

## **Design and Access Statement for proposed alterations to building in 7 Dering Street W1S 1AE London – to mixed use, comprising exhibition and office space, and the adaption of the interior and exterior of the building**

### **Proposal:**

The design and access statement has been prepared in support of an application for permission to change property from office to mixed use, comprising exhibition space on the ground floor and first floor, kitchen and storage in the basement, and offices on the upper floors. Proposed alterations include the adaption of the interior and exterior, and to refurbish elements of the entire building. The property is a Grade II listed building.

### **Context**

The location of the structure is in 7 Dering Street W1S 1AE London, in the affluent district of Mayfair, which is the business area of the city with a large number of diplomatic residences. The building and its surroundings represent an important ambient unit that is protected as historic heritage of the city (Grade II listed building). The main facade faces Dering Street, and the building is bordered by surrounding structures on all other sides. The outline of the structure fits building lines. Its height is regulated by the number of storeys – ground floor + three storeys + attic, with a gable roof. Altogether, the building has five levels and a basement.

7 Dering Street was designed by Treadwell and Martin in 1904. The facade was constructed with fine stonemasonry in the informal Gothic-Flemish style, with elements of Arts and Crafts. Filling the façade on both the ground and first floors is a full-width show window - a large integral opening which is framed by columns with foliated capitals and a boldly moulded elliptical stone arch. Above the first floor, two bay elevations are flanked by bold shafts supported on carved corbels and crowned by domical caps. Curvilinear hood moulds on consoles surmount the shallow oriel bow windows on the second and third floors. The steep gable has a tabernacle feature at its apex.

The building was formerly used as a representative office of JAT Company. Following the transfer of ownership from JAT Airways to the Republic of Serbia in 2011, the building gained the status of a building for official activities of the mission of the Republic of Serbia in the United Kingdom, *i.e.* diplomatic status. During the London Olympics in 2012, the building hosted the 'Serbian Pavilion' for the promotion of Serbia at the Olympics in the UK. A few months later, a couple of art exhibitions were organized in the building, after which it was closed.



## Access

The site is located in a pedestrian zone near Oxford Street. There are good transport links in around the area of this location; the tube station as well as bus routes are nearby. The site is fairly level, and the front entrance will remain stepped. Step free access is gained by a removable platform from ground level up to the raised ground floor. The link between the floors remains via the stairs.



**Picture 2.** Existing stepped entrance

## Layout

No significant change.

## Scale/appearance

The aim of the proposed work is to develop the property to improve its appearance, its utility and flexibility. Little change is proposed to the external appearance. There are no proposed extensions. At ground floor level there will be some alterations to improve access (see Access Section). This has been kept to a minimum. Since the current entrance portal, formed of wooden facade joinery, is in very poor condition, it is proposed to replace it with a new aluminium system with safety glass containing integrated thermal insulation. The new portal is divided into three parts. A double sliding door is centrally located sliding to the left where the glass fix is placed, while the fire door is set to the right. Some discreet signage is proposed to advertise the exhibition facilities. The middle part of the facade portal is redesigned and replaced in aluminium joinery in copper colour. The rest of the aluminium joinery remains in the colour black, as in the original joinery.



**Picture 3.** Design proposal for entrance portal

## Landscaping

N/A

## Heritage Assets

### Heritage Assets/Significance

The property is listed grade II and is situated in the Mayfair conservation area. Its importance is as a fine example of Gothic-Flemish style with elements of Arts and Crafts, and as a prominent building in the conservation area. The space has been neglected and empty for years, and is showing signs of deterioration as a consequence. For this reason, it is necessary to perform complete adaption of the object. In accordance with the historical significance of the building and the level of protection, the newly designed solution plans to retain and repair both the exterior of the building and the facade, and the interior structural and decorative elements. The planned changes are designed so that they do not alter the appearance of the building, but adapt the existing situation to the new functional purpose of the building. The replacement of joinery on the entrance portal with a new disposition of the front door is envisaged on the exterior facade. Other elements on the front facade, facade joinery on the floors as well as the stone facade will be repaired. The roof and ground floor lantern window require replacement; their shapes will be kept and replaced with new aluminium systems with safety glass containing integrated thermal insulation.

Adaptation of the interior of the building is based on the preservation of the original character of the interior of the building, and retaining the existing decorative elements, stairways, wreaths and floor battens. The original walls are retained, while the partition walls - erected during earlier renovations and that impair the historical value of the building - are removed. The existing stairways in the inner part of the building, which extend through the entire building with decorative balustrades, are retained and repaired. On the top floor, the dressing of an existing safety balustrade that is retained by wooden panelling is envisaged. Since the stairways leading to the basement have few historical features, its replacement is foreseen. The final materialization of the floors changes, as the existing floors have no historical value. Within the service areas, suspended ceilings are foreseen in parts where there are no decorative plaster works.

### Impact

Externally, there is little alteration proposed. Alterations to the ground floor have been kept to the minimum necessary to provide adequate access. The overall approach aims to improve the contribution the property makes to its setting without degrading its significance. This will improve the significance of the heritage asset both in terms of the special character of the listed building and in its contribution to the character of the conservation area.





**SERBIA  
CREATES**

Serbia Creates is  
affirm the country  
originality. *Serbia*  
core elements of t  
or do business, an  
partners.

## CONTENTS

### TECHNICAL DESCRIPTION OF ARCHITECTURE PROJECT

Description of the existing situation

Sanation of the object

Technical description of the newly designed space

### TECHNICAL DESCRIPTION OF PLANNED CONSTRUCTIVE WORKS

### TECHNICAL DESCRIPTION OF PLANNED ELECTRICAL INSTALLATIONS

### TECHNICAL DESCRIPTION OF PLANNED TELECOMMUNICATION AND SIGNALING INSTALLATIONS

### TECHNICAL DESCRIPTION OF PLANNED MECHANICAL INSTALLATIONS

### TECHNICAL DESCRIPTION OF PLANNED WATER SUPPLY AND SEWERAGE INSTALLATIONS

### GRAPHIC DOCUMENTATION

No.	Name of the drawing	scale	No. of drawings
<b>EXISTING PROJECT</b>			
1.	LOCATION PLAN	1: 1250	2019-IDR-A01-01
2.	SITE PLAN	1: 200	2019-IDR-A01-02
3.	BASEMENT PLAN	1: 100	2019-IDR-A01-03
4.	GROUND FLOOR PLAN	1: 100	2019-IDR-A01-04
5.	1ST FLOOR PLAN	1: 100	2019-IDR-A01-05
6.	2ND FLOOR PLAN	1: 100	2019-IDR-A01-06
7.	3RD FLOOR PLAN	1: 100	2019-IDR-A01-07
8.	ATTIC PLAN	1: 100	2019-IDR-A01-08
9.	CROSS-SECTION 1 – 1	1: 100	2019-IDR-A01-09
10.	CROSS-SECTION 2 – 2	1: 100	2019-IDR-A01-10
11.	CROSS-SECTION 3 – 3i 4 – 4	1: 100	2019-IDR-A01-11
12.	FACADE FROM DERING STREET	1: 100	2019-IDR-A01-12
<b>EXISTING PROJECT CHANGES PROPOSAL</b>			
13.	BASEMENT PLAN	1: 50	2019-IDR-A01-13
14.	GROUND FLOOR PLAN	1: 50	2019-IDR-A01-14
15.	1ST FLOOR PLAN	1: 50	2019-IDR-A01-15
16.	2ND FLOOR PLAN	1: 50	2019-IDR-A01-16

