



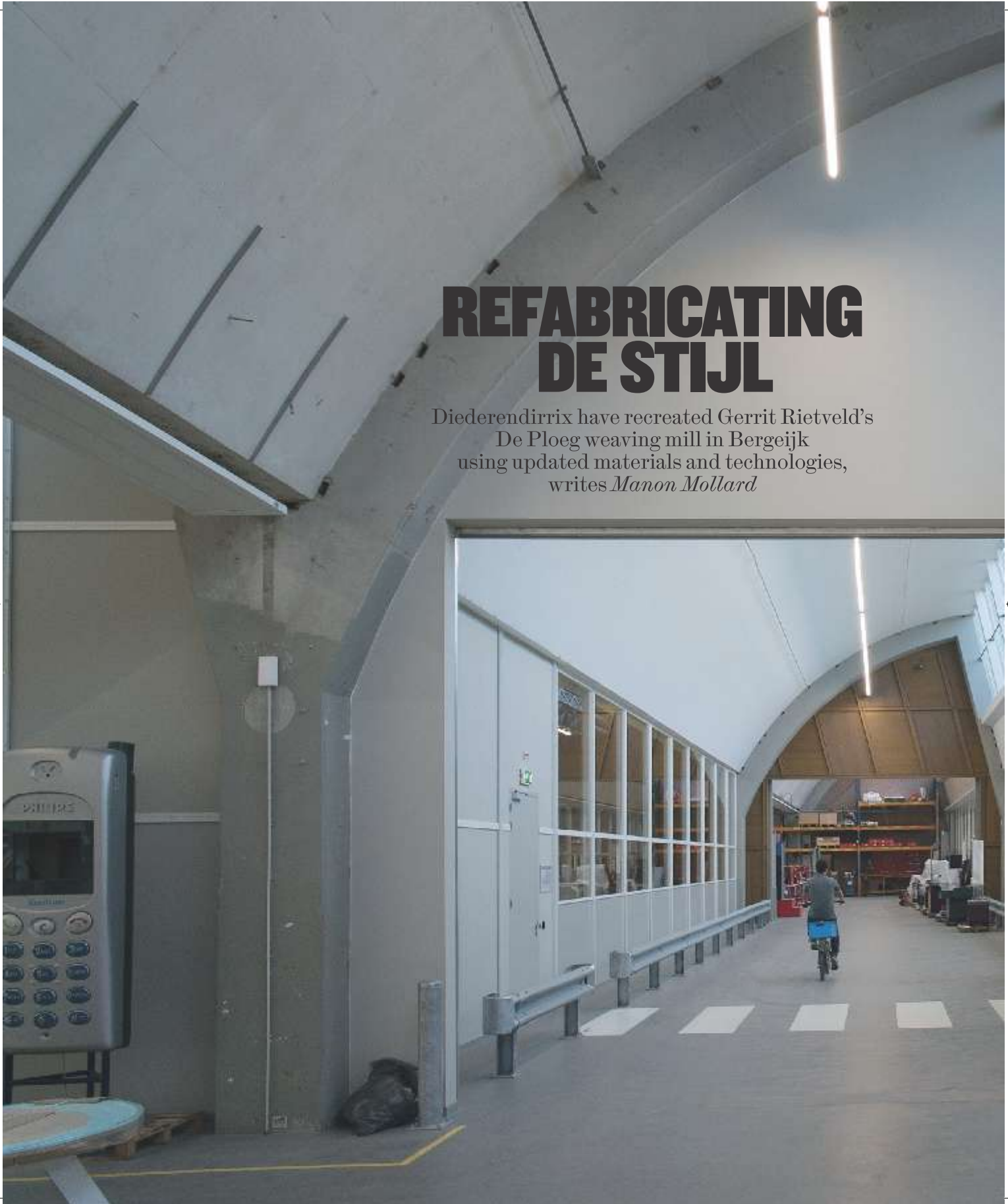
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NEW INTO OLD

REFABRICATING DE STIJL

Diederendirrix have recreated Gerrit Rietveld's
De Ploeg weaving mill in Bergeijk
using updated materials and technologies,
writes *Manon Mollard*



