

BOEKENTOREN, GENT

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For a building to emerge from the chrysalis of its construction site, certain inversions must, by necessity, be performed. For the logic of the site is not that of the building. The street in front becomes a wharf where a river of materials is landed and moved on. A void invites colonisation by a crane like a self-seeded tree. The sublime, the urban, the collective must be salami sliced down to the measure of the human body: vast halls are filled with scaffold cages; exteriors are first formed as galleried interiors. These ancillary, temporary constructions and operations are a parallel architecture that the architect – forgivably, contractually – cannot command. Since medieval masons evolved into separate tribes, it has been the architect's lot to will the end but leave the means to engineers and contractors.

The Boekentoren in Gent is an untimely building: simultaneously late, early and interrupted. It was late in the life of the architect, who was eighty-two when construction of the library was completed; late also as a secular monument reshaping the identity of the city of Gent; early in its use of exposed concrete construction, and in the adoption of climbing formwork for the tower. Started in peace and completed at war, works were slowed and altered by material shortages and substitutions, with (imported) rubber replaced by (Belgian) marble – a strange inversion forced by circumstance. The architect himself considered the work incomplete.

Material and execution quality were carefully controlled, yet its decay started swiftly. Henry Van de Velde and his engineer Gustave Magnel set exacting standards: the concrete was cast against tall steel shuttering panels; the contractor was required to order the white Portland cement in a single batch, to ensure consistency of colour. The structure did not stay timelessly clean and stable for long, however. In common with many pioneering concrete buildings, the rusting reinforcement bars expanded and cracked the outer face of the concrete.

The renewal of the library, led by the architectural team of Robbrecht en Daem architecten, Barbara Van der Wee architects, BARO and SumProject, combines works of repair, upgrade, adaptation and expansion. To repair the external walls, these had to be first stripped back all the way to the steel reinforcement mesh. This act of undoing was both brutal and precise, with water jets directed at terrifying force – 200,000 kN/m² – to remove the concrete to calibrated thicknesses, making it ‘the loudest building site in the city’. When the scaffold was dropped it was a monstrous double of the

Boekentoren that was revealed to Gentenaars, its walls flayed to a wincingly raw state. After open-air chemistry to identify then eliminate acid corrosion of the steel, a thin skin of self-compacting concrete was cast to form a new outer face. Little thicker than a couple of books – 6 centimetres – this slender new layer was cast between the existing wall and phenolic faced shuttering plywood, set up, as the original construction, within a climbing shuttering installation that covered the entire perimeter of the tower, re-using the original bolt holes. Seen in the winter light the re-skinned concrete is crisp and pale like fine clay, smooth but solid, articulating Van de Velde's curious but compelling composition of movement and stasis, of strength and softness, now again both dated and timeless.

Beneath the courtyard lies the elegance of the architects' design: not a formal elegance like Van de Velde's lines and volumes, but a conceptual elegance. For the first phase of work was a partial duplication of both book storage and reading rooms, enabling books to be decanted out of the tower and readers out of the reading rooms. A vast half-cube was excavated beneath the ornamental pool, exploiting the only spatial capacity on the site, the 10 metres of sandy ground beneath the courtyard down to the foundation level of the tower. It's an invisible inversion, of void into building, a volumetric displacement worthy of Archimedes. For the 40 kilometres of shelving in three storeys of basement depot offered the library space for most of the books that were previously stacked in the 'monumental bookcase', a key first step that enabled the repair of the tower. The architects have not only willed the end, but crucially, by building their design from these inversions and displacements, they have also willed the means to the end.

At the new south-western, step-free entrance, a new concrete canopy skirts the bowed front of caretaker's house and a light court to the basement work-spaces. This sunken court is the remnant of the access ramp where the piling rig for the new basement entered – so is like a scar where the surgeon entered. There are still several phases of work to pass through - interior refurbishment, furniture – and several years before the reading rooms reopen fully. But when students at last displace builders, this elegantly resolved scar will be the only echo of the sound and fury of site, and the chess moves that unleashed them.

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