17.	3RD FLOOR PLAN	1: 50	2019-IDR-A01-17
18.	ATTIC PLAN	1: 50	2019-IDR-A01-18
<b>NEWLY DESIGNED SPACE</b>			
19.	BASEMENT PLAN	1: 50	2019-IDR-A01-19
20.	GROUND FLOOR PLAN	1: 50	2019-IDR-A01-20
21.	1ST FLOOR PLAN	1: 50	2019-IDR-A01-21
22.	2ND FLOOR PLAN	1: 50	2019-IDR-A01-22
23.	3RD FLOOR PLAN	1: 50	2019-IDR-A01-23
24.	ATTIC PLAN	1: 50	2019-IDR-A01-24
25.	BASEMENT CEILING PLAN	1: 50	2019-IDR-A01-25
26.	GROUND CEILING PLAN	1: 50	2019-IDR-A01-26
27.	1ST CEILING PLAN	1: 50	2019-IDR-A01-27
28.	2ND CEILING PLAN	1: 50	2019-IDR-A01-28
29.	3RD CEILING PLAN	1: 50	2019-IDR-A01-29
30.	ATTIC CEILING PLAN	1: 50	2019-IDR-A01-30
31.	CROSS-SECTION 1 – 1	1: 50	2019-IDR-A01-31
32.	CROSS-SECTION 2 – 2	1: 50	2019-IDR-A01-32
33.	CROSS-SECTION 3 – 3i 4 – 4	1: 50	2019-IDR-A01-33
34.	FACADE FROM DERING STREET	1: 50	2019-IDR-A01-34

**TECHNICAL DESCRIPTION**  
Cultural Center of the Republic of Serbia  
7 Dering Street in London



## TECHNICAL DESCRIPTION OF ARCHITECTURE PROJECT

### DESCRIPTION OF THE EXISTING SITUATION

#### LOCATION AND DESIGN

The location of the structure –Creative Embassy of the Republic of Serbia - is in 7 Dering Street W1S 1AE London, in the affluent district of Mayfair, the business area of the city with a large number of diplomatic residences. The building and its surroundings represent an important ambient unit that is protected as historic heritage of the city (Grade II listed building). 'Creative Embassy' is bordered by surrounding buildings. The main facade faces Dering Street. The outline of the object fits building lines. Height is regulated by the number of storeys – ground floor + three storeys + attic, with gable roof. Altogether, the building has five levels and a basement.

The building was designed by Treadwell and Martin in 1904. The facade was constructed with fine stonemasonry in the informal Gothic-Flemish style, with elements of Arts and Crafts. Filling the façade on both the ground and first floors is a full-width show window - a large integral opening which is framed by columns with foliated capitals and a boldly moulded elliptical stone arch. Above the first floor, two bay elevations are flanked by bold shafts supported on carved corbels and crowned by domical caps. Curvilinear hood moulds on consoles surmount the shallow oriel bow windows on the second and third floors. The steep gable has a tabernacle feature at its apex.

#### FUNCTIONAL ORGANISATION

The building is designed as a simple form on a rectangular base with the following dimensions – 5350mm x11060 mm. The front facade facing the street is 5350mm in width and in contact with the two buildings that on each side of it. The back facade is facing an atrium. The back facade includes windows and a lantern that exceeds to atrium.

Total area of the object is 248.24 m<sup>2</sup>; it is composed of the following storeys:

- Basement: area 47.93m<sup>2</sup> + storage room that is placed below street level 11.36 m<sup>2</sup>;
- Ground floor: area 45.42 m<sup>2</sup>;
- 1<sup>st</sup> floor: area 37.60 m<sup>2</sup>;
- 2<sup>nd</sup> floor: area 38.81 m<sup>2</sup>;
- 3<sup>rd</sup> floor: area 35.41 m<sup>2</sup>;
- Attic: area 31.71 m<sup>2</sup>.

#### FUNCTION/ USE

The building was formerly used as a representative office of JAT Company. Following the transfer of ownership from JAT Airways to the Republic of Serbia in 2011, the building gained the status of a building for official activities of the mission of the Republic of Serbia in the United Kingdom, *i.e.* diplomatic status. During the London Olympics in 2012, the building hosted the 'Serbian Pavilion' for the promotion of Serbia at the Olympics in the UK. A few months later, a couple of art exhibitions were organized in the building, after which it was closed.

### DESCRIPTION OF THE CURRENT STATE THROUGH LEVELS

#### Basement:

The basement is used as storage for exhibitions material. It comprises a utility room, kitchen, toilet room, shower room and storage rooms. The space is in very bad shape. The stairs are made of wood with vinyl plating on treads. The floor is paved with ceramics and vinyl plates. Mortar surfaces are significantly damaged by capillary damp. A dropped ceiling, which is made of raster plates (Armstrong type), is considerably damaged by moisture. Electricity and plumbing installations have been repaired previously. Gas installations are made of copper pipes and run from the line of facade under the dropped ceiling to the kitchen and further vertically to the attic. Storage rooms (1 and 2) are made of laid bricks and coated with drainage foil in order to insulate the space from

atmospheric water (leaking). The sanitary block is covered with ceramics that were applied on to wooden plates with wooden under-construction. Stairs made of steel are used as a fire escape to the street.

#### Ground floor:

The ground floor is used for exhibitions. The space for exhibitions has a lobby and a vertical communication – stairways, as well as a windshield at the entrance. The space is in poor condition. The floors are covered by laminate that is placed over stone panels on a cement jacket. All walls are covered by drywall which is fixed to a wooden construction (this is an assumption based on the presence of capillary damp). The ceiling is made of drywall that hides air-conditioning and ventilation systems. The ceiling is damaged by water leakages in the area under the roof lantern skylight. The ceiling of the flat roof with lantern skylight is in poor condition, with deteriorating hydro insulation. The stairs are made of wood, with wooden treads, and covered by carpet with battens. The lobby is made of wooden facade carpentry, painted in dark tones and with of one-sheet glass. The carpentry is in bad shape.