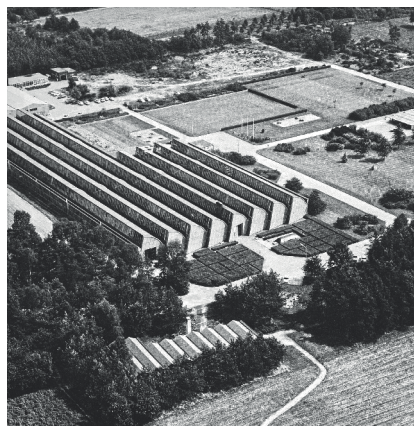
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The fate of Bergeijk, a small town in the Dutch province of Noord Brabant, was changed forever when Gerrit Rietveld and Mien Ruys, two pioneers of modern design, collaborated on a design for De Ploeg's weaving mill. It made Bergeijk the 'centre of the world', according to Piet Blijenburg, a director of De Ploeg, which manufactured high-quality curtains and upholstery. Originally a cabinet maker like his father, Gerrit Rietveld broke free from traditional furniture-making etiquette to establish himself as a visionary architect and proponent of De Stijl, while Mien Ruys acquired a reputation as the country's first landscape architect.

Sharing an interest in standardisation, Rietveld and Ruys both believed that good



design should be affordable, and attempted to disseminate their knowledge and ideas to a wider audience. Ruys edited a quarterly gardening magazine featuring 'gardening lessons for dummies', and Rietveld organised lectures, exhibitions and film screenings in and around Utrecht. Keen to simplify production processes and render obsolete the grinding toil of workers, they believed that by stimulating the senses, design could make people aware of both their surroundings and their own existence. These shared concerns for the cultural enrichment of society culminated in 1960, with the completion of the De Ploeg weaving mill.

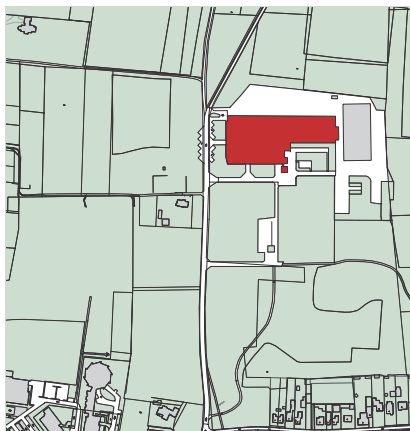
Fast forward nearly 50 years: struggling to survive after the financial crisis, De Ploeg was bought by the Dutch multinational

The sculptural shells of the sawtooth roof are legible on the east and west frontages



Hunter Douglas and the vacant weaving mill and its adjoining park were sold to a housing corporation for €4.5 million. Enter Bruns, a company specialising in the design and construction of exhibition displays, which negotiated financial help from the local authorities to buy and refurbish the mill building. As part of the deal, the municipality of Bergeijk would restore the park. CEO Jan Burgmans admits he was not familiar with Rietveld's work before acquiring the mill but, 'how can I be sure that I don't ruin [his] building' soon became his main preoccupation.

After standing empty for nearly 10 years, Weverij De Ploeg was in poor condition. Undertaken by architectural practice Diederendirrix, its rehabilitation proved



to be an assiduous investigation into the building's history, studying its evolution over time in order to strip it back to reflect Rietveld's original design intentions. The only exception to this rule is sun shades, originally prohibited by Rietveld for aesthetic reasons but reintroduced to protect current employees from glaring light and unnecessary heat – apparently Rietveld refused to have curtains in his own kitchen and responded to his wife's complaints by issuing her with sunglasses. (On the southern facade, natural double-glazing with blinds is preferred to a solar control coating, which would have given the glass an undesirable mirrored effect.)

The structure's slender skeleton is preserved, but everything else is essentially



replaced. An impressive photograph taken in March 2016 shows the building's carcass, its empty floor strewn with a carpet of shattered glass. The idea is to recreate the 'old', using updated materials and technologies, thus simultaneously looking back while also looking forward. Although at first cultural heritage experts insisted on strictly respecting Rietveld's original material specifications, the architects convinced them to opt for 'smart engineering' instead, utilising contemporary technical solutions to design 'modern facades' in keeping with the 'authentic detailing' as well as conforming to current building regulations – the use of asbestos was common in the 1950s and '60s. Rietveld's original glass specifications could not have been used today,



and Bruns' technical acumen proved useful in this process.

