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## The Paintwork and the Colours of the Exterior

van Thoor, Marie-Therese

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## 2 / THE PAINTWORK AND THE COLOURS OF THE EXTERIOR

MARIE-THÉRÈSE VAN THOOR

A house like the Rietveld Schröder House, which relies on the chosen colours for its expression and character, needs to be painted very regularly. While he lived, Rietveld determined the colours on the spot, together with the painter.<sup>1</sup> He considered the light reflection, light diffusion and hence the light intensity of the coloured surfaces very important. Over the years, because of changes in the context and incidence of light, the house had started to look different. Rietveld also experimented with the colours. In a conversation with Bert Mulder, Truus Schröder remarked that the external walls looked very spotty after the initial painting.<sup>2</sup> That irked Rietveld, who went looking for a different brand of paint, eventually settling on Alpha, which was later taken over by Sikkens. Although Rietveld was initially not very enthusiastic about Sikkens, because of their colours, the company has continued to supply the paint for the Rietveld Schröder House up to the present day. Sikkens has also been frequently involved in research into the composition and colour of the paints, which the company supplied free of charge. The Stichting Sikkensprijs – later renamed Sikkens Foundation – also financed the research and the paint for the restorations.<sup>3</sup>

Mulder made notes of several conversations with Truus Schröder.<sup>4</sup> Also present during these conversations was Gerrit-Jan de Rook, who collaborated with Mulder on the '50 Years Schröder House' exhibition (Centraal Museum, 1975).

On one of those occasions, the conversation turned to a lecture that Rietveld had given in Antwerp in 1963, during the 'Man, Colour, Space' study day.<sup>5</sup> Rietveld spoke about the relation between colour and space.<sup>6</sup> He always strove to achieve an even diffusion of light, over all spaces, at different times of the day, indoors and out. The reflection of light on the walls, or in the colours, could render space visible. Rietveld explained his way of working as follows. Having first decided, room by room, on the desired degree of light reflection, he then translated this into a variety of grey surfaces: the lighter greys for sections where the form needed to be emphasized, and darker greys for the flat 'bits in-between'. The execution was then up to the painter, who instead of greys might even recommend using a different colour with the same light value. This way of working did not follow set rules since a house – the 'artwork' – is constantly changing owing to alterations in the incidence of light, the context, or the surrounding greenery. Rietveld regarded the choice of colour as a 'live act of creation' that was not conducive to regulation. According to Schröder