

# TECHNICAL SPECIFICATIONS

LES  
CIMES DE  
LA MADELEINE





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# TECHNICAL DESCRIPTION

## PROJECT PRESENTATION

This mixed-use retail and office property dates back to 1932 and features a global area of c. 32,000 sqm. It has undergone a global heavy refurbishment in 1992 (office and retail) and a retail repositioning from 2011 to 2013.

As of today, the property develops:

- Eight above-ground levels (ground floor: office lobby and retail space, 1<sup>st</sup> floor: retail space, and 2<sup>nd</sup> to 7<sup>th</sup> floors: office space)
- Four below-ground levels, with the 1<sup>st</sup> basement level for retail space, and the other basement levels for plant room and car parks.

The project will carry out a heavy refurbishment of the office spaces and basements, excluding the retail space.

## GENERAL DESIGN ELEMENTS

According to fire safety regulations, the property is classified as an ERP category 1 type M, L, N, W and PS.

According to the French Labour Code, the office spaces are designed for one to four user groups per level (lots A, B, C and D/E), either fitted out as open space or partitioned according to applicable regulations.

The suspended ceilings will be made from mineral fiber ceiling tiles and positioned according to the office layout plan. In addition, plasterboard suspended ceilings and cover strips will be provided.

Each lot will provide its own installations and services (all utilities), with individual meters for the different services (utilities).

The office floors (from the 2<sup>nd</sup> floor to the 8<sup>th</sup> floor) are equipped with raised floors for running electrical and IT cables.

The office floors loadbearing capacities are as follows:

- Office space on all levels: 250 daN /sqm
- Corridor: 250 daN /sqm
- Lobby: 400 daN /sqm
- Cafeteria/lounge: 250 daN /sqm
- Multi-purpose space: 400 daN /sqm

- Accessible terraces: 250 daN /sqm
- Archive space within office spaces (as identified within the plans): 500 daN /sqm

All spaces will be accessible to disabled people in accordance with the French Labour Code (Regulation no. 2009-1272 of 21 October 2009).

The following spaces will be subject to a specific interior design project:

- The lobby
- The Chambord staircase
- The lifts landings on all office levels
- The sanitary facilities on all office levels
- The cafeteria / lounge (7<sup>th</sup> floor)
- The Business club (7<sup>th</sup>/8<sup>th</sup> floor)
- The double-height multi-purpose room (7<sup>th</sup>/8<sup>th</sup> floor)
- The pavilion (8<sup>th</sup> floor).

## BUILDING CAPACITY

The building is classified as an ERP category 1 with M, L, N, W and PS activities. It will globally accommodate 4,835 people, including 2,855 members of the public and 1,980 employees.

The office component will accommodate 2,000 people, including 200 members of the public and 1,800 employees.

## FIRE SAFETY / SMOKE EXTRACTION SYSTEMS

The interior layout of the office spaces will be designed in accordance with applicable partitioning rules from the 2<sup>nd</sup> to the 6<sup>th</sup> floor.

On the office floors, a natural/mechanical smoke extraction system will be implemented and will comply with IT 246 guideline. Additional fresh air will be drawn in naturally through the facade, while stale air will be mechanically extracted through vertical ducts.

## CERTIFICATIONS

Targeted environmental certifications are as follows:

- “HQE” Batiment Durable Neuf” certification (“excellent” rating), according to the “HQE Batiment Durable Neuf” standard (version V3 of January 2019)
- BREEAM certification according to the “BREEAM 2016 NC Shell and Core” standard (“Excellent” rating)
- BBKA RENOVATION label (“Performant” rating)
- OsmoZ (well being certification) (no level required)
- WiredScore certification (“Gold” rating)
- SmartScore certification (“Silver” rating)
- BBC Effinergie renovation label

Thermal insulation will be carried out in accordance with existing thermal regulations.

## ACOUSTIC PERFORMANCE

The targeted acoustic performance of the refurbishment meets the requirements of the specified above-mentioned certifications.

The minimum acoustic criteria (Dn, T, A, tr) will be:

- Corner of the building facing Place de la Madeleine: 37 dB
- Bd de la Madeleine: 34 dB
- Rue Duphot: 34 dB
- Interior patios: 30 dB
- Other facades: 30 dB

The minimum acoustic criteria (Dn,T, A) within an office floor are as follows:

- Between offices: ≥ 30 dB
- Between offices and corridor: ≥ 30 dB
- Between offices and sanitary facilities: ≥ 35 dB;

## EXTERNAL JOINERY

External joinery will be mounted on metal frames, with double glazing and windows that open inwards or outwards:

- Grid-effect curtain walls on the historical facade
- Glazed curtain walls on the new facade on Boulevard de la Madeleine and Rue Duphot
- Glazed curtain wall with external glass railing and an opaque aluminium section forming C+D on by the patios
- Curtain wall with external glass railing and an opaque aluminium section forming C+D for the Vinde facade
- Glazed curtain wall on the 7<sup>th</sup> and 8<sup>th</sup> floors facade (sliding doors) and the multi-purpose room (oversize double-height doors)
- Insulated mounting frame
- Glazed roofs at the bottom of two patios and above the Chambord staircase

The lobby will be fitted with metallic entrance doors.

## SUN SHADING SYSTEM

The sun shading system will comprise motorised interior fabric blinds without a track guide and most sun-exposed facades will be fitted with guided exterior blinds.

The glazed roof of patio D is fitted with track-guided interior motorised fabric blinds from the underside.

## ROOFING / WATERTIGHTNESS

The existing zinc roof coverings will be repaired, and new zinc roof covering will be installed on the 8<sup>th</sup> floor pavilion. The slateroof of the Paul Frieze building will also be repaired.

All watertighness, balconies and terraces will be repaired with a double-layer elastomer complex. All terraces located above heated premises will be insulated.

The watertightness of the accessible terraces will be carried out according to the architectural design (wooden decking boards or tiles on adjustable pedestals, greenery complex and zinc roofing).

## LIFTS

The building will be equipped with a six-lift elevator group in the lobby, including:

- Three lifts with a capacity of 1,600 kg and a speed of 1.6 m/s between the ground floor and the 8<sup>th</sup> floor
- One lift with a capacity of 1,600 kg and a speed of 1.6 m/s between the ground floor and the 7<sup>th</sup> floor
- One goods lift with a capacity of 1,050 kg and a speed of 1.6 m/s between basement level 4 and the 7<sup>th</sup> floor
- One lift with a capacity of 1,125 kg and a speed of 1.6 m/s between basement level 4 and the 7<sup>th</sup> floor
- Basement level 1 and the first floor (retail spaces) are not distributed.

These lifts form a six-lift elevator group with a “destination call system”.

Provisional measures for installing an access card system on each lift landing.

Other equipment:

- Two goods lifts with a 1,000 kg capacity and a speed of 1 m/s between basement level 2 and the 7<sup>th</sup>/8<sup>th</sup> floor
- One lift for disabled people with a 630 kg capacity and a speed of 1 m/s between the 2<sup>nd</sup> and 6<sup>th</sup> floors
- One lift for disabled people with a 400 kg capacity and a speed of 0.15 m/s between the 6<sup>th</sup> and 7<sup>th</sup> floors
- Four wheelchair platform lifts with a capacity of 315 / 330 kg and a speed of 0.06 / 0.15 m/s for the 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> floors
- FlexStep platform lift with a capacity of 400 kg and a speed of 0.04 m/s for the 3<sup>rd</sup> floor.

## SUSPENDED CEILINGS

The office spaces will be fitted with mineral fiber ceiling tiles from 1200 x 1200 mm, 1200 x 600 mm or 1400 x 600 mm, with a semi-exposed grid system allowing fittings to be added in (lighting equipment and supply/return HVAC grids). In addition to the removable suspended ceiling, a smooth plasterboard suspended ceiling on a metal frame will be used installed.

Where necessary, plaster trims will be installed to accommodate for any ceiling level difference.

Corridors will be fitted with mineral fiber ceiling tiles from 1400 x 300 mm or 1600 x 300, with a semi-exposed grid system allowing lighting equipment to be installed.

Wet rooms will be fitted with a specific and hygienic suspended ceiling.

## HVAC

The existing heating production system will be maintained and powered by a CPCU substation (district heating). This supplies both the office spaces and retail units. The substation will provide the heating and domestic hot water needs for a potential food court concept on the ground floor / 1<sup>st</sup> floor.

The existing cooling system will be maintained and powered by a Fraicheur de Paris substation (district cooling).

The temperatures of the office spaces are as follows:

- Summer: 26°C +/- 1°C for a 32°C outdoor temperature
- Winter: 19°C +/- 1°C for a -5°C outdoor temperature

The fresh air flow debits are as follows:

- Offices: 30 m<sup>3</sup>/hr per person
- Meeting rooms: 35 m<sup>3</sup>/hr per person
- Lobby: 1 Vol/hr

The hot and chilled water equipment will be specific to each use (office fan coil units, air handling units, food court, etc.).