#### First floor:

The first floor is used for exhibitions. It is composed of: gallery, exhibition space, lobby and vertical communication – stairways, and kitchenette. The space is in poor condition. The floors are paved by carpet that is placed on cement jacket (on ceramics in the kitchenette). The surface layer of mortar is damaged by water leaks. The ceiling is made of mortar on wooden construction and decorative battens. The stairways are made of wood with wooden treads, and covered with carpet with battens. Carpentry is in poor condition. Semi-circular lobby, which is connected with the ground floor, has exterior and interior carpentry made of wood and one-sheet glass. The wood is painted in dark tones. The lobby is in deteriorating condition.

#### Second floor:

Second floor is used as a working space. In addition to the working space, it has of toilet room, lobby and vertical communication. The space is in poor and deteriorating state. Carpet is placed over wooden floor. In the toilet room, vinyl plates are fixed to cement jacket. The surface of the mortar in the stairways area is considerably damaged showing signs of water leaks, whereas in other parts of the floor it is in good condition. The ceiling is made of mortar with wooden construction and battens. Stairs are made of wood, covered with carpet with battens. Exterior carpentry is made of wood and metal and in very poor shape. Interior carpentry's made of wood.

#### Third floor:

This floor is used as a working space. In addition to the working areas, it contains a lobby and a vertical communication. The space is in poor condition. Floors are covered by carpet on wooden basis. Walls are in good condition. The ceiling is made of mortar on wooden construction. Stairways are made of wood and covered with carpet with battens. Exterior and interior carpentry is made of wood and metal. Both are in poor shape.

#### Attic:

Attic is used as a working space. It comprises open working area and stairways. The attic is in poor condition. Floors are covered by carpet laid over wooden flooring. The surface of walls is in poor condition, with visible marks of water leaking. The ceiling in the attic is made of mortar plated onto the wooden construction. The four-pitched roof has a glass lantern skylight that is positioned above the centre of the building. This Lantern Skylight is composed of steel frame with reinforced glass. The glass does not provide adequate heat and sound insulation. The roof is covered by fibre-concrete panels that are mounted onto wooden construction. The roof shows signs of water leak. The attic and the roof space are connected. The Heating system is placed in the attic. The stairways are wooden, with wooden treads which are coated with carpet. The exterior carpentry is made of wood and metal and it is in poor condition. The interior carpentry is made of wood and in poor shape.

### PRESERVATION OF THE ARCHITECTURAL HERITAGE

In accordance with the historical significance of the building and the level of heritage protection, the newly designed solution plans to retain and repair both the exterior of the building and the façade, and the interior structural and decorative elements. The planned changes are designed so that they do not alter the appearance of the building, but adapt the existing situation to the new functional purpose of the building. The replacement of joinery on the entrance portal with a new disposition of the front door is envisaged on the exterior façade. Since

the entrance portal, formed of wooden facade joinery, is in very poor condition it is proposed that it be replaced with aluminium joinery. The new portal is divided into three parts. A double sliding door, centrally located, slides to the left where the glass fix is placed, while the fire door is set to the right. The middle part of the facade portal is retained and clad in copper plate to allow space for the logo of the building. Other elements on the front façade, facade joinery on the floors as well as the stone façade will be repaired.

Adaptation of the interior of the building is based on the preservation of the original character of the interior of the building, while retaining the existing decorative elements, stairways, wreaths and floor battens. The original walls are retained, while the partition walls - erected during earlier renovations but which impair the historical value of the building - are removed. The existing stairways in the inner part of the building, which extend through the entire building with decorative balustrades, are retained and repaired. On the top floor, the dressing of an existing safety balustrade that is retained by wooden panelling is envisaged. Since the stairway leading to the basement has few historical features, its replacement is foreseen. The final materialization of the floors will change as the existing floors have no historical value. Within the service areas, suspended ceilings are foreseen in parts where there are no decorative plaster works.

#### REHABILITATION OF THE BUILDING

The space has been neglected and empty for years, showing signs of deterioration as a consequence. For this reason, it is necessary to perform complete rehabilitation of the object. It is necessary to remove all paving from the walls, floors and ceilings. Rehabilitation involves construction and other works on the object to repair or replace constructive elements without changing the exterior of the building.

Rehabilitation of the following elements is required:

- All walls and floors for hydro-insulation. A detailed hydro-insulation of all floors and walls that are under street level in order to allow further reconstruction according to new design
- Interior walls for cracks and other mechanical damage. Brick walls have to be tested for constructive cracks to perform optimal selection of micro-concrete and polyurethane materials for repair.
- Interior walls have to be treated with rupture-proof mortars and painted
- Wooden constructions of all ceilings have to be repaired and reinforced. Replace all damaged and rotten woodwork
- Stone surfaces and fasteners of the facade have to be cleaned. High-water pressure cleaners have to be applied. Fasteners have to be filled with mortar. Facade has to be protected with coating.
- Roof has to be repaired. Roof plates have to be removed to gain access to construction and to replace rotten/ damaged wooden elements. Roof paving has to be replaced with new wooden plates that are protected from biological impacts, and additionally hydro-insulated. Return the roof plates.
- The All the wooden façade carpentry has to be repaired. Wooden components of new facade carpentry have to be made and arranged according to the design of the old facade. Metal components made of cast iron and brass have to be treated with sandblast and anti-corrosion protection, and they should be painted in accordance with the project. Damaged components have to be replaced and polished.

Elements that require replacement:

- The wooden carpentry of on the entrance has to be replaced with aluminium and redesigned one; new ornament with logo 'Serbia Creates Here' has to be made and applied. New aluminium system contains safety glass containing integrated thermal insulation
- Roof lantern window – keep the shape, replace the steel parts and reinforced glass with new aluminium system with safety glass containing integrated thermal insulation
- Ground floor lantern (skylight) -- replace the existing new lantern in the same shape according to the new project
- Stairways throughout the entire interior – repair with the preservation of all the decorative elements and paint them in white.

#### TECHNICAL DESCRIPTION OF THE NEWLY DESIGNED SPACE

##### PRESENTATION OF DESIGN

In accordance with the new function of Creative Embassy of Serbia in London and 'Serbia Creates Here' concept, the project proposes a new functional organization and interior appearance of the building. The design is aimed at providing a creative and innovative concept of an exhibition space that will support different forms of presentation and organisation of public events, meetings, creative workshops, all serving the purpose of presenting Serbian culture.

