

FULVIO CAPUTO

The design and the building site

The initial choices and start of work

The first part of the restoration works at the Palazzo Franchetti began in June 2002.

The work itself was preceded by an intense period of architectural design work by Alessandro Comin on the basis of decisions made by the Istituto Veneto di Scienze, Lettere ed Arti regarding the future use of the building.

The design was approved by the Istituto after it had been submitted to the then Soprintendente per i Beni Architettonici, Roberto Cecchi, for examination of some design difficulties. It was then vetted by the Soprintendenza and the Comune di Venezia, after which it became definitive.

The building had until then been used only as office space, while its new life called for a more complex division of space and access.

The new design placed the conference activities on the ground floor (in the main hall, the *portego*) and the services in the surrounding areas (reception, cloak room, toilets, café, guest rooms and speakers' rooms) along with the control room and other technical areas. The mezzanine was to provide room for other conference back-up activities: press room, office and meeting room.

The conference and meeting facilities were also to be set up in the attic rooms, while the rest of the mezzanine on the ground floor along with the second *piano nobile* and the wing of the building below the café, were to have been used for activities relating to the service sector.

The *piano nobile*, with magnificent, majestic volumes and dazzling views, was to be fitted out for hosting exhibitions.

The executive definition of the programme described required many precise checks, most of which could only be carried out after the building work had begun. For example, the load-carrying capacity of the floors, which would have to be compatible with the expected number of people and quantity of furnishings and plant, could only be defined after the floors had been stripped and their consistency checked; in other words, after considerable demolition work.

This was the main reason it was thought appropriate to plan and carry out the work in two successive stages.

The first stage, which as we have seen began in summer 2002, under the site direction of Alessandro Comin, led to consolidation of the roofing structure by replacing rotten trusses and secondary support beams, waterproofing and insulation of the roof, reordering of the internal attic layout, structural repair of the two upper floors, replacement of the lift and, on the ground floor, construction of basement plant rooms for the boilers and water tanks, and a new sewage system.

Vettore Costruzioni srl, the winner of an informal tender for the contract, carried out these first works under the technical direction of Franco Carazzai, later succeeded by Stefano Baso.

Restoration of the smaller and more precious parts of the building – the old fabrics and wooden decorative elements – began in the same period on the second *piano nobile*.

After careful cataloguing and laboratory testing, it was apparent that the old fabrics made at the end of the nineteenth century by Fortuny were no longer strong enough to remain in place and that this would threaten their irreparable loss. It was therefore decided to dismantle them, restore them and keep them in a suitable place for subsequent display. The historic fabrics on the second *piano nobile* were replaced with new ones made by the same company in the same design and using the same process.

Restoration was also begun, by Luigi Righes and his associates (Laboratorio Righes Restauri snc), on the inlaid floors, the neo-Gothic doors, the wooden panelling and the filing cabinet added by the Istituto Federale in the early 1920s. The latter gave the whole floor a powerful stylistic connotation.

A mix of old and new recipes and patient manual work went into the dismantling, cleaning, replacing of missing parts, polishing with lac and light veiling with mixtures consisting of beeswax and microstalline.



The difficulty of installing equipment into the wooden structure of the filing cabinet became apparent during its restoration. Original solutions were therefore devised, such as the insertion of bands of fibre optics (Synthesi illuminazione and Zumtobel Staff) for the lighting, concealed installation of power and network points in some of the drawers and use of some empty spaces for installation of the fan-coils. Old brass grilles that were in keeping with the style and epoch of the filing cabinet were also fitted.

The design and installation of the new plant, directed by myself (C and C architettura ingegneria srl) with the consultancy of Lorenzo Fellin, nominated project supervisor by the Istituto Veneto board of directors, departed considerably from many of the usual procedures that simply involve checking heating plant and installing new services and relative transfer and discharge networks. The goal at the Palazzo Franchetti was to ensure total climatic comfort in the areas intended for offices (air conditioning) and electrical, electronic and special systems of the highest possible quality regarding their end uses.