The fan coil equipments will be a four-pipe system (installed within the suspended ceiling, in the breast wall in specific areas or within the raised floor for the 8<sup>th</sup> floor pavilion and the cafeteria).

Regarding the double height lobby area, additional air handling unit or a reversible floor.

Fan coils units will be implemented in the breast wall within the single-height lobby space.

An underfloor heating and cooling system will provide standard comfort across the entire lobby.

The sanitary facilities and locker rooms in the basement / ground floor will provide hot water radiators. The sanitary

facilities on the top floors or the 2<sup>nd</sup> floor will be equipped with electric convector heaters. A warm air curtain will be installed in the lobby to prevent and limit heat losses during winter.

It is provided that 20% of the private lettable office space for each office lots will be dedicated to meeting rooms, with an occupancy rate of 2.5 sqm/person (areas for meeting rooms on the 7<sup>th</sup> and 8<sup>th</sup> floors excluded).

All equipments are managed and controlled by a smart BMS.

## BUILDING MANAGEMENT SYSTEM

The BMS will incorporate the building's various functions into a single system and will manage all the building's technical equipments.

The system is open and interoperable to allow for any changes that the lessee may wish to implement.

The system must be capable of:

- Monitoring the building's energy supplies: providing information about the building's operation, tracking meter readings and managing alarms if a fault is detected.
- Controlling the HVAC/electrical systems: controlling and managing the technical equipment (heating and cooling, AHUs, lighting, blinds, air conditioning terminals, etc.).
- Helping operate the building's systems, such as programming the heating, air conditioning and lighting systems.
- Helping manage the building's systems: producing energy consumption reports.

All the equipment connected to the BMS will be based on a communication network and the BACnet, Modbus and M-Bus protocols.

The system will include a web server for managing and controlling the BMS through a PC. The system will be run from an operating workstation connected to the BMS architecture over the “Smart” / BOS network.

Energy meters will be installed to monitor each source of fluids (as below), each type of use and each area, with information forwarded to the BMS:

- Heating (electricity consumption and calories)
- Cooling (electricity use and frigories)
- DHW (electricity consumption of the DHW tanks)

- Lighting (electricity consumption of the indoor, outdoor and car park lighting systems)
- Ventilation (electricity consumption of the AHUs)
- Electricity consumption of the power sockets
- Electricity consumption of the pumps and auxiliaries
- Electricity consumption of the lifts
- Electricity consumption of the facilities management equipment

## SMOKE EXTRACTION SYSTEM

The building is subject to IT 246 guideline in terms of smoke extraction. The smoke extraction system covers the office areas and part of the lift landing on the 2<sup>nd</sup> floor, as well as the common area around the Chambord staircase at the same level. The other lift landings and Chambord common area on the 3<sup>rd</sup> to 8<sup>th</sup> floors are not covered by the smoke extraction system.

Within the office spaces, areas in front of the smoke extraction vents will not be partitioned off. A natural/ mechanical smoke extraction system will be used and must comply with IT 246. Additional fresh air will be drawn in naturally through the facade, while stale air will be mechanically extracted by creating vertical draughts.

The car parks will be equipped with a mechanical smoke extraction system.

The ground floor lobby, the whole of the 2<sup>nd</sup> floor, the ground floor bicycle rooms and all basement levels will be equipped with an automatic sprinkler system.



## PLUMBING / SANITARY FITTINGS

All sanitary facilities will provide have a toilet cabine for disabled people.  
The sanitary facilities for the office spaces will be equipped with an electric hot water tank.  
Each facility has its own water meter, which is connected to the BMS. Reused basins and taps can be fitted.

Domestic hot water production for the 7<sup>th</sup> floor kitchen will be centralised with storage tanks and a plate heat exchanger, supplied from the CPCU substation.  
Domestic cold water feeds for the water fountains or breakrooms will be pre-installed in the access floor as close as possible to the sanitaries through tappings and valves at the riser outlets. There are also plans for drainage into the wastewater network (pipes are pre-installed and capped).  
These provisions will enable lessees to integrate these elements into their fit out plans.

The outdoor terraces will be equipped with pre-installed feeds and taps for watering and maintenance.

## HIGH-POWER ELECTRICITY

The building will feature a dual power supply from the 20 kV MV grid.

The delivery substation and the two new 1,600 kVA HV/LV transformers will be located in basement level - 2.

A main electrical switch board for the office space, a distribution board for general services and common areas and secondary switchboards for each lot will be installed.

Two backup and replacement generators, each with a unit capacity of 1,500 kVA, will be installed to supply power to the safety-critical electrical installations in the event of a default.

Workstation outlet boxes will be positioned in the raised floors and will be equipped with:

- One power connector (usual network)

- Three white 2x10/16A+E power sockets (usual network)

Provisions must also be made in the main electrical switch board for adding an inverter.

All lighting in the office areas will be based on LEDs. The office areas will feature presence detectors and dimmers.

- The specified lighting levels are as follows:
- Office spaces: 300 lux with a uniformity value of 0.7
  - Meeting rooms: 300 lux with a uniformity value of 0.7
  - Landings: 200 lux with a uniformity value of 0.4
  - Lobby: 200 lux with a uniformity value of 0.4
  - Circulation areas: 150 lux with a uniformity value of 0.4
  - Staircases: 150 lux with a uniformity value of 0.4

## LOW-POWER ELECTRICITY – IT – SMART BUILDING

The lessee is responsible for IT pre-cabling within the office spaces; provisions are made so that the IT network can easily be deployed at a later stage. Two IT operator rooms will be created in basement level 2 to provide the site with a dual supply. A connection to the fibre optic network will be installed.  
Cableways will be laid between the two operator rooms and in vertical ducts serving the office spaces. Therefore, the lessee can set up its IT rooms (one IT room per level, with a pre-installed chilled water supply) with the necessary interconnections with the operator rooms.  
A Wi-Fi system will be deployed in the building’s common areas (ground floor lobby, cafeteria/ lounge on the 7<sup>th</sup> floor, lift cabins and outdoor areas).

A 3G, 4G and 5G indoor GSM system will be rolled out in the office spaces and basements.  
A smart network will be deployed for the offices. This network will be pre-configured and organised in a “star” configuration from the main distribution frames via switches to the various terminals. This network will be capable of collecting and transporting data using the IP protocol and will distribute BMS, audiovisual, security, telephony and Wi-Fi.

## OTHER LOW-POWER ELECTRICITY ELEMENTS

The access control system will control all external access points to the building with a MIFARE DESFire access card reader.

The security and control room, most of the plant rooms and the bicycle rooms will also be equipped with access card control.

The installation will feature a scalable design for extending the number of additional control points; provisions must be made (recessed sheaths and boxes) for subsequently equipping all access doors to the various work packages to meet the security needs of the lessee(s).

Turnstiles / unmanned gates are provided in the lobby area.

Video entry systems will be installed at the access points to allow people without an access card to enter the site. Calls can be made to the reception desk or security control room.

The anti- intrusion detection system will be installed in the building to protect all areas that can be accessed from the outside.

There are plans to install a fire detection system, comprising a Category A fire safety system with Type 1 fire alarm equipment installed in the security and control room.

The security and control room on the ground floor will house all the equipment used to supervise the site’s technical, security and safety installations. Equipment to control and secure the car parks will also be installed in this room.

## FOOD AMENITIES – CAFETERIA

The 7<sup>th</sup> floor cafeteria / lounge area comprises a premium food area divided into two kiosks with a capacity of around 350 meals and 180 seats. This space is located next to the Business Club, rooftop and outdoors areas.

## CIRCULAR ECONOMY

The project aims to embrace the principles of the circular economy. This strategy provides a selective deconstruction and reuse of products in situ and ex situ, equipment and materials resulting from site cleaning operations, as well as integrating materials from outside circular economy.