Ground and first floor will comprise exhibition space.

The ground floor and first floor are designed as multi-functional creative exhibition spaces, with a variety of flexible presentation options within the interior.

In addition to this basic purpose, the building is, on the second and third floors, as well as in the attic, designed as a working space, but which provides contemporary access to the working environment. On the second floor, the working space is adaptable, open, collaborative, and may contain space for meetings and presentations by organizing desks, and it may also be converted into an open office for work by easy relocation.

The main concept of the interior is to get a clear space on all floors, as much as possible, where allowed by the inherited functional space. The existing internal wooden stairways linking all six floors from the ground floor to the attic are retained as an authentic element that is under the protection of the architectural heritage. The existing wooden stairways with a landing which connects them to each other is repaired, while preserving all the decorative details, which means removal of all existing plaster coverings on the staircase, as well as the carpet on the floor and being painted white. The part of the stairs leading to the basement has been redesigned, so that they suggest the time when they were created, while respecting the architectural heritage of the building and respecting the contemporary context and future use of the space. The stairways to the basement are designed as a combination of solid concrete stairs – pedestal upon which stairs made of white steel metal frames lean and in which part and sides they are coated with full white steel flat bars, visually suggesting a descent into the basement room. On the top floor, the old wooden stairways are preserved but lined with oak veneer fibreboard to fit more closely into the context of the future purpose of the open working space.

##### FUNCTIONAL ORGANIZATION OF FLOORS:

###### **Basement:**

Basement space will include a kitchenette with utility room that will be used for distribution of catering during public events in the exhibition and working space. This is not a commercial/industrial style kitchen for preparing catering but rather a space for plating and re-heating. The kitchenette can be completely closed if necessary by MDF doors, which is, according to the "accordion" system, simply packed into niches intended for them. The closed kitchen door, together with the panel of the side walls, on one side towards the pantry and the panelling of the walls on the other side, with the integrated toilet door, make a whole in the form of a visually unique wooden cube "embedded into concrete" basement walls. Two rounded rooms that are placed under the street level will be used as wine cellar. In the basement, next to the kitchen and wine cellar there are toilets for women and men with a common lobby, as well as a utility room for heating system and a large refrigerator.

###### **Ground floor:**

The ground floor, next to the exhibition hall, which is in the first part, also includes the part under the lantern window that is naturally imposed as a space that can be used for video presentations, lectures, projections.... The exhibition space is designed to be used in different ways depending on the type and kind of cultural activity that is presented. Since the space is relatively small, without sufficient wall space for wall-mounted exhibits, movable vertical exhibition panels are envisaged, with dimensions 810x2500x50mm, attached to a metal frame with a rail on the ceiling on which they slide. This makes it easy and simple to have exhibitions that require a larger amount of vertical surfaces. Vertical panels, if they are not needed, are packaged in a niche at the back of the room, dimensioned to fit all moving panels. In addition to these exclusive exhibition panels, there are vertical panels that close the back of the room if a video presentation or lecture is in progress, allowing for a more intimate area, isolated from other audio and visual contacts necessary at that moment. These vertical panels differ from exclusive exhibition panels in that they are on the one side veneered in oak and on the other, painted in white. Their dimensions are the same, so they are compatible with other exhibition panels and can be combined for



exhibition purposes as needed by the exhibitor. The project proposes another possibility for an exhibition setting, unless there is a great need for free vertical surfaces, and horizontal exhibition surfaces are required. In this case, assembly - dismantling exhibition tables are designed, which are assembled according to needs. Exhibition tables 1000x2000 mm in size can be set longitudinally to one another, and thus allow seamless communication and viewing of exhibits. The table top is made of oak veneer I, and the legs are made of diagonally mounted solid steel profiles with a cross section of  $\varnothing$  6mm.

The floor of the ground floor, which was in the existing condition lowered in relation to the entrance zone, is raised to the level of the entrance zone and is designed in a white cast terraces.

The projection room contains wooden foldable chairs (our suggestion is Chair B Ash Natural, designed by Konstantin Grčić), and a projection panel. If necessary, chairs can be folded down and removed, and all panels can be packed in a niche in the back, so that the space of possible projection can be used completely for the exhibition.

#### **First floor - Gallery:**

On the first floor, the space allows exhibitions to be hung on the existing walls, but since the functional organization of these walls imposes certain (limiting) conditions, a mobile exhibition installation is designed in the form of glass cubes with a base of fibreboard in black. These cubes are glass boxes in which exhibits are displayed, dimensions 1000x1000x750mm, with a base height of 150mm, standing on hidden wheels to move seamlessly through space, depending on the needs of the exhibitor. The basic position of the exhibition cubic installations is in the central zone of most of the 1st floor space. Above that position there is a lightning designed specifically for that space which directly illuminates the exhibits in that position. Lighting is also a design statement on how to intervene in a space with lots of stylistic details including the architecture and free interpretative style of the Gothic-Flemish movement, with elements of the Arts and crafts of 1904, and which are therefore preserved as a valuable heritage. It is viewed through the arched facade portal from the outside of the building and thus suggests the purpose of the space within the building.

If necessary, a projection screen can be lowered over the windows towards the inner courtyard, which allows exhibitions and projections on that part of the wall if needed.

The space also contains a toilet for visitors, placed near the lobby.

#### **Second floor:**

This space is designed as a meeting/presentation room, as well as an open working space if needed. In the centre of most of the space, two larger tables and one smaller one are set longitudinally, which can be folded together to form a large meeting table. These tables have a similar design as the tables on the ground floor, with wire legs but with a white terrazzo colouring. Ideally, it is envisaged that the tables on the ground floor, second and third floor can be combined if necessary because they are compatible and well-fitting in size. In one the part of the conference room, wired chairs of geometric structure are placed (our suggestion are Chair One, designed by Konstantin Grčić), which in addition to their primary purpose, represent the design statement; because of their sculptural influence, they greatly affect the overall impression of the space. A shelf for registers is positioned in the existing niche between the supporting pillars, designed to contain a perforated lining for the parapet air conditioning in the lower zone. A similar shelf is designed opposite it, which complements the rest area on this floor. The sofa is made of wooden construction with upholstered seating cushions. An additional toilet for employees is located in the rear of the floor that faces the atrium.