This first stage began with construction of the climate control plant and installation of the evaporating towers, the boilers, fire extinguishing systems and pressure regulators. Paired electro pumps were installed and the piping for sanitary water supplies and fire fighting laid. General electricity boards, local ones and transformers were installed, and unipolar, copper wiring with a double sheathing ensuring a very low emission of fumes and toxic gases was used and fibre optic or coaxial and multi-couple wiring for the special plant.

Outside, Paolo Pagnin and his firm (Lithos snc) had begun restoring the areas of white Istrian stone in autumn of that year. The compacted lime was treated with particular care and in some places the work was restricted to simple washing in order to retain the patina and shading the material had acquired over the years. Door jambs and architraves, plain and spiralled frames, balusters and shafts, dentils and eggs were all consolidated, restored and given new protection.

The ochre yellow rendering of the building was carefully secured and cleaned of the dust, mould and other deposits on its surface.

The first stage of the restoration work was completed in December 2003.

An area of about 220 square metres had been created in the attic and a further 920 on the second *piano nobile*, providing space for 60 new work stations. The surface area devoted directly or indirectly to plant and services in this stage was considerable: more than 600 square metres.

The division of the work into two complete functional stages allowed the first tenants chosen by the Istituto Veneto to move in: the World Health Organisation's European Office for Investments in Health and Development and the Regione Veneto on the second *piano nobile*, and the CO.RI.LA (Consorzio Ricerche Lagunari) in the attic, though temporarily.

Refining the design and the new building site

In the meantime the Istituto Veneto had added further requests to its initial ones.

The climatic parameters in the areas intended for exhibitions had to cover not only temperature but also relative humidity and the rooms had to be fitted with a volumetric detection system and closed circuit television system to increase the level of security for works of art.

It was also decided to extend the air-conditioning to the entire conference area and to connect the whole building with a network that would allow it to be turned into one big hall. The aim of this was to enable voice and video communication with the conference rooms on the ground floor. This maximised the potential offered to the Istituto and third parties using the system. These new requests did nothing but magnify a question that had become evident during the first stage of the works: the importance taken on by the plant, both in economic terms and executive complexity.

Consequently, overall responsibility for the building site was given to Bortoli Ettore srl, the company that had given excellent proof of itself in the first stage, while Davide Costantini was assigned the exacting, complex responsibility of site direction.



The second stage works began in February 2004. These involved completion of the 'stella centrale' and control room, laying of the pipes and ducting for the air conditioning and for the normal and special copper wiring, completion of the electronic security system and positioning of the cameras with swivels, managed automatically for internal surveillance, all carried out under my direction.

The building works began again with consolidation of the vertical structures (spot stripping and rebinding on vast areas of masonry walls) and the horizontal ones (consolidation with new sections added to the beam ends of the floors where these had decayed), the laying of new floors (for installation of the air treatment plant on the first *piano nobile*) and consolidation of the existing ones in order to withstand high inertia loads, and construction of plant and service areas.

The greater flexibility of the building with the increased forms of use and consequent increase in user numbers accentuated the problems relating to security; in particular fire prevention. Guglielmo Marchetto had supervised on-site work safety during the design and building work; now Davide Cassandro began to handle the work needed to comply with the requirements of the Provincial Fire Services.

Drafting the plan to ensure the building would be granted the Fire Prevention Certificate proved extremely complicated. The main problem was to fit it with elements capable of resisting fire for one or two hours, placed between one functional area and another, such as between the conference areas and the exhibition spaces. But there was an obvious risk that these elements would become invasive or even mask the artistic-historic features of the *palazzo*.

It was decided to avoid false ceilings under the wooden floors, rich in pictorial decorations, but rather to lay an expanding, transparent, fire resistant-certified, varnish. A good eight coats were applied to all the beams in the *portego* and all the plant rooms.

At the same time it was decided to create two fire resistant compartments, one on the ground floor and one on the first floor to make the two internal staircases safe for evacuation in case of fire.

An easy answer to the problem was found on the first *piano nobile*, with the installation of a revolving glass door (containing a fire door with automatic release in case of fire), but on the ground floor the invasiveness of any traditional building structure meant looking for other alternatives. After having considered various possible solutions, the C and C designers' choice was for a glass wall capable of responding to needs other than security. In the lateral parts of the wall, the glass would be completely transparent, allowing visual continuity of the *portego* and full appreciation of the whole space without interruption to the layout of the decorations. On the other side, the upper section of the wall facing the Grand Canal and positioned above the speaker's table was to act as a screen, avoiding the need to install another element. It would also be moveable and its uprights able to house the 16 speakers required. There was only one, not negligible, obstacle between the objectives and their realisation: finding glass that was transparent, capable of reflecting high definition images and fire resistant for at least one hour.