# SPACE PLANNINGS

## 4<sup>TH</sup> FLOOR

MIXED-USE VERSION

### 210 Workstations

Conventional open space design	55
22 x B1	22
19 x B2	38
6 x B3	18
3 x B4	12
1 x B6	6
Alternative	59

### 180 seats in a closed collaborative space

2 x 1p. cabin	2
2 x 2p. boxes	4
7 x 3p. boxes	21
5 x 4p. boxes	20
5 x 5p. boxes	25
3 x 6p. meeting rooms	18
2 x 8p. meeting rooms	16
1 x 10p. meeting room	10
3 x 14p. meeting rooms	42
1 x 22p. meeting room	22

### Open collaborative space

Open spaces	124
Work cafe	16









4<sup>TH</sup> FLOORNEW WAYS OF WORKING  
VERSION**390 Workstations**

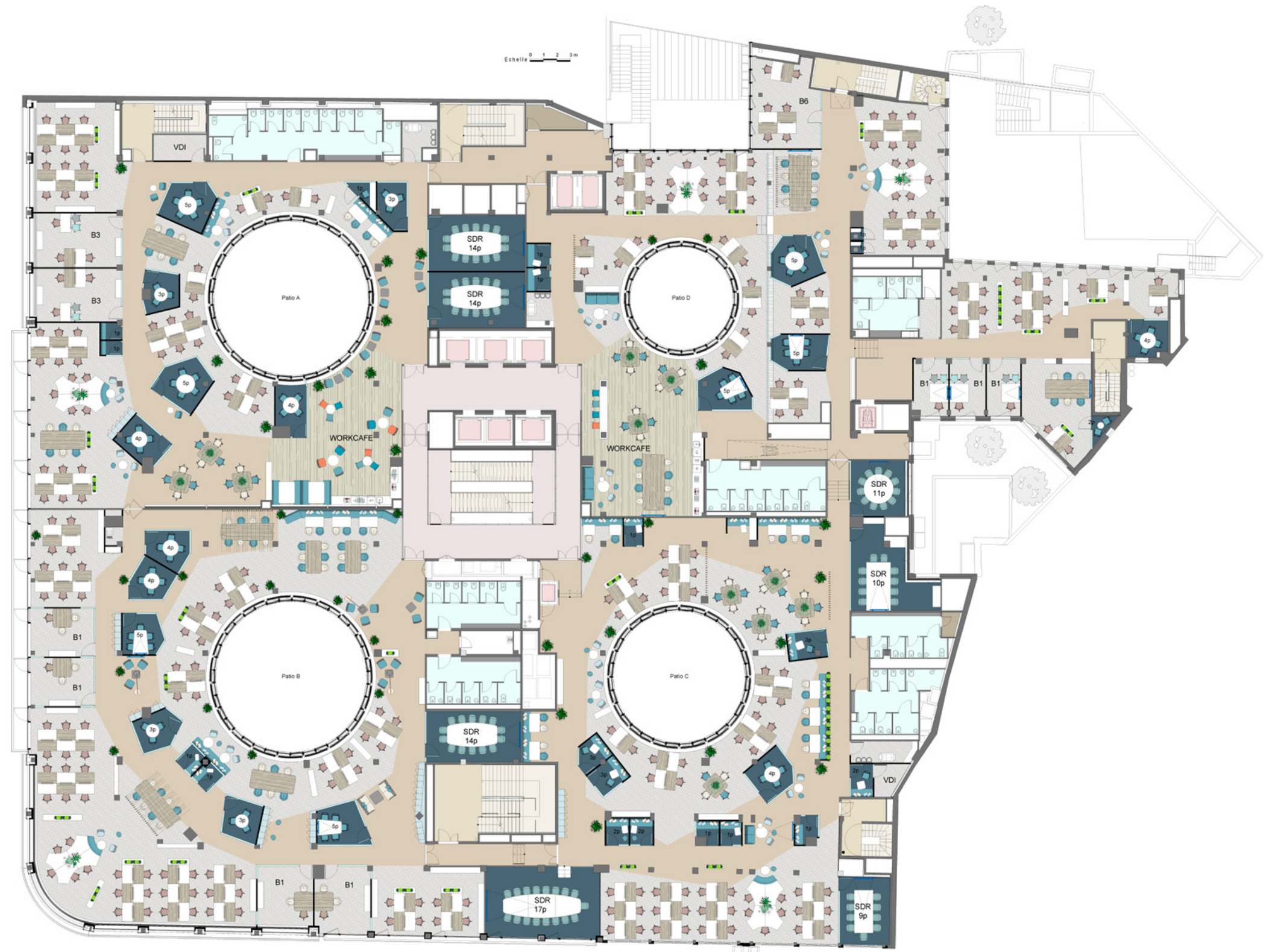
Conventional open space design	241
Closed offices	19
Alternative	130

**189 seats in a closed collaborative space**

13 x 1p. cabin	13
4 x 2p. boxes	8
7 x 3p. boxes	21
6 x 4p. boxes	24
7 x 5p. boxes	35
1 x 9p. meeting room	9
1 x 10p. meeting room	10
1 x 11p. meeting room	11
3 x 14p. meeting rooms	42
1 x 17p. meeting room	17

**Open collaborative space**

Open spaces	99
Work cafe	30





4<sup>TH</sup> FLOORNEW WAYS OF WORKING  
VERSION



Business Club

Bar / Restaurant

Double-height multi-purpose room

Terraces and green spaces





Business Club

Double-height multi-purpose room

Bar / Restaurant

Terraces and green spaces





Terraces and green spaces

Business Club





Terraces and green spaces

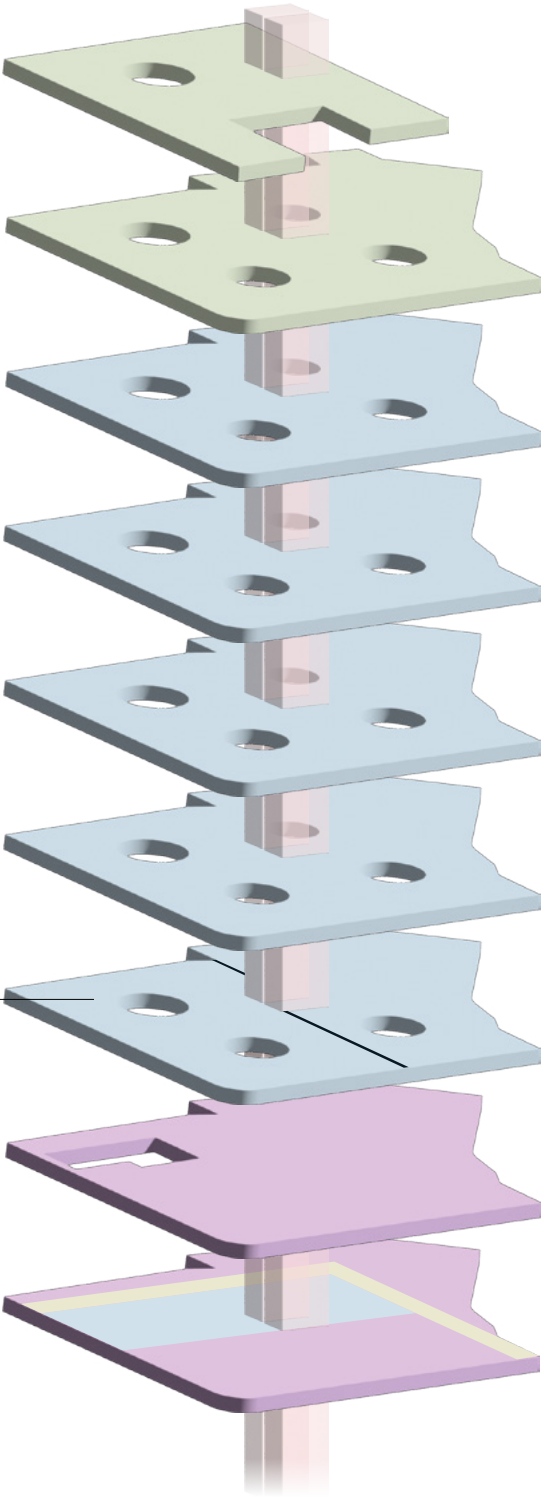
Business Club



# AXONOMETRY

- Rooftop and premium services
- Office spaces and lobby
- Retail units
- Common space between office and retail