#### **Third floor:**

This floor is designed as modular working space aimed at promoting collaboration. This floor contains the same elements of movable furniture as the second floor, except that here they would be to more organized for the purpose of open working space. Such an organization enables a total of 5 people to work without interruption. The tables and chairs on the third floor are of the same size and design as those on the second floor, to be combined as needed and easily adjusted.

#### **Attic:**

The Attic is designed as a working space. A table (1200 × 2400 mm) with two working places is placed in the centre under the lantern window. A closet is incorporated into the wall niche, which is perforated in the upper and lower zones because it hides the air-conditioning unit and the radiator. In the part of the attic towards the façade wall, the front of the two-story structure is dressed in fibreboard panelling painted in white, which is at the same

time the window ledge and a closed shelf for registers. Part of the sloping roof is dressed in oak veneer fibreboard, which also integrates the exit door to the roof to achieve the wholeness and harmony in the recessed part of the attic. The exit to the roof is provided by lowering the "window ledge" - a ramp additionally strengthened in order to allow smooth walking, which is hidden behind the mentioned veneer fibreboard panel. In order to follow the concept of the contemporary treatment of the attic interior, the safety balustrade of the existing wooden stairways is lined with the same oak veneer fibreboard, while the stairs and treads of the stairs are repaired and painted white.

#### **MATERIALS AND FURNISHING OF WALLS, FLOORS AND CEILINGS IN DIFFERENT STOREYS:**

##### **Basement:**

Floor materials: micro-concrete coating in concrete colour on the entire surface of the floor.

Walls materials: The walls in the area where there is the room for food layout and tasting, toilets and storage space are made of micro-concrete coating in concrete colour. The front wall of the wine cellar and the inner walls of the wine cellar are lined with brick.

Ceiling materials: In the area above the storage space and toilets is a dropped plasterboard ceiling, painted white, at the height of 250 mm from the ceiling panel. In the other parts of the basement (except part of the wine cellar), the ceiling is lowered in plasterboard painted white, 50 mm from the ceiling panel. The wine cellar ceiling is set in a brick arch style.

##### **Ground floor:**

Floor materials: cast terrazzo in white colour.

Walls materials: Plaster and painted in white.

Ceiling materials: The part above the projection area, part of the ceiling is lowered in plasterboards painted white 220 mm from the ceiling panel. Also in front of the front stairs and in front of the entrance portal dropped ceiling in height from 200mm to allow space for packing the fire curtain and thus separate area for evacuation. In the exhibition room, paint the existing ceiling in white.

##### **First floor - Gallery:**

Floor materials: Carpet tiles are put on the floor over the existing construction. The stairways with the landing in front of the visitor toilet as well as in the part towards the stairs for the upper floor are retained, the existing wooden structure is repaired and painted white. The existing floor moulding is repaired and restored to its original position.

Walls materials: Plaster and painted in white.

Ceiling material: Ceilings, plaster mouldings as well as capitals around the columns are retained, repaired if there is some damage and painted in white. Only a part of the stairways above the landing has a dropped ceiling under the decorative plaster mouldings for the purpose of hiding the air-conditioning installations.

##### **Second floor:**

Floor materials: Carpet tiles are put on the floor over the existing construction. The stairways with the landing in front of the visitor toilet as well as in the part towards the stairs for the upper floor are retained; the existing wooden structure is repaired and painted white. The existing floor moulding is repaired and restored to its original position.

Walls materials: Mortar, painted in white. The part of the wall by the stairways will be covered with fibreboard in oak veneer colouring.

Ceiling materials: Ceilings, plaster mouldings as well as capitals around the columns are retained, repaired if there is some damage and painted in white.

##### **Third floor:**

Floor materials: Carpet tiles are laid on the floor over the existing construction. The stairways with the landing in front of the visitor toilet as well as in the part towards the stairs for the upper floor are retained; the existing wooden structure is repaired and painted white. The existing floor moulding is repaired and restored to its original position.

Walls materials: Mortar, painted in white. The part of the wall by the stairways will be covered with fibreboard in oak veneer colouring.

Ceiling materials: Ceilings, plaster mouldings as well as capitals around the columns are retained, repaired if there is some damage and painted in white.

#### **Attic:**

Floor materials: Carpet tiles are put on the floor over the existing construction. The stairways with the landing in front of the visitor toilet as well as in the part towards the stairs for the upper floor are retained; the existing wooden structure is repaired and painted white. The existing floor moulding is repaired and restored to its original position.

Walls materials: Mortar and painted in white. The side wall along the stairways is lined with plasterboards to the level where the lining of part of the wall and the stairways railing in the oak veneer fibreboards begin.

Ceiling materials: The existing ceiling is painted in white.

### **TECHNICAL DESCRIPTION OF PLANNED CONSTRUCTIVE WORKS**

#### **DESCRIPTION OF THE EXISTING STRUCTURE**

The building of the Creative Embassy in London was built in the first half of the 20th century. The building has three floors and a loft. The height of the building above the surrounding terrain is 15.8m, and the outer dimensions of the building are 11m x 5.35m. The constructive system is masonry with solid bricks as the basic material. Partially, the structure is reinforced with vertical steel columns and steel beams. Above the basement is a full reinforced concrete slab coupled with steel beams. On the higher floors there is a wooden floor that is bordered in masonry walls. The basement of the building partly underlies under the street and on that part there are masonry utensils. The staircase in the building is wooden. It is assumed to be based on a steel beam that extends over the transverse length of the object. The building is in good condition and there is no visible constructive damage to it.

#### **OBJECT RECONSTRUCTION PLAN**

The future facility needs to undergo adaptation and reconstruction to fit to the purpose of the Creative Embassy. It is planned to preserve the main structural elements of the building and not to jeopardize the stability of the building. The construction itself would carry the same load in the future as before, so it is not necessary to reinforce the foundation and above-ground construction. Any changes that will be carried out on the building will not reduce the constructive stability of the building and will be carefully calculated and processed in detail.

The main activities on the construction of the building are:

1. Replacement of an existing wooden staircase to the basement with a steel staircase

Other activities are smaller and do not represent changes to the constructive system, but they are at the level of craft works.

#### **Replacement of an existing wooden staircase to the basement with a steel staircase**

The new staircase will be made of 40mm thick steel plates that will be welded by each other. The staircase will start from the existing steel beam and end up on existing steel which already bear the wooden staircase.

### **TECHNICAL DESCRIPTION OF PLANNED ELECTRICAL INSTALLATIONS**

#### **Main power supply and electrical distribution**

The main distribution cabinet for the MDBM is located in the ground floor on the wall.

The design envisages the Main Distribution Boards (MDBM) for supplying lighting installations, sockets, connectors, thermotechnics, TCS equipment and other elements.

