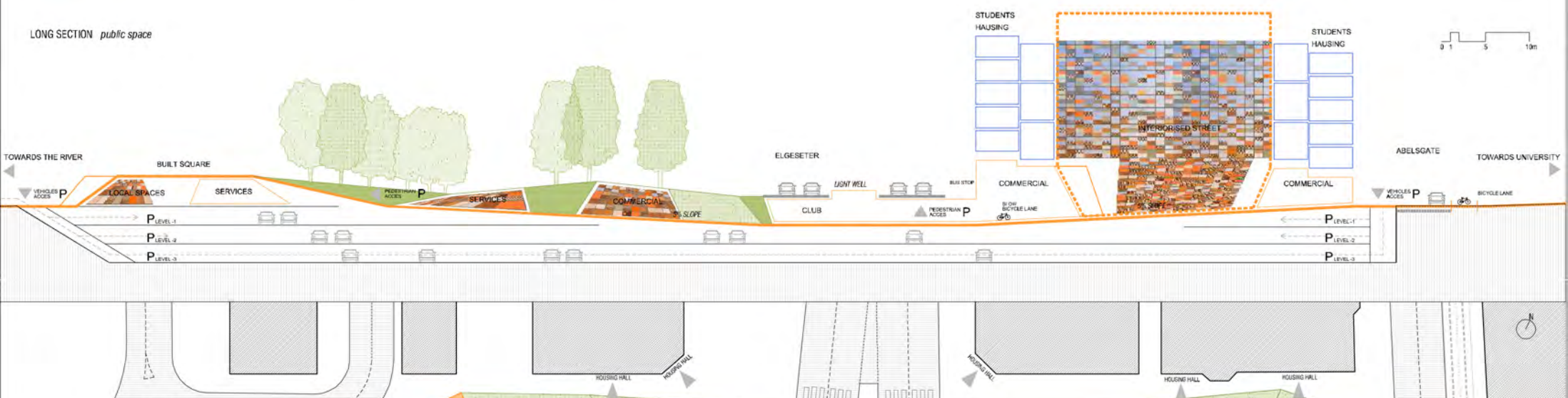
...BRIDGE THE ATRIUM WITH LIGHT PLATFORMS...

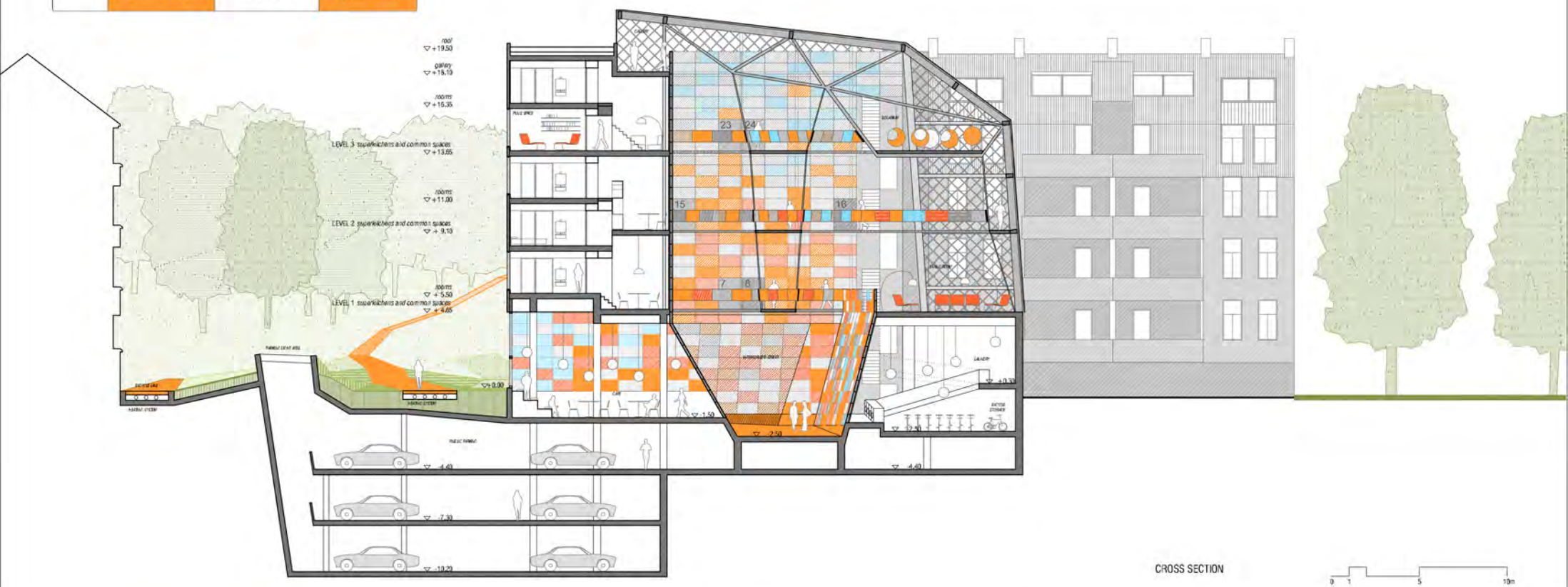


...ENCLOSE THE SPACE WITH A GLASS CAGE...

...SLOT THE DOUBLE LAYER DOMESTIC SPACES...