ERP 5 type W

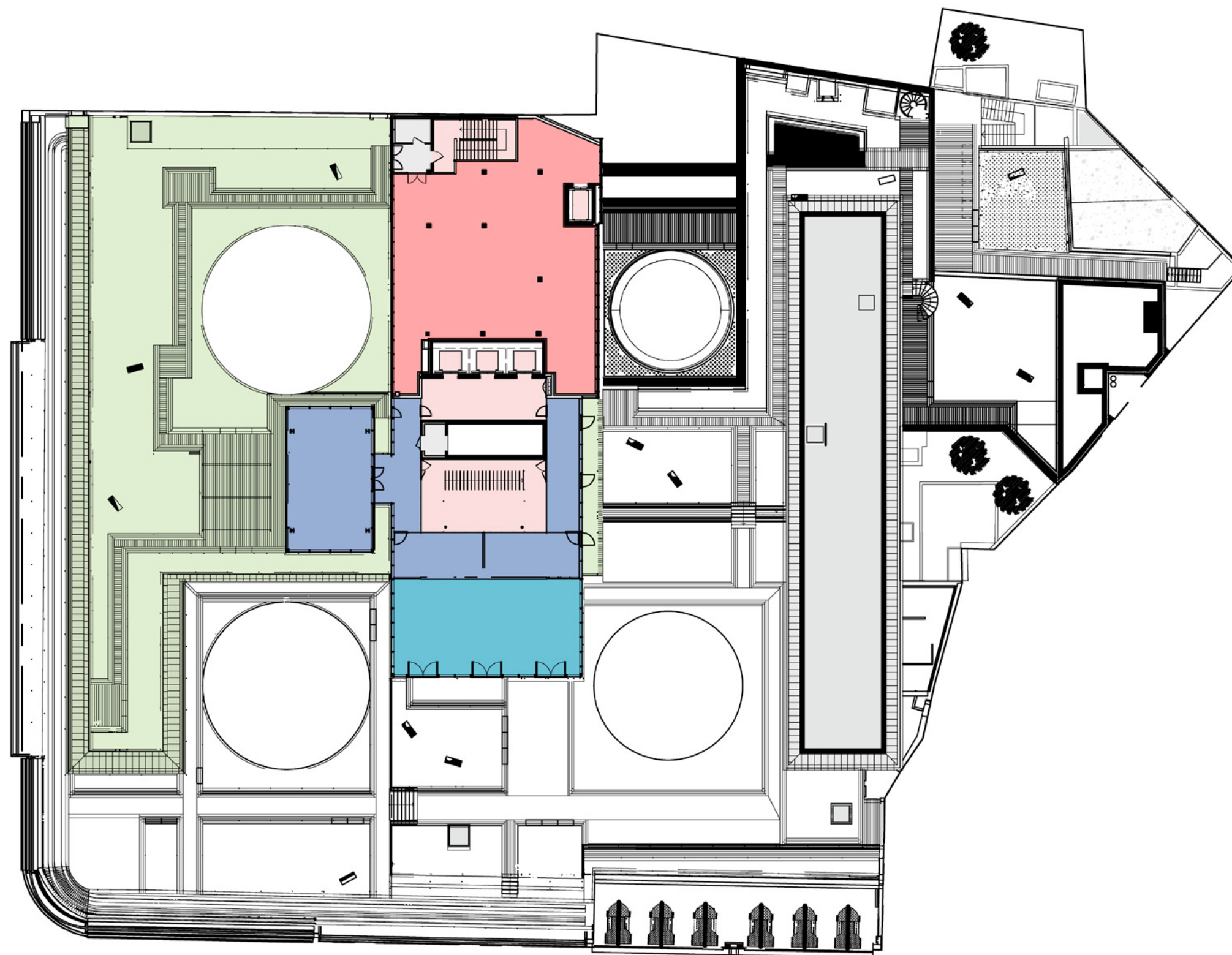


	Net lettable area	Outdoor area
8 <sup>TH</sup> FLOOR	255 sqm	815 sqm
7 <sup>TH</sup> FLOOR	1 341 sqm	1 470 sqm
6 <sup>TH</sup> FLOOR	3 208 sqm	258 sqm
5 <sup>TH</sup> FLOOR	3 654 sqm	66 sqm
4 <sup>TH</sup> FLOOR	3 717 sqm	36 sqm
3 <sup>TH</sup> FLOOR	3 703 sqm	36 sqm
2 <sup>ND</sup> FLOOR	3 711 sqm	341 sqm
1 <sup>ST</sup> FLOOR	15 sqm	–
GROUND FLOOR	1 202 sqm	55 sqm
BASEMENT LEVEL 2	280 sqm	–
GF-3 / GF-4	Car park – 134 units	



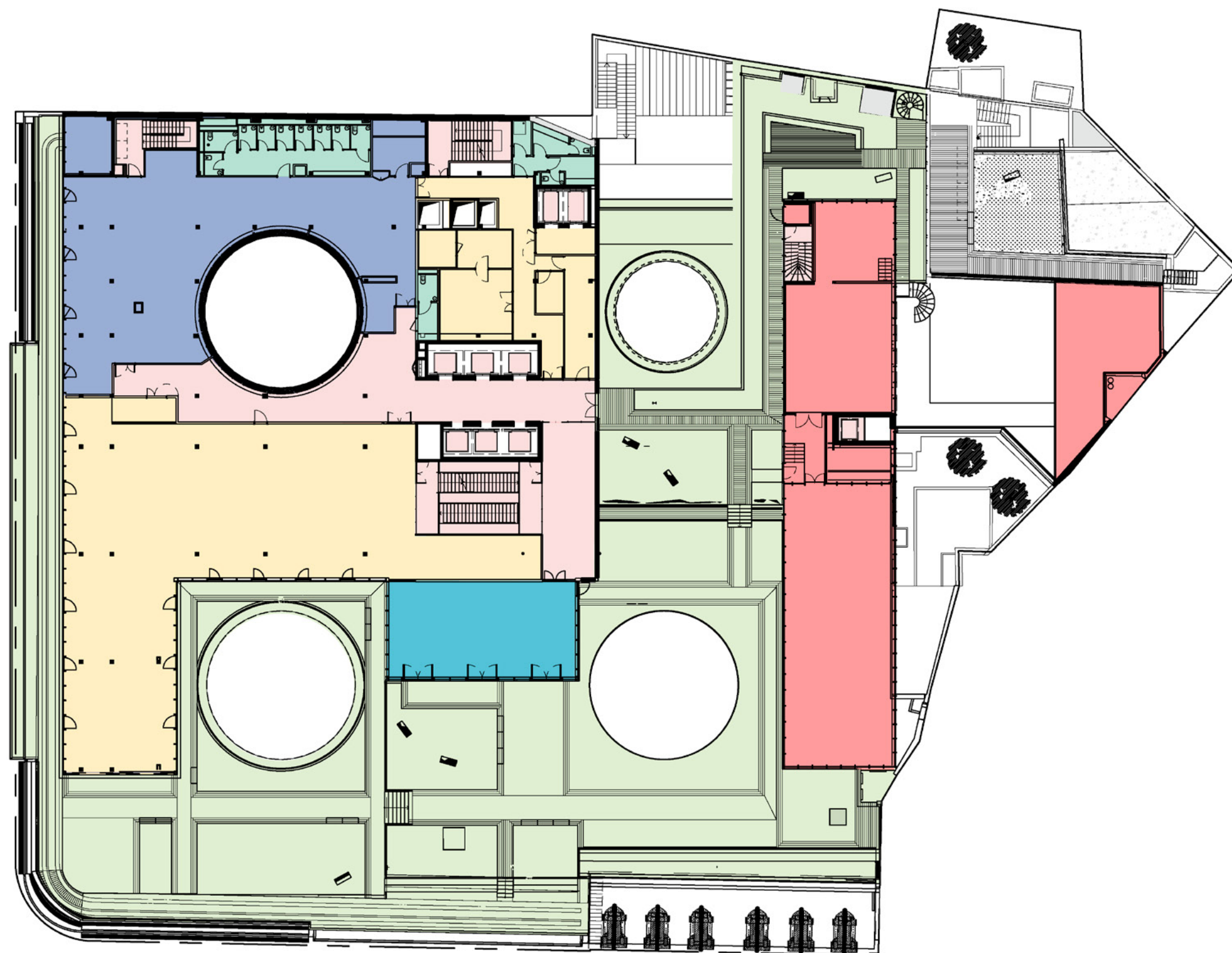
## 8<sup>TH</sup> FLOOR

- Terraces and green spaces
- Business Club
- Double-height multi-purpose room
- Lifts, staircases and common areas
- Plant room