The MDBM should be marked with nameplates: names of cabinets, all protective, control and measuring elements, power supply system, protective and control elements and regular terminals shall be marked with 12 mm high labels, in black on a yellow background. In the document storage pocket, 3 copies of the technical documentation will be placed, each containing the single-pole and control cabinets schemes, as well as the technical documentation of each of the built-in elements, taken from the manufacturer's catalogue.

The MDBM must be tested.

As protection devices, compact power switches (MCCB) on the inlets and automatic circuit breakers at outlets are used, depending on the nominal current of the consumer, and the combination of the automatic switch with RCCD, in case of the need for additional protection from indirect contact (toilets, sockets etc.)

The power supply is carried out with cables from halogen-free insulation materials with increased fire resistance. Power cables powered by devices that have to work in a fire are from halogen-free insulating materials resistant to burning for 90 min.

Complete installation should be done according to the applicable IEC regulations for the execution of this type of installation.

#### **Lighting installations**

Electrical lighting of the facility will be performed per safety & environmental code, with corresponding lights with LED sources. LED light sources are used in order to improve the energy efficiency of the building, i.e. reducing the amount of electricity consumed.

Security lighting fixtures are LED with local battery. Security lighting fixtures need it be provided in all area and in the evacuation routes.

Common spaces and offices that are exposed to daylight will be equipped with dimmable LED lights. Lighting control is provided with local switches (dimmers) which are mounted at a height of 110cm from the finished floor.

In toilets, lighting is switched on with classic presence detectors (230 V, 16 A).

Installations of lighting should be carried out by the halogen free cables. Cables for the supply of fixtures are laid on clamps in the suspended ceiling and walls in HF ribbed pipes.

The exact types and the final arrangement of fixtures will be defined with the Interiors architect.

#### **Installation of sockets and connectors**

Socket installations are to have a sufficient number of single-phase service sockets placed in the wall at 300 mm from the floor of the finished floor.

Socket installations are performed so that each individual workplace is equipped with 4 sockets. Installations should be carried out using halogen free cables.

In ground floor and gallery (first floor) is a showroom which requires the provision of floor sockets – 4 pcs for each floor (would be hidden).

In the basement, a services socket is provided in the Kitchen for use by equipment, at 1200 mm from the finished floor, as well as sockets for water heater, gas boiler and a large refrigerator.

Cables for the supply of fixtures are laid on clamps in the suspended ceiling and walls in HF ribbed pipes.

Service sockets designed for cleaning and maintenance are arranged along corridors, on columns in open space and in each of the areas near the door.

In toilets it is envisaged that there are socket for hand dryers.

#### **Power supply of thermotechnical and technological consumers**

Electrical installation is performed according to the design of thermotechnical installations.

The power supply is carried out with cables from halogen-free insulation materials with increased fire resistance. Power cables powered by devices that have to work in a fire are from halogen-free insulating materials resistant to burning for 90 min.



### **Protection against electric shock**

Protection against direct contact is achieved by the use of suitable enclosures where the electrical equipment is placed, so that no direct contact with live parts is possible for any voltage level.

Protection against indirect contact is achieved by automatic power off by using TN-C and TN-S system. The distribution of power supply from the main cabinets is conducted with a rail distribution with five-wire and three-wire cables, so in this way all consumers can be connected via the special protective yellow-green wire in the power cable or rail distribution to the main protective busbar, and through the main busbar for potential equalization to the grounding ground of the building.

As additional measures of protection against dangerous contact voltage, the installation of combined protective devices that include overcurrent and short-circuit protection with a residual-current device of a corresponding rated current and sensitivity of 30mA, as well as the additional potential equalization in all technical and sanitary facilities.

In toilets, the additional potential equalization is done by installing a PVC box with a protective Cu busbar, which interconnects the available exposed conductive parts in the sanitary block. From the protective busbar to the metal masses in the sanitary block, the connection is made by means of a conductor 1x6 mm<sup>2</sup> and the connection via galvanized hinges, screws and cable hook. The conductor is placed in a protective installation pipe Ø13.5 mm below the plaster in the wall or in the floor panel.

Complete installation of electric shock protection should be done according to the applicable IEC regulations for the execution of this type of installation.

## **TECHNICAL DESCRIPTION OF PLANNED TELECOMMUNICATION AND SIGNALING INSTALLATIONS**

### **Automatic fire alarm system**

The project envisages the setting up of an addressable central unit of the fire department, with a sufficient number of detector loops to cover the entire building.

The complete building (except for sanitary blocks) is covered by automatic fire detectors (the type of detector depends on the purpose of the room), while the addressed break glass call points are placed on the evacuation routes.

In the event of a confirmed alarm, the system activates the necessary executive functions (activation of alarm sirens and evacuation messages, ventilation shutdown, closing of PP valves and opening of windows for de-smoking, activation of the overpressure fans, automatic opening of sliding doors and opening of doors protected by access control on evacuation routes.

### **Structured cabling system**

The system of structured cabling represents the infrastructure for various telecommunication services: telephone installation, computer installation, video surveillance, WiFi etc. The main concentration of the structured cabling system (BD) in the form of a 19" Rack cabinet of will be positioned in basement where active equipment of all telecommunication systems (telephone switchboard, active network equipment, central equipment of video surveillance system, sound systems etc.) will be installed.

Classical horizontal cabling is planned: STPcat6 LHOS cables are installed from the patch panels from BD to the position of the RJ45 sockets.

RJ 45 Socket installations are performed so that each individual workplace is equipped with 3 sockets (computer -2 pcs and telephone -1 pcs).

On each floor need to be provided access point (1 pcs) mounted on the ceiling.

### **Sound system**

An ambient sound system is provided. The central equipment of the sound system is set up in DB in basement. The sound system covers all areas in the building.

In the case of fire, the fire alarm is performed through alarm sirens throughout the entire building, with evacuation messages being emitted in the areas where the sound system is installed, for reasons of easier evacuation

(alternating with alarm sirens in the initial stages of evacuation). In this case, the sound system may not be set up with equipment that meets EN54 standards, and standard cables can be used for speaker lines.

### **Video surveillance system**

An IP video surveillance system is provided that uses structured cabling. The central equipment of the video surveillance system will be placed in the DB in the basement, and the surveillance monitors will be placed in the ground floor.

High resolution cameras (min. 2MP) will cover all the entrances into to the building and corridors on each floor.

### **Anti- burglary system**

By the use of the anti-burglary system, the protection of all entrances to the building is planned. Alarm mode will be defined by the DH security service.