A company from the Permaastelisa spa group, PM Design, managed to solve the problem and its manager, Michelangelo Bonotto, proposed a complex and interesting material able to respond to all these.

The solution to this problem put the completion of integrated water supply network and fire detection system into second place. The latter covers the entire building and communicates by means of telephone controllers with the relevant authorities and the internal security staff. The new internal distribution of functions put the existing system of external access into question.

This was of some significance. The *palazzo* has three pedestrian entrances (the first at the foot of the Accademia bridge, the second in front of the church of San Vidal and the third facing Campo Santo Stefano) and two water entrances (one on the Grand Canal, the other on Rio dell'Orso). Changing this system or altering the hierarchies would mean also altering the relationship with the delicate fabric of the historic city. This consideration had already been



raised with the garden designer, Federico Maetzke, who, along with Simone Pinzauti, Valentina Giardini, Lodovico Gherardi and Mario Pileri, submitted a first hypothesis.

The final solution was to keep the three pedestrian accesses but to divide the incoming traffic between them.

The entrance for exhibitions was to be from Campo Santo Stefano. The visitor would cross a section of the garden, go through the revolving entrance door and past the custodian's table, to the cloak room at the base of the monumental staircase (under which the storage section is located). Ascending the stairs, he would come to the ticket office (on the first landing) and the bookshop (on the next landing) at the exit from the exhibition route.

Visitors attending conferences would enter the garden by the gate at the foot of the Accademia bridge; they would cross the garden, go past reception and the cloakroom and into the *portego*.

Access on the church side would be restricted to those working in the offices and provided with a badge.

The three entrances were to be defined by the new arrangement of the garden, after removal of its unsuitable plants. Its design opens out from the big, square, central bed facing the Grand Canal, crowning the perimeter with the existing tall trees (hackberry, yew, cypress, sycamore and linden), those placed at a lower level (mainly Judas Trees and holm oaks) and new shrubs (privet, pittosporum, lagerstroemia, osmanthus and three varieties of liburno).

The choice of plants was given much consideration by Gabriele Bisetto (Hydra sas) to ensure that there would be brightly coloured flowers in all seasons, starting from hydrangeas and roses to hostas, German irises and summer camellias, through to late camellia japonicas and hellebores.

The garden facing onto the Grand Canal is ideally continued into the system of mooring posts, landings and floating jetties constructed during the summer by Ingemar spa and Opemar srl. The rotten mooring posts and landings were replaced, but only the underwater sections of the '*pai de casada*' were remade, while the rich, crowning '*cappellotti*', carved out of walnut wood, painted turquoise blue and enriched with a sheet of embossed gold, were restored. Along with the blue, the red and white of the *palazzo's* historic colours were once again reflected in the water.

In July 2004, while the outside spaces were being rearranged, restoration work had just begun on the monumental staircase built between 1881 and 1884 to a design by Camillo Boito.

Anna Keller carried out the work of cleaning, integrating, strengthening and protecting the paintings on the vaults and walls; the rich and highly coloured floral motifs, the disquieting monsters, the strange racemes and everything else portrayed by the imaginative artist. The same patient work extended to the marble panels representing allegorical fern motifs and to the cast iron winged lions supporting the staircase chandeliers.

Unfortunately only a small fragment of the painted decorations on the upper part of the *androne* – a personal, neo-Gothic interpretation, by Carlo Matscheg – was saved and carefully restored. This is why it was decided to cover the walls with a light, imitation marble rendering. On the ground floor, mezzanine and *piano nobile*, restoration work continued on the wooden elements, on the decorations, also conceived and painted by Matscheg, in the billiard room and Baron Franchetti's study and the seriously threatened marquetry wall decorations.