Temporary partitions, added at different times and cramming the original free plan, were removed to recreate the factory's initial zoning, structured along two perpendicular lines of sight. The north-south axis connects the public entrance and showroom to the more private canteen and garden area at the back, while the east-west axis cuts across the full 144-metre length of the building, traversing the carpentry workshop, the digital design laboratory and the assembly workshop. This longitudinal optical axis is emblematic of the project's core idea: turning the offices into the panoptic heart of Bruns' new home by connecting thinking with making. In the company's previous buildings, engineers and

Temporary partitions were removed to allow the free flow of natural light deep into the building through large glazed surfaces and skylights



programmers were on different floors to the workshop teams, so the decision to integrate them made sense on both an operational and pragmatic level, eliminating the need for expensive air-conditioning.

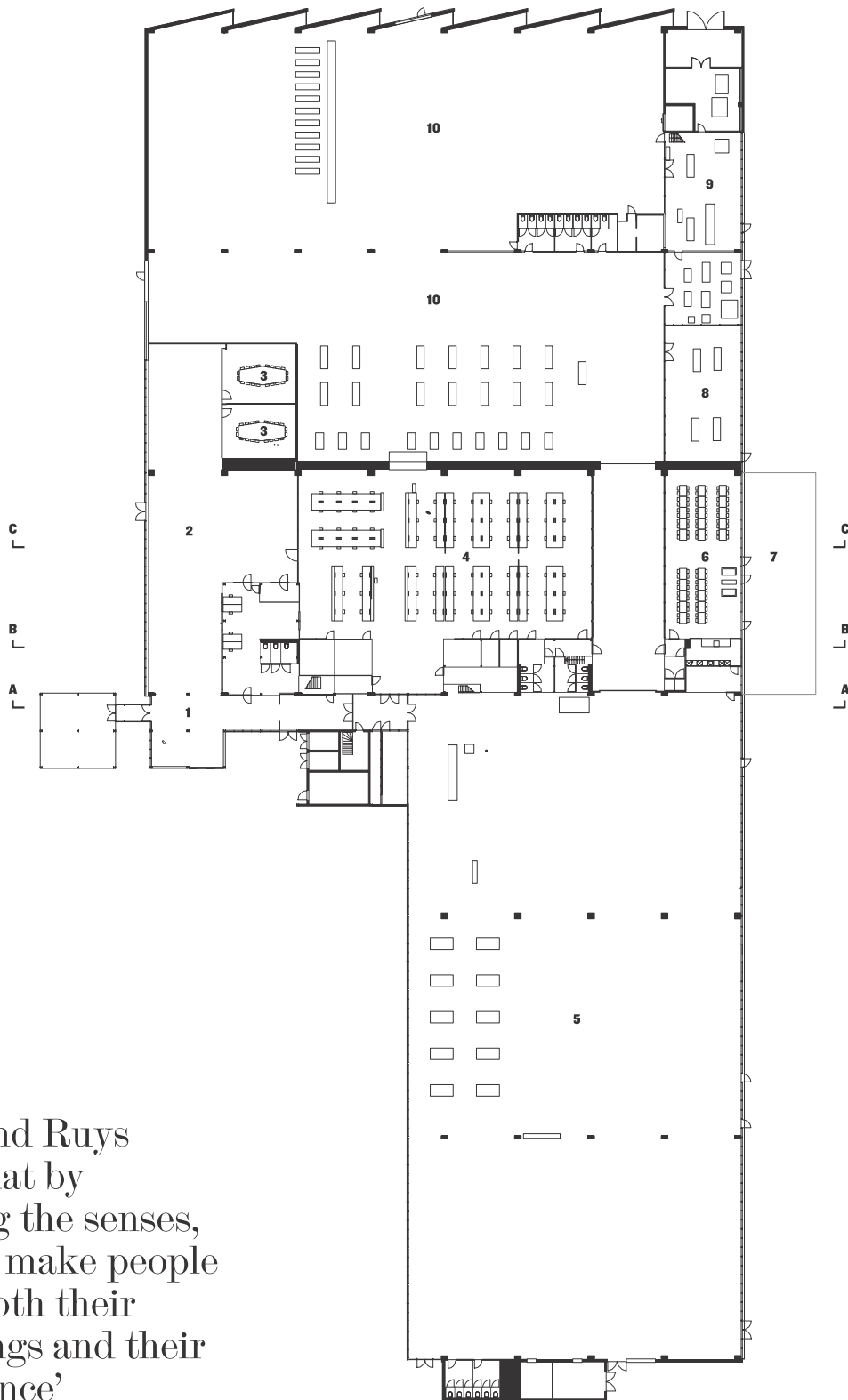
Sight was understood by Rietveld as the most important of the senses. He postulated that seeing could be divided into three distinct categories: colour, expressed through painting; form, expressed through sculpture; and space, expressed through architecture. Unlike De Stijl founder and leader Theo van Doesburg, Rietveld insisted on experiencing them separately because, if experienced simultaneously, he argued, they became lost in the resulting intensity. The design of De Ploeg's weaving mill adheres to this principle. Touches of colour are restricted to the otherwise flat,