## **TECHNICAL DESCRIPTION OF PLANNED MECHANICAL INSTALLATIONS**

This design has been prepared for the retrofit of the existing building located in Central London, inside which a showroom and exhibition space will be formed for the Embassy of the Republic of Serbia. The building has a basement, a ground floor, 3 stories above grade plane and an attic, with the combined area of around 230 m<sup>2</sup>. This retrofit project plans a complete removal of the existing mechanical installations in the building and their substitution with new heating, ventilation and air conditioning systems, which will meet the indoor comfort requirements set by the User and the technical norms applicable to these types of buildings. The Concept of the HVAC systems is conditioned by the planned architectural changes and completely new interior designs of all building levels.

### Basement

The building's basement is planned as a lounge area and a visitor gathering area. A part of the basement has been reserved for the restrooms and the technical room envisaged for the gas-fired boiler.

For the purpose of heating this space, it is envisaged to install a radiator heating consisting of plastic pipelines that are embedded in a cement screed under the final floor covering. It is planned to install special interior 2000mm high radiators (manufacturer CLEIDO, model CIVETTA). For the installation of radiators, niches are provided in the side walls of the room in the area of the wine cellars just below the street. All radiator heating pipes come from a manifold cabinet located in the technical room. The cabinet houses the supply and return manifold radiator heating and all associated fittings.

To cool the space, but also to heat it in the period between seasons, the designer has planned a duct-type indoor DX unit, with the approximate cooling capacity of 3.5 kW. The unit will be installed in the bathroom, above the suspended ceiling. The unit will use recirculating air only. Air will be supplied to and extracted from this space through ventilation grilles (max. height 200mm), which will be installed (immediately under the ceiling) on the partition wall that separates the bathroom from the lounge.

Ventilation of the space will be carried out over a ceiling-mounted ventilation unit with the high-efficiency waste heat recovery unit (min. efficiency  $\eta=70\%$ ), which will also be installed above the bathroom suspended ceiling. The 300 m<sup>3</sup>/h (4 acph) capacity of this unit has been determined on the basis of the assumed number of occupants in the space concerned (10-15). At the extraction duct of the waste heat recovery unit, the designer has planned installation of a 2 kW electric heater. Operation of the heater has been linked with the operation of the waste heat recovery unit over a shared controller. Supply and extraction of air to and from the space will take place over ventilation grilles, installed on the partition wall, under the ceiling. Operation of the waste heat recovery unit will be controlled independently of the cooling duct-type unit.

A system of galvanized sheet metal air ducts and plenums connects the supply and extraction ventilation grilles with the indoor unit and the waste heat recovery unit. Both supply and extraction ducts and plenums will bear thermal insulation with integrated vapour barrier.

To ventilate the restrooms the designer has planned an extraction system consisting of air valves, flexible tubes and an in-line extractor fan.



Points of (outdoor) air intake and (waste air) exhaust will be the vent caps, located in the courtyard, on the level of the 1st floor. For the installation of ducts, the designer has planned a double gypsum wall, extending from the basement to the ground floor ceiling.

#### Ground Floor

The ground floor of the building covered herein is planned to be used as a showroom, which will consist of two interior design partitioned areas, which, nevertheless, act as a single space from the standpoint from the standpoint of HVAC design.

The installation of radiator heating like in the basement is foreseen for the heating of this part of the building. The radiator heating cabinet is installed in a gypsum lined wall niche, especially designed for this purpose.

This space will be ventilated naturally, through the door and the hatch installed on the ceiling.

To cool the space, but also to heat it in the period between seasons, the designer has planned a ceiling mounted corner cassette DX unit, with the approximate cooling capacity of 4.5 kW. The unit will be concealed inside a suspended ceiling bulkhead, formed in the area that divides this space in two.

#### 1st Floor

To heat this part of the building, the designer has planned a radiator heating system. Installation of specially designed 2000mm tall radiators has been planned (manufacturer: CLEIDO; model: CIVETTA). Radiators are planned to be installed in side wall niches.

This space will be ventilated naturally, through the windows.

To cool the space, but also to heat it in the period between seasons, the designer has planned a ceiling mounted corner cassette DX unit, with the approximate cooling capacity of 3.0 kW. The device will be placed in a cascade of lowered ceiling within the stair hall, in accordance with the interior design requirements.

#### 2nd and 3rd Floors

To heat this part of the building, the designer has planned a radiator heating system. As on the 1st floor, installation of specially designed 2000mm tall radiators has been planned (manufacturer: CLEIDO; model: CIVETTA). Radiators are planned to be installed in sidewall niches.

This space will be ventilated naturally, through the windows.

To cool the space, but also to heat it in the period between seasons, the designer has planned indoor wall-mounted DX units, with the approximate cooling capacity of 3.0 kW. The units will be installed in side wall niches, behind the hollowed wall cover, in accordance with the requirements of the interior design.

#### Loft

To heat this part of the building, the designer has planned a radiator heating system. Installation of specially designed 800mm tall radiators has been planned (manufacturer: CLEIDO; model: CIVETTA). Radiators are planned to be installed on the facade wall under the window sill, as well as in the niche behind the hollow lining, in accordance with the interior design requirements.

This space will be ventilated naturally, through the windows.

To cool the space, but also to heat it in the period between seasons, the designer has planned an indoor wall-mounted DX unit, with the approximate cooling capacity of 3.0 kW. The units will be installed in side wall niches, behind the hollowed wall cover, in accordance with the requirements of the interior design.

#### Cooling

To cool the building's indoor spaces, but also to heat them in the period between seasons, the designer has planned installation of direct expansion (DX) and variable refrigerant volume (VRV) systems. This master system is comprised of an outdoor air-cooled compressor-condensing unit and DX units used for both heating and

cooling, which are designed for indoor installation. Outdoor and indoor units will be connected between each other over a system of Freon-conveying copper pipes.

Different types of indoor units (duct type, cassette type, wall-mounted type) will be used to make up for the indoor heat gains and transmission losses in the period between seasons. All these types of indoor units come with 3 fan speed settings (low/med/high). Every room will be fitted with a local controller, which will allow the User to set the desired indoor temperature and fan speed. For the duct type and cassette type indoor units there must be inspection openings in the ceiling, which will facilitate the units' maintenance and filter replacement. These openings will be coordinated with the interior design.

The outdoor unit of the VRV system will be installed in the courtyard, on the level of the 1st floor. The system planned in this design will have the total cooling capacity of around 20 kW and the total power usage of 6 kW. Exact capacity of this unit will be adopted in further design development, on the basis of the heat demand calculations of individual indoor spaces.