## 7<sup>TH</sup> FLOOR

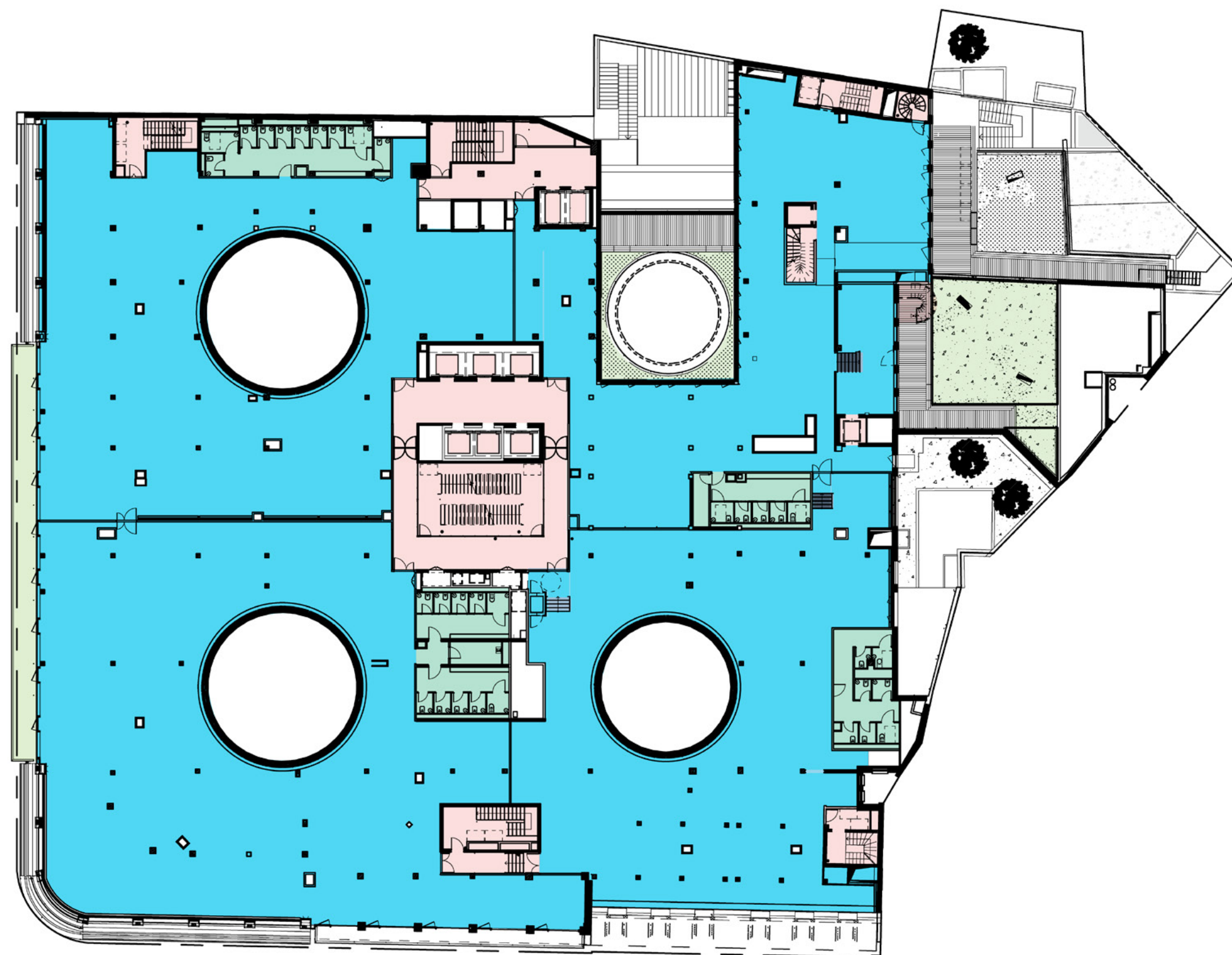
- Terraces and green spaces
- Business Club
- Food and amenities area
- Double-height multi-purpose room
- Sanitary facilities
- Lifts, staircases and common areas
- Plant room





## 6<sup>TH</sup> FLOOR

- Terraces and green spaces
- Offices
- Sanitary facilities
- Lifts, staircases and common areas



## 5<sup>TH</sup> FLOOR

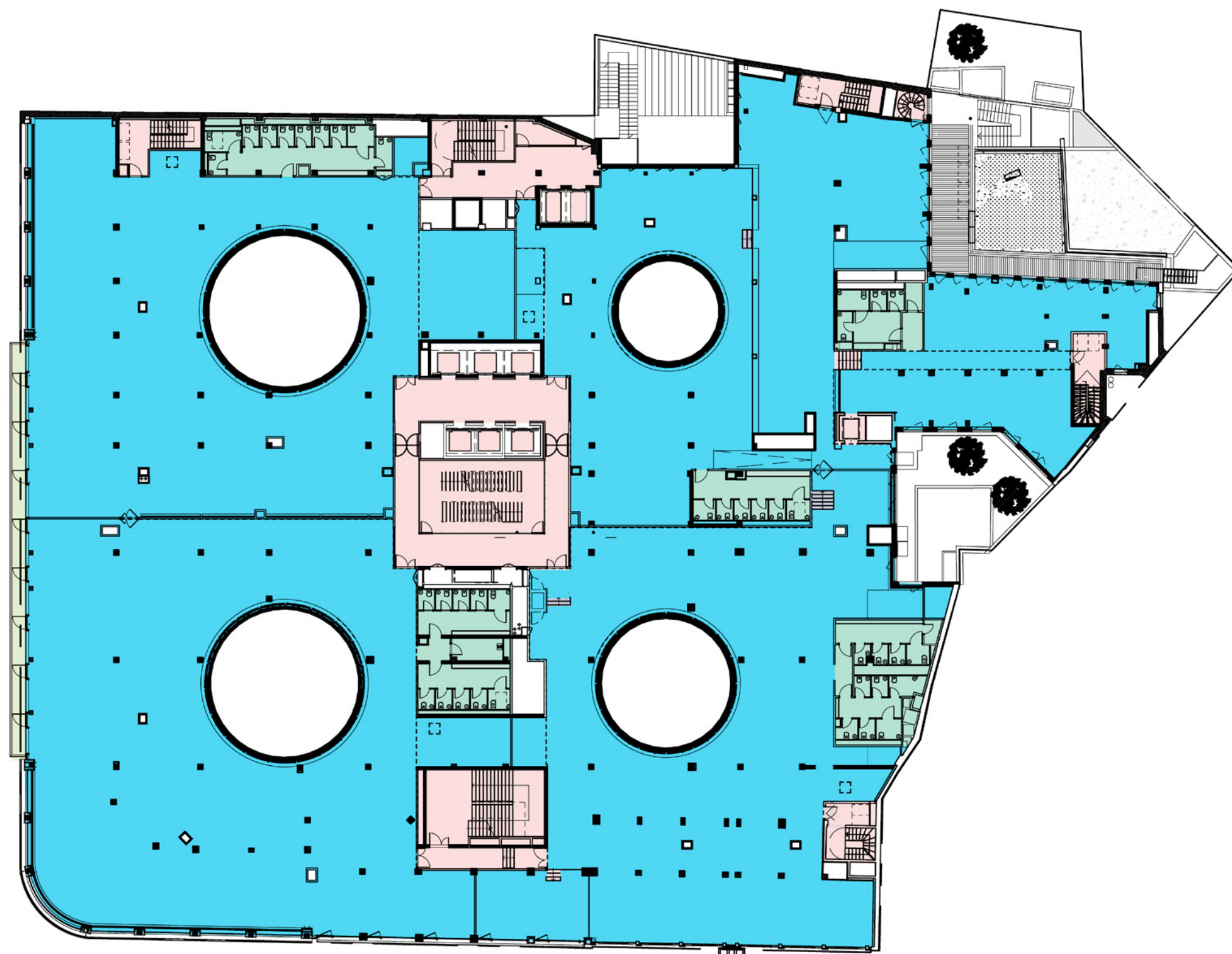
- Terraces and green spaces
- Offices
- Sanitary facilities
- Lifts, staircases and common areas