The marble floors on the ground floor were also the object of careful recovery. The Carrara white, the pale yellow Verona nembro and the Bardiglio grey, along with many kinds of breccia and dark Alpine greens showed the colour tastes of the historicist architecture. The marble itself gave a cue to the refacing of the floors in the side rooms on the ground floor, and to the cladding of the new toilets; all materials were supplied by the Consorzio Progetto Marmo.

Along with the marbles and the marbled rendering, the final fabric coverings of the *piano nobile* were also added. In this case, too, the nineteenth-century materials were not strong enough to be reused, so a new fabric was chosen. The intended use as exhibition space guided the choice, supported by Giuseppe Vani, of a fabric with no clearly defined pattern, but in any case able to enliven the surfaces. It had to be bright (silk), in traditional shades (gilt red and ivory) and fireproof (Class I, thanks to its special processing). These characteristics were found in a double woven lampas made by Rubelli spa.



The nineteenth-century aspect of the *piano nobile* was completed with the repositioning of the original chandeliers. Dismantled and stored at the beginning of the works, they were made operational again by Fabio Fornasier and his associates, who replaced worn parts and remade missing ones.

The chandeliers in Murano glass, despite all their sparkling, would not have been able to ensure sufficient lighting to show off the works of art exhibited and allow these to be correctly read. The problem was solved by building a big metal cornice with inner rail to support and power a system of lights supplied by Targetti spa. These are capable of producing lighting of various intensity and range both for spotlighting small works and for strengthening the overall light intensity.

One final job remained to be done: restructuring of the ground floor of the new wing next to the Rio dell'Orsa. This involved a complex job of demolition and reconstruction to turn the old vault into a cafeteria, a refreshment and meeting place for those visiting the Palazzo Franchetti regularly or for special events. A pleasant, comfortable space, open onto the garden and all its light, was created by opening up the windows onto the canal and restoring the beautiful big cast iron doors, masterfully carried out by the blacksmith Renzo (Visentin e Cesarin snc). The final act was furnishing this area with objects of an essential simplicity, capable of giving a touch of modernity, lightness and brightness to this dark, austere space. There were various suppliers (Centro Ambiente Ufficio srl, Boselli, Ghegin Interiors), but all were committed to skilfully respecting these characteristics.

Completion of this second stage of the works – marked by a private viewing on 12 November 2004 – resulted in a total of 860 square metres being provided for conferences and meetings, with seating for 300, 900 square metres for exhibition space, 530 for offices, 70 for archives and stores, 100 for plant and 120 for the cafeteria; outside, the garden takes up a good 1500 square metres and a 145 square metre area of water provides safe and comfortable moorings for four boats.

The building now has new plant providing uninterrupted power, general lighting and security, hot-spot wi-fi, sound, data transmission, telephone and television, audio video projection, video recording, simultaneous transmission and a complete conference system. All this is intelligently managed by the systems supplied by Merten, allowing automatic control of lighting and fan-coils, the creation of scenarios and personalisation of operation.

In form of conclusion

In an age like ours when grand examples of architecture appear in succession, a display of figures has little significance; however, the laying of more than 100,000 metres of wiring and more than 20,000 metres of piping for air-conditioning and water supply give some idea of the executive complexity encountered.

I have named many of the contractors in the text, but for reasons of space I can only mention the others in a list: Professional Show spa, Consutel Group, FCF srl, VIS, Atix, Edilmar, Gobbi Ivano, Pro-Legno, Europavimenti, Vianello Brusò snc, Xilos, Flaminia, Savi srl, Punto Fotolito srl, Arredamenti M. Moretti, Le Luci Project sas, Guadagni snc.

There are then others, such as those responsible for the graphic design (Tapiro Invenzione Grafica) whose quality of contribution may be seen by the readers themselves.

The remarkable number of people involved in the restoration of the Palazzo Franchetti is proof of the effort made to blend the design into the work itself, to match diverse techniques with quite different skills and enable the combination of craft techniques with industrial production systems; always with passion.

Along with my friends Dino Verlato and Giuliano Rigoni coordinating this formidable team, we have 'restored' the grand *palazzo* so that, after a brief pause, it may once again take up its centuries long journey.

This was a great honour bestowed on us by the Istituto Veneto di Scienze, Lettere ed Arti and we are profoundly grateful.