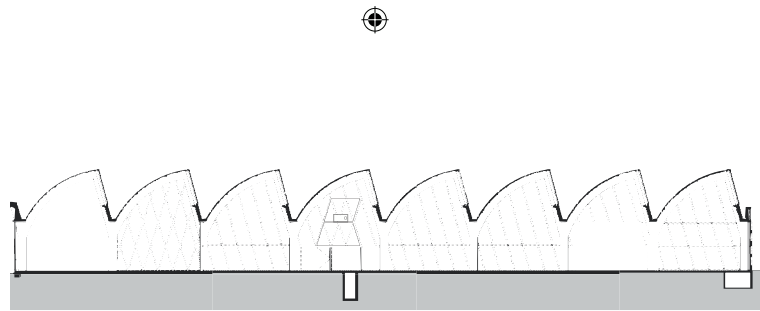
rectangular doors – everywhere else, white, grey and black dominate. The sawtooth roof's sculptural curved shells are legible on the building's east and west frontages, but from all other perspectives, their straight extrusion reduces them to horizontal lines, allowing the vast open interiors to be just 'void'.

'In architecture, greater merit can be ascribed to the quality of empty space than the built mass', wrote Rietveld. This explains why the play between flat surfaces and three-dimensional space is so carefully orchestrated. Lines and volumes almost avoid intersection and the graphic profiles of the steel H-beams are reminiscent of the slats and verticals of his chairs. Large surfaces of glass connect the tectonic elements and close up volumes. Throughout,

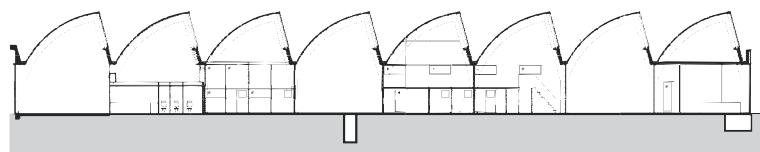
- 1 entrance
- 2 showroom
- 3 meeting room
- 4 design office
- 5 carpentry workshop
- 6 canteen
- 7 terrace
- 8 computer room
- 9 graphics studio
- 10 assembly workshop



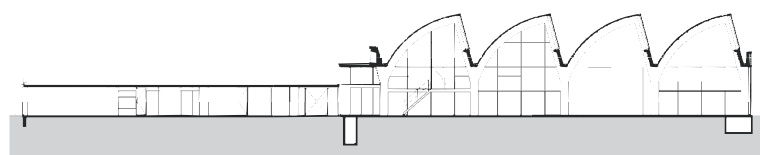
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section CC



section BB



section AA



Visual connections are made between the different interior spaces and also with the outside world. A timber 'smart wall', designed by Aart von Asseldonk, reinterprets the original building's language, using oak instead of steel

Following extensive research into the intentions of Rietveld and Ruys and the design's evolution, the refurbishment is purer and more original than the old



transparency abounds and natural light pours in from all sides, through the shed roofs' slanted skylights, the large gridded facades and the narrow slits of the rotated wall sections on the west elevation. The only spaces that can be closed off completely are two meeting rooms, aptly named Gerrit Rietveld and Mien Ruys, where darkness was a requirement for presentations.