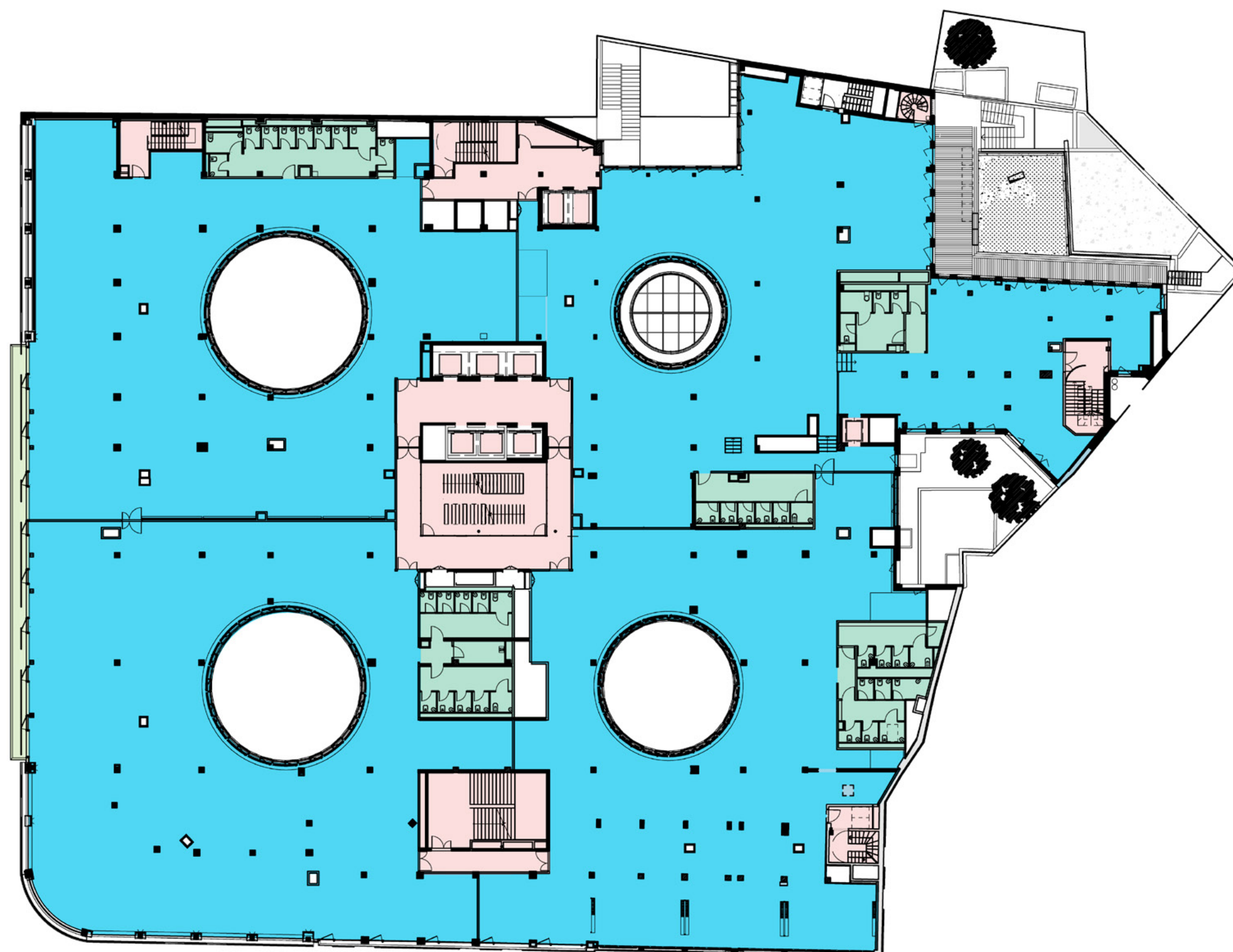
# 4<sup>TH</sup> FLOOR

- Terraces and green spaces
- Offices
- Sanitary facilities
- Lifts, staircases and common areas



## 3<sup>RD</sup> FLOOR

- Terraces and green spaces
- Offices
- Sanitary facilities
- Lifts, staircases and common areas

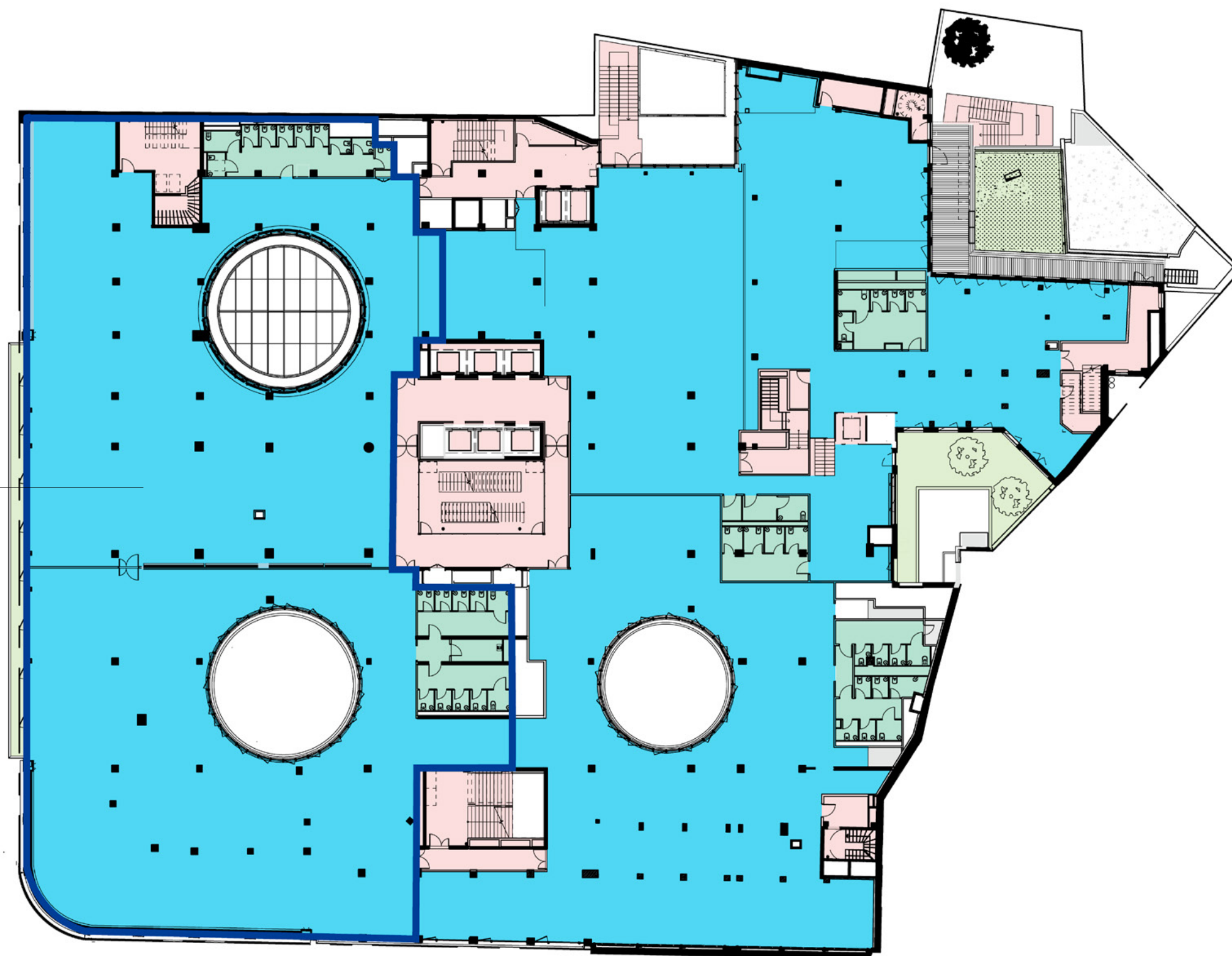




## 2<sup>ND</sup> FLOOR

- Terraces and green spaces
- Offices
- Sanitary facilities
- Lifts, staircases and common areas

