Project details - "Construction and renovation works for buildings and infrastructure at the Joint Research Centre (C.C.R.) in Ispra"

BUILDING 1

Citizens' space - Completion works

The work planned for Building 1 will mainly cover three phases:
PHASE 1: civil works (interior finishes, flooring, doors, planking and false ceilings) and plant engineering (mechanical, electrical and special installations);
PHASE 2: with the construction of an outdoor canopy;
PHASE 3: paving of outdoor areas.

BUILDING 17A

Demolition and new construction

The purpose of the project is the demolition and reconstruction of building 17A, already used for material storage, but with distributional characteristics no longer suited to the client's new needs.
The building consists of a reinforced concrete industrial-type building consisting of prefabricated beams, pillars and roof slab, located on the site of the demolished former building.
The main building has a rectangular plan, with a net internal surface area of approximately 600 square metres, and consists of a single above-ground floor; the flat roof is at a height of 7.60 m above the internal floor level.
The new building is designed to be flexible in view of possible changes of use (e.g. post office or co-working area); in addition, three internal partitions with automatic doors will be built in order to divide the building into different areas.

BUILDING 20

Building demolition
The work planned for Building 20 will mainly concern a partial strip-out and securing of the site.
The building, formerly used as a machine shop, workshop and offices, is currently unused. On the other hand, the neighbouring buildings, mainly used as warehouses and technical rooms, will be completely demolished.

BUILDING 34

External company areas

The area in question was free of buildings, however; it included only tall trees (oaks and pines) and a road that was partly paved and partly covered in asphalt, bordered by stone kerbs in some sections.
The project consists of designing a new external storage area, covering a total area of more than 3,000 square metres.

The area consists of the office/changing room area and a parking and material storage area. The roadway is six metres wide in the initial section and is subsequently reduced to five metres to allow for single-direction traffic.
The office area consists of a zone with easy access via an asphalt road; within the space delimiting the area there are six blocks that can accommodate containers, which are also available on two levels. The defined blocks can be divided into four with four container locations, one with five locations and a last one that can accommodate up to seven containers. The possibility of superelevation is of course available on each individual container block.

The water and electricity supplies are provided by a distribution terminal that is conveniently located with respect to the container to be supplied; connection is very quick, as it can be made in the total absence of excavation because the terminal is ready for immediate use.

BUILDING 36 PHASE 2B
Reconstruction

The project, therefore, develops the following areas:

CO-WORKING/CATERING (Zone 1.2)

An additional catering area dedicated to lunch is identified, separate from that already provided in Phase 1 and served by the same catering island (Zone 1.1). This second dining area and the co-working area form a large, seamless space, which can be used for large events up to a maximum capacity of 500 people. The two rooms, characterised by a suspended ceiling that moves their volumes, can be separated by means of two folding acoustic partitions. The H 290 false ceiling, which also has acoustic properties, is made of rock wool panels interspersed with ceiling tiles to mask the hatches for system inspection and with H 270 lowered islands of perforated gypsum boards that identify functional islands. The co-working space has a maximum of 46 workstations and is equipped with informal furniture that can also be used for dining. There are also steps with wooden seating to create a more informal, relaxed environment. The spaces are accessible to persons with disabilities directly from the inner courtyard or from the lifting platform located near the connecting steps. The flooring is made of pre-finished oak planks. The area occupies about 500 square metres and can be configured either as a multifunctional area or as an event space. Taking into account the spaces restructured in Phase 1 (zone 1) with the distribution studied we obtain:

Dining area 1 = 220 sqm approx.
Dining area 2 = 216 sqm approx.
Co-working area = 324 sqm approx.

Open space (Zone 2)
An open space is created on the mezzanine/ground floor with workstations for up to 35 people. A waiting area is identified in the entrance hall, featuring a H 270 drop in perforated coated plaster slabs, which in addition to its aesthetic function also serves to allow the plant engineering backbones to bypass the existing spine beam. The open space and glazed volume of the meeting rooms (2/4 persons) /phone booth has H 298 ceilings made using plain or perforated coated gypsum board. Additional workstations will be placed in the two closed offices in the project, located on the two short sides of this area. The flooring is vinyl.
The total area of the space being worked on is approximately 225 square metres. It is designed to provide a “buffer” workspace if there are closed or refurbished offices within the JRC.