Meticulous colour research was undertaken to restore the original palette, for both the interior and exterior. When the architects discovered that two different hues of grey had been used on the building's two gable ends, and this was neither a deliberate choice nor the result of weathering, they agreed on a single uniform colour. Always in keeping with Rietveld's original vision, the refurbishment creates a 'new' that is

more pure and more original than the 'old' they inherited.

The factory's large doors were originally only painted on the outside, derived from the pattern of black grooves created by extending the skylight's slant onto grey concrete. However, Diederendirix creative director and project architect Rob Meurders opted to bring the colour into the interior, mirroring the external pattern. The large doors' colourful surfaces become strong points of reference, visible not only from the park but also from the workshops and offices – a way to understand where you are within the building, as well as an ever-present reminder of the beginning and end points of the production line.

This same diagonal grid is also transposed onto the timber 'smart wall', the main new

addition to the factory, designed by product manufacturer Aart von Asseldonk.

Departing from Rietveld's original aesthetic, it offers a reinterpretation of the building's architectural language, translating the steel beams into oak, playing on the variations between solid and glazed panels, and bringing vegetation into the interior. At the two points of contact between office and workshops, deep thresholds, extruded out of the smart wall's angular pattern, sit directly underneath the curved sawtooth roofs.

Transparent surfaces enabled Modernist architects to reimagine relationships between human beings, nature and architecture. At Bergeijk, visual connections are made not only within the factory's different work areas but also with the outside world. It was landscape architect



Mien Ruys who decided on the site of the building within the park. Rietveld had imagined the factory would sit in the middle, but Ruys was intransigent on pushing it further back, making it more welcoming as a communal open space, while lengthening the route to the factory, elongating the transition between the street and the workplace. 'There has to be a great lawn, where everybody can lie down in the sun', she wrote. 'Isn't it nice to feel the moist ground after a long day at the machines, and to smell the fresh grass?'

Adapted to a new era and new owner, the building has to fulfil the expectations of a number of different groups. Firstly, for Bruns' employees, the socially progressive ideas of Rietveld and Ruys are still enlightening and remind us that more care

should be put into the design of workplaces. Secondly, for Bruns' clients, who 'like historic buildings', the careful remodelling has enhanced the company brand, increasing its authority and legitimacy. Thirdly, for the residents of Bergeijk, where everyone has relatives who were once De Ploeg employees, their personal histories are intertwined with that of the factory. On 1 April 2017, the day of the refurbished building's opening, 120 former employees were invited to witness the adaptation of their old workplace in a way that kept faith with the past while commencing a new chapter. 'It was like a reunion', explains Burgmans. 'Memories resurfaced, there was a lot of emotion and a few tears.'

While Bergeijk might not have made it onto the world map, its local significance is

very real and it was important for all parties to guarantee that both the park and the building would continue to actively engage with the public. Meurders emphasises the team effort required to pull off such a project. 'With the client resolutely in charge and the subcontractors all located within a 10-kilometre radius', he says, 'the set-up is very similar to what would have been when the factory was initially constructed.'

At the project's core was how Rietveld successfully applied his ideas for furniture to a large industrial building. Over half a century later, the conscientious transformation of a significant repository of both individual and collective memory is an eloquent testament to De Ploeg's ongoing relevance.

**Mien Ruys decided
the mill should be
pushed back on the
site to exploit the
communal open space**



Architect

Diederendirrix

Project team

Rob Meurders (project architect), Thorsten Schneider (architect), Tom Kuiper (project leader), Jorg Barten (technical designer)

Landscape architect

Buro Mien Ruys

Interior design

Aart von Asseldonk

Photographs

All photographs by Jan van Ijken, apart from historic images, which are courtesy of the architect