ERP 5 type W



# 1<sup>ST</sup> FLOOR

- Retail
- Lifts, staircases and common areas





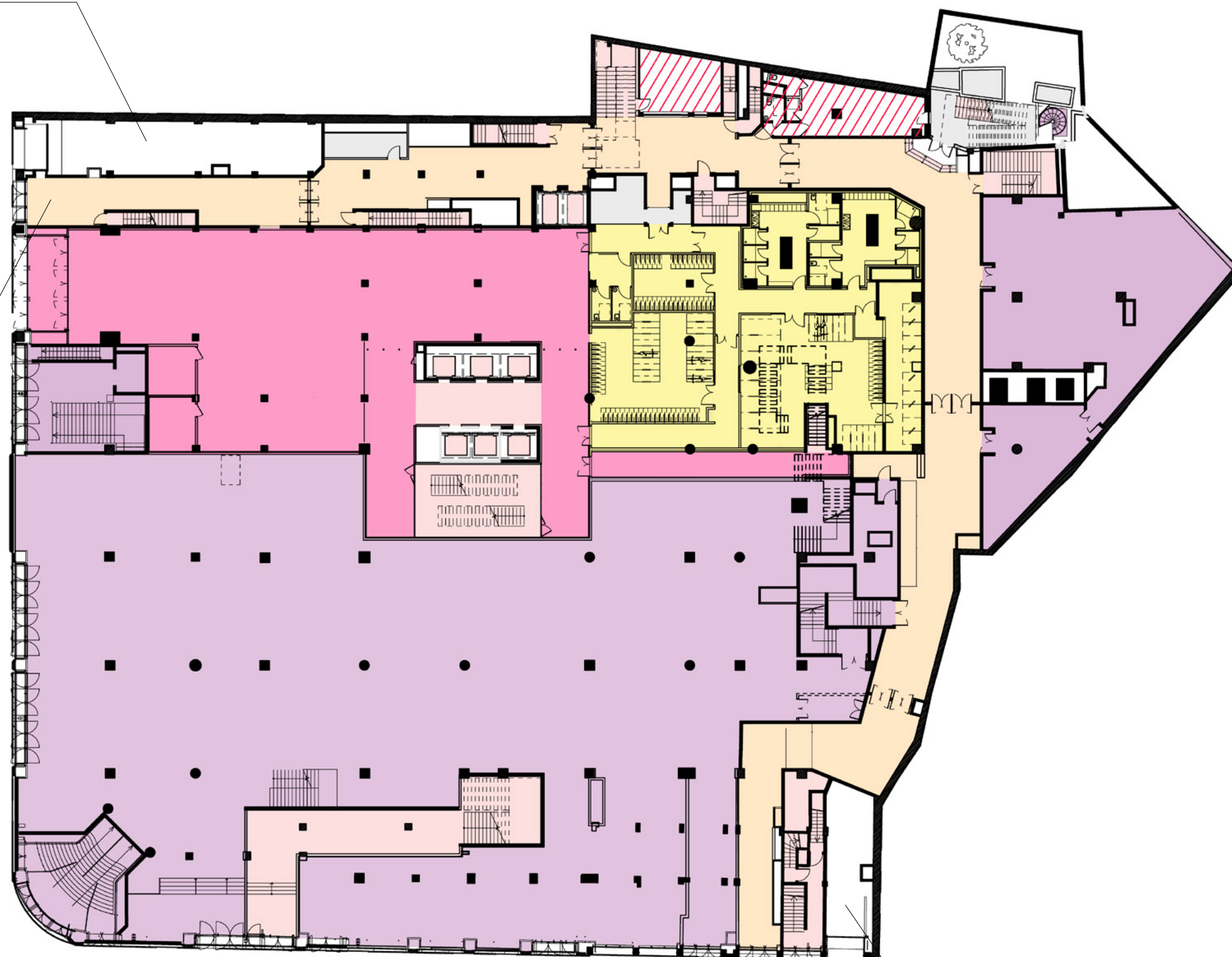
# GROUND FLOOR

- Common area between office and retail
- Retail
- Hospitality-style lobby
- Bikes parks and locker rooms
- Lifts, staircases and office common areas
- Security and control room

Bikes parks  
entrance / exit

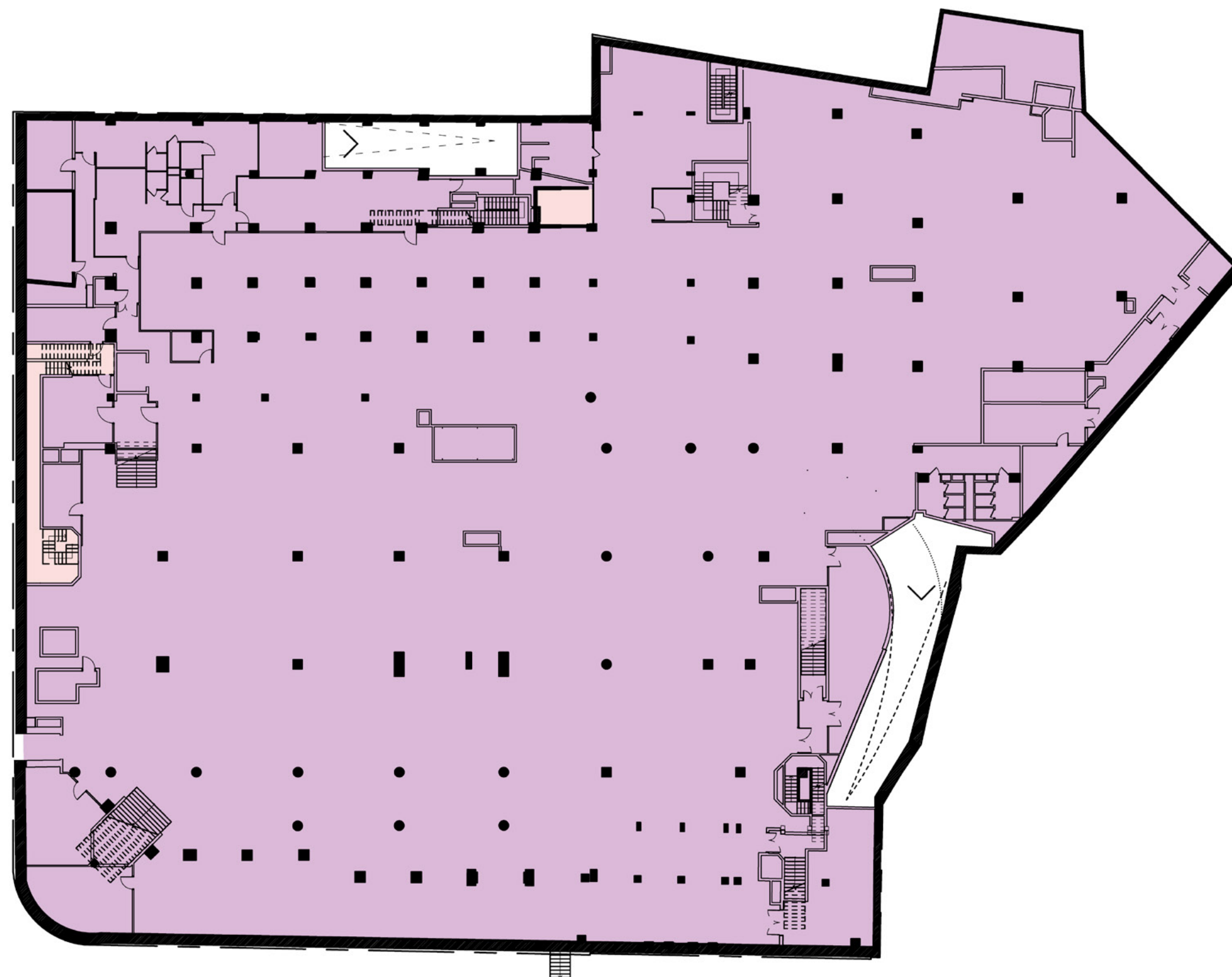
Car park entrance

Car park exit



# BASEMENT LEVEL 1

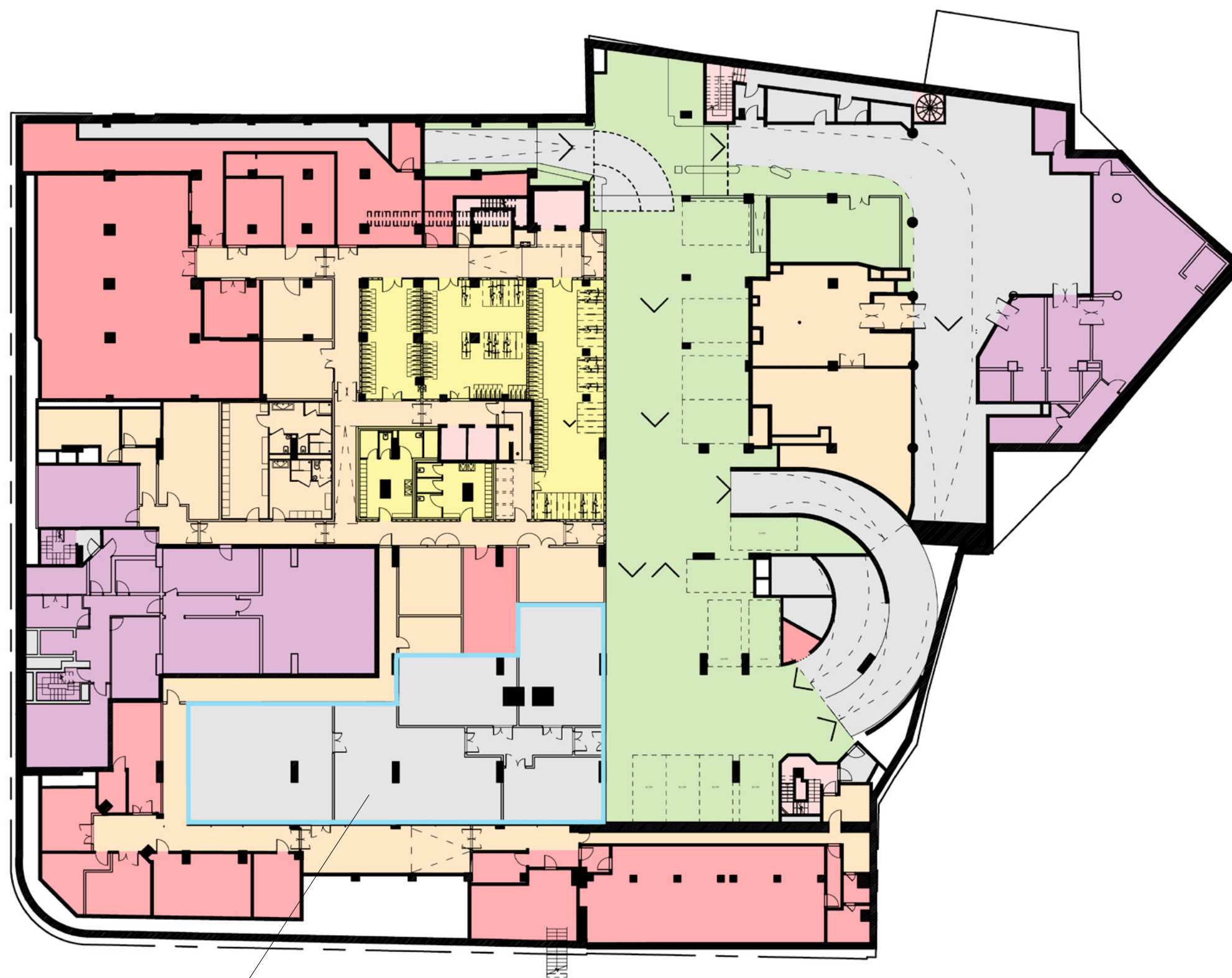
- Retail
- Lifts, staircases and office common areas