With this distribution we will have:
WORKSTATION AREA IN CLOSED OFFICES = 25+29 = 54 sqm approx.
ON OPEN SPACE WORKSTATION AREA = 175 sqm approx.
OFFICE SUPPORT (meetings, copy, phone booth) = 19 sqm
Considering the 7 sqm / person for workstations in open space and 8 sqm / person for workstations in closed offices, we will approximate by default:
WORKSTATIONS IN OPEN SPACE: 175/7= 25 places approx.
WORKSTATIONS IN CLOSED OFFICES: 54/8= 6 places approx.
In order to improve the thermal performance, the existing façade on the ground floor of the open space and the façade on the first floor of the same building will be clad with EPS insulation. The thickness of the insulation including finishing skim coat will be variable, between 10 and 32 cm to make the existing façade coplanar. A painted sheet metal sill is provided at the windows. The upper cap and baseboard will also be in painted sheet metal.
Outdoor areas
The outdoor areas, consisting of a rectangle with a surface area of approximately 1250 square metres, are designed to provide green areas for public use and paved areas. For the entire duration of the works, the accessibility of emergency vehicles will be guaranteed with a 350 cm free width path, and at the same time for maintenance and catering service vehicles, for which a loading/unloading area will be provided, to be assessed on a case-by-case basis. The paving and lighting will map out longitudinal paths that have the dual function of setts for vehicles and a walkway for pedestrians. Also in the service of pedestrians, the longitudinal axes are interrupted by sloping connecting paths, which provide an 'invitation' into the building entrances and at the same time, have the function of guaranteeing easy access for persons with disabilities. Depending on function, paving will either be for traffic or pedestrians, and made in Levofloor-type architectural concrete. The zones equipped with benches in the green area will be accessible through elements, also made of architectural concrete, to form a kind of grass grid. The 'piazzetta' serving the catering will have flooring designed with 'Levofloorl'-type architectural concrete and serizzo stone inserts. The furnishings of the catering square

consist of low and high tables with the corresponding seats and shaded with parasols for which retractable floor arrangements are provided. Bordering the plaza on one side is a fixed seat to be built in painted reinforced concrete. At the base of the seat there is a linear light fixture.
On the catering plaza, on the loading/unloading area serving the catering, on the entrance with stairs, the existing shelters (Phase 1) will be completed with the installation of cover glass and louvres for shading (with the exception of the shelter near the stairs). All three will be equipped with linear under-beam luminaires. These activities must be coordinated and scheduled in order not to interfere with the activities in the building and to guarantee the emergency exits at all times.
The walls of the safety stairwells will be fitted with a metal structure and steel cables, angled to recall the design of the flooring and to allow climbing plants to cling to them.

Meeting room (Zone 4)
A meeting room on the first floor of approx. 139 square metres with a flexible layout that can accommodate separate tables or a single table. Workstations range from a minimum of 24 to a maximum of 30 people. Pursuant to workplace safety regulations, D.M.37/08, it will be necessary to assess the need to reverse the opening direction of the installed doors, the supply of which is included in phase 1. The main feature of the room is retained by preserving the outline of the sheds, which are clad and fitted with false-ceiling using rock panels with acoustic properties. A plasterboard doorway is created on the wall where the doors are located to allow the air ducts, which are planned to be visible, to enter from the corridor at the correct height. The flooring is pre-finished oak.
Activities in this area will be carried out using the nearby external staircase as the entrance to the site. This choice will have to be co-ordinated with the activities in Building 36 in order to be able to guarantee the same flow to the public in compliance with regulations. Specifically, in order to avoid interference between the public and the construction site in zone 4, the activities on the first floor, and thus the presence of people in the rooms, must be reduced, so that in the event of an emergency the flow of people can always be guaranteed by the other escape routes/safety exits.

BUILDING 48

Reconstruction
The intervention concerns civil works to increase comfort in the working environment and to innovate the aesthetic appearance of the building.
The office building is parallelepiped in shape with three above-ground levels and a basement.

GROUND FLOOR: on the west side of the entrance, the distribution of offices has been revised to obtain a small meeting room, a storage room and to extend the existing toilets; to the east of the entrance, in addition to the staircase and lift block, there is a new break area, accessible from the outside as well as from the inside. To create these spaces, the workshops were moved further east towards the emergency exit and the offices are built in a more central location.

FIRST FLOOR: new workspaces and additional meeting areas closed off with glass walls are created.

SECOND FLOOR: aimed at reorganising offices and transitional spaces; in this case the corridors are designed with free meeting points, created with furniture elements and mobile sound-absorbing partitions.

BUILDING CLADDING: the interventions to the façade and roof are aimed at improving the building from an architectural and energy point of view and include:
- New ventilated façade with integrated photovoltaics;
- Improvement of thermal insulation in façade and roof;
- Replacement of external windows and doors;
- Window screens by means of retractable slats;
- External stair shielding by means of fixed slats or perforated sheet metal;
- Metal entrance canopy;
- Photovoltaic panels on the roof.