#### Heating

The building will supply heat from the gas-fired boiler with the approximate capacity of 16 kW. Exact capacity of this unit will be adopted in further design development, on the basis of the building heat demand calculation.

The boiler will sit in the technical room in the basement. The designer has planned a boiler with integrated coaxial flue pipe, which serves both to exhaust flue gas and to admit outdoor air necessary for the combustion process. Points of air intake and smoke exhaust will be in the courtyard, on the ground floor level. The flue pipe will lead to the courtyard through a double gypsum wall. The technical room will also house circulating pumps for the radiator and underfloor heating systems, expansion tank and the necessary isolating, metering and control valves.

#### Pipe System

Pipework of the heating system will be formed with the use of thermally-insulated steel pipes. Insulation thickness has been determined in compliance with local regulations.

Underfloor heating pipework will be formed out of polyethylene plastic pipes.

Pipes of the cooling system will be made of copper, and thermally insulated. Insulation component will also bear a vapour barrier. Insulation thickness has been determined in compliance with local regulations.

Condensate will be drained away from the indoor units over a system of PVC pipes, which will slope towards the connection to the drainage system.

Pipe installation will be concealed, in niches or above the suspended ceiling, wherever their installation is possible. Parts of the pipe systems outside of the ceilings and niches will be either concealed within bulkheads or embedded in the walls. The exact pipe installation method will be defined in later design stages, with reference to the interior design requirements.

#### General Notes

The natural gas service line installation shall conform to the technical requirements of the local natural gas distribution company.

Space for the installation of the gas-fired boiler shall conform to the requirements contained in the applicable codes and British Standards.

Heating and cooling load calculations shall conform to local codes and British Standards.

In later design stages, it will be necessary to ensure compliance with the local fire safety regulations.

### **TECHNICAL DESCRIPTION – HYDROTECHNICAL INSTALLATIONS – CURRENT STATE**

The subject of this technical description are **hydrotechnical installations** (water supply to consumers) and **sewerage installation** (waste pipes and rain water drainage from the roof).

### **CAPACITIES AND INSTALLATIONS**

The available steel plumbing pipe has a diameter of Ø25 mm, with the water throughput of Q=0.468 L/s. The available drainage system with the main steel pipe, Ø150 mm in diameter with a 2% slope and waste throughput of Q = 8.6 L/s.

### **PLUMBING IN THE OBJECT**

#### **SANITARY NETWORK**

The main horizontal branching is placed under the basement floor. The branching has a slope towards the release valve. Vertical branching is fixed with hooks or embracers. There is an elastic rubber mat under each embracer.

Hot water is produced by separate boilers in each toilet and kitchenette.

The distribution of tap water is made of steel plumbing.

Tap water piping is organized in a way so that the valves are in the plane with the wall surface.

Horizontal network has a slope towards the bleeder valve.

### **SEWERAGE IN THE OBJECT**

#### **RAIN DRAINAGE**

Atmospheric waters from the pent-roof is collected by horizontal gutters. Vertical gutters take water into the street sewerage via horizontal branching. Atmospheric waters from the yard go to rain drainage via side channels.

#### **WASTE SEWERAGE**

Steel vertical pipes are positioned on the back facade of the building.

The toilets have integrated toilet tanks. Sewerage ventilation is composed of surface openings that are made of zinc-coated tin. The wastewater collection system is made of vertical steel pipes (Ø110 mm). The transition from vertical to horizontal components is made using revision parts.

Horizontal branching is placed under the basement floor, and it is separated from the rain drainage.

### **SANITARY EQUIPMENT**

The available sanitary equipment is in good condition.

## **TECHNICAL DESCRIPTION – HYDROTECHNICAL INSTALLATION – PROJECT PROPOSAL**

The subject of this technical description are hydrotechnical installations (water supply to consumers) and sewerage installations (waste pipes and rain water drainage from the roof).

### **PROJECTED CAPACITIES AND INSTALLATIONS**

The water supply will be through a PE pipe with a diameter of Ø25 mm and water throughput of Q = 0.5 L/s.

The project involves one drainage system for waste and atmospheric water, made of steel pipe with Ø150 mm, 2% slope and throughput of Q = 8.6 L/s.

### **PLUMBING IN THE OBJECT**

#### **SANITARY NETWORK**

The project of plumbing in the building is in accord with the available water supply, constructive elements, and distribution of consumers.

The main horizontal branching is placed under the basement floor. The branching has a slope towards the release valve. Vertical branching is fixed with hooks or embracers. There is an elastic rubber mat under each embracer.

Hot water is produced by separate boilers in each toilet and kitchenette.

The distribution of tap water will be through a fusiotherm plumbing system.

Tap water piping is organized in a way that the valves are in the plane with the wall surface.

Horizontal network has a slope towards the bleeder valve.

The visible plumbing elements will be insulated to prevent condensation, using 20 mm thick armafex slit pipe insulation.

Tap water piping is organized in a way so that the valves are in the plane with the wall surface.

Wherever feasible, branching in the ceiling should be equipped with a valve to enable closing different parts of water supply system.

Bleeding valve will be installed at the input of water supply into the object. Horizontal network has a slope towards the bleeder valve. All plumbing has to be pressure-tested and disinfected.

Hydraulic calculus has been performed according to Brix. The results are presented in a table. Special care was exerted to make the system fully functional.

### **SEWERAGE IN THE OBJECT**

#### **RAIN DRAINAGE**

Atmospheric waters from the pent-roof is collected by horizontal gutters that have to match the roof cover, made of anti-corrosive materials, and resistant to chemicals. Vertical gutter take water into the street sewerage via horizontal branching.

#### **WASTE SEWERAGE**

Steel vertical pipes are positioned on the back facade of the building.

The toilets have integrated toilet tanks. Sewerage ventilation is composed of surface openings that are made of zinc-coated tin. Wastewater collection system is made of vertical steel pipes (Ø110 mm). The transition from vertical to horizontal components is made using revision parts.

Horizontal branching is placed under the basement floor, and it is separated from the rain drainage.

### **SANITARY EQUIPMENT**

All sanitary equipment has to be top class, with appropriate attests. The contractor should provide the investor and supervisor with samples and to proceed to procurement only after the approval.

### **GENERAL COMMENT**

1. All construction and other works that are proposed in this project have to strictly follow operative regulations and standards and have to be performed by appropriately qualified workers.
2. Any change of the project at any point during the construction can be performed only with a tacit approval of architects or supervisors.

**GRAPHIC DOCUMENTATION OF EXISTING PROJECT**

Cultural Center of the Republic of Serbia  
7 Dering Street in London