# BASEMENT LEVEL 2

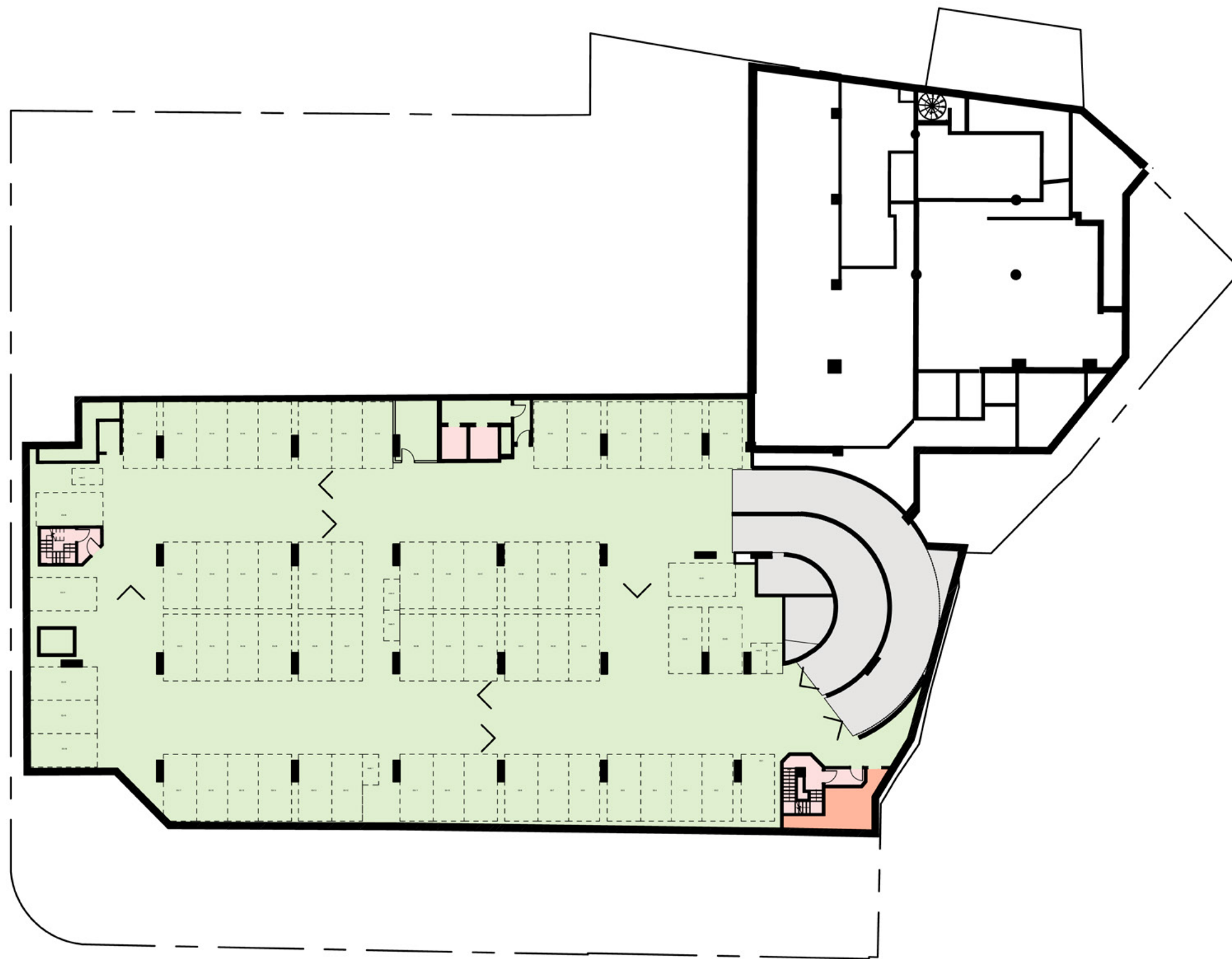
- Common area between office and retail
- Retail
- Offices
- Bikes parks and locker rooms
- Lifts, staircases and office common areas
- Car parks
- Plant room



Urban logistics space

# BASEMENT LEVEL 3

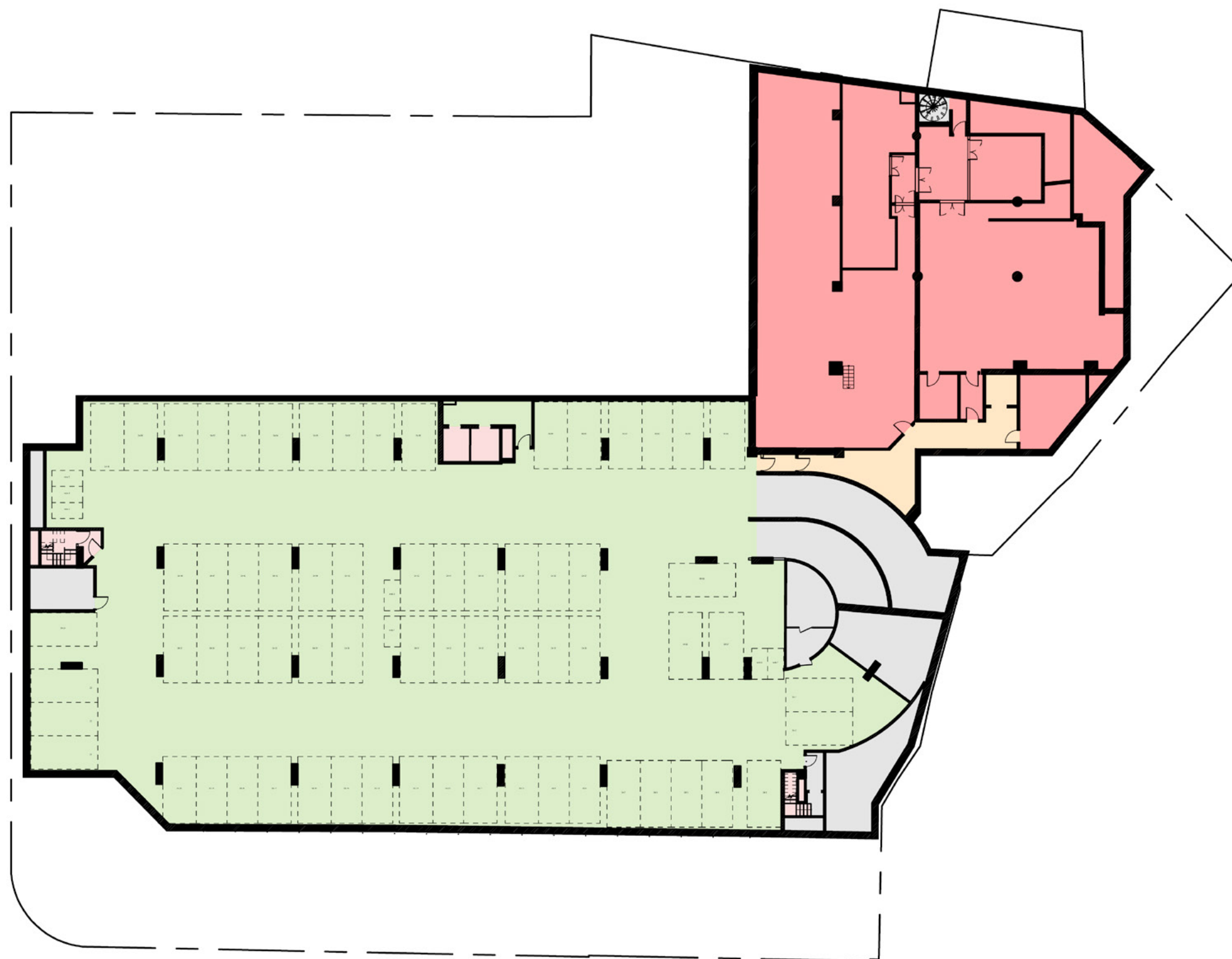
- Car parks
- Lifts, staircases and office common areas
- Plant room





# BASEMENT LEVEL 4

- Common area between office and retail
- Car parks
- Lifts, staircases and common areas
- Plant room



LES  
CIMES DE  
LA MADELEINE



17-23 boulevard de la Madeleine  
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