LONG SECTION *public space*

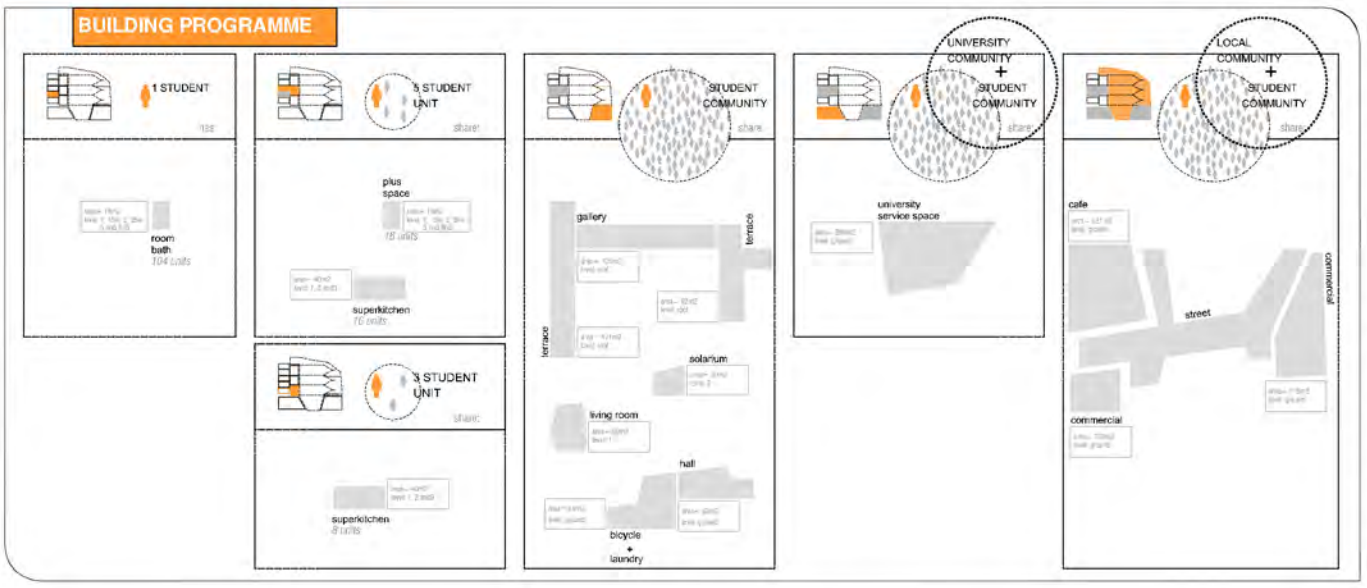




CROSS SECTION

0 1 5 10m

BUILDING PROGRAMME



DOMESTIC BLISS
Student housing units are structured from three basic spatial units in a variety of combinations:
-**private bedroom.** Single bedrooms with en-suite shower in the exterior façade.
-plus space. Functionless space piercing in a random fashion the front façade. Final (or indeed, temporal) use to be agreed upon by set of occupants.
-superkitchen. Large common room. Lofty kitchen with a generous volume (ceiling height of 4.5 metres) and a glazed façade on to the interiorised street.
The inside out scheme rearranges spatial notions of privacy and domestic habits. The study bedrooms are piled around the outermost layer of the building, animating what would normally be the its most public façade. As a counterpoint, the plus spaces are scattered so as to be shared between 5 units. All rooms look on to a superkitchen, the focus of communal life openly exposed to the public atrium. As a result an apparently dense and vibrating interior reverberates with whatever activities are carried out within the flats, redefining the notion of domesticity and privacy.
Height differences between the larger and smaller spatial units allow for shifts in section which, combined with the varying allocations of the plus spaces, generate various flat types. A further degree of differentiation is implied by the undefined programme of the plus spaces.

COMMON LOUNGE

STUDENT UNITS TIPOLOGIES

TIPOLOGY 1
5 ROOMS
1 SUPERKICHEN
1 PLUS SPACE

ROOMS
wardrobe
accoustic division
private

INTERIOR VIEW OF SUPERKITCHEN

BATH
private

SUPERKITCHEN
store
kichen forniture
cupboard
book shelf
shared

PLUS SPACE
students can decide the use of this space: green house, dvd room, lecture space,...
it can also be used as an extension of the superkitchen
shared

TIPOLOGY 2
5 ROOMS
1 SUPERKICHEN
1 PLUS SPACE

ROOMS
wardrobe
accoustic division
private

BATH
private

SUPERKITCHEN
store
kichen forniture
cupboard
book shelf
shared

PLUS SPACE
students can decide the use of this space: green house, dvd room, lecture space,...
it can also be used as an extension of the superkitchen
shared

TIPOLOGY 3
3 ROOMS
1 SUPERKICHEN

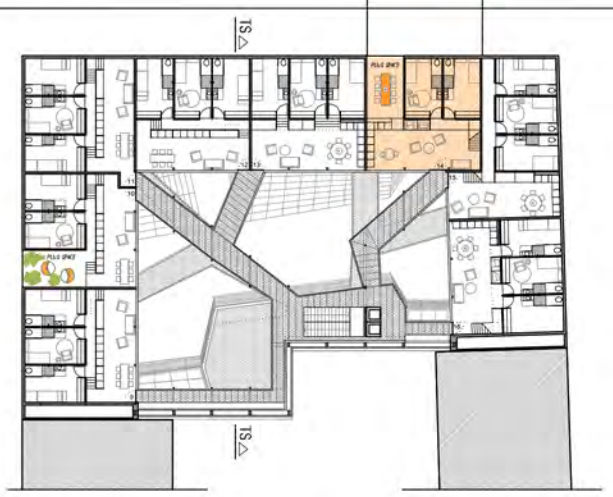
ROOMS
wardrobe
accoustic division
private

BATH
private

SUPERKITCHEN
store
kichen forniture
cupboard
book shelf
shared

LEVEL 1 *superkitchens and common spaces*
▽ + 4.65

0 1 5 10m



LEVEL 2 *superkitchens and common spaces*
▽ + 9.10

0 1 5 10m

LEVEL 3 *superkitchens and common spaces*
▽ + 13.65

0 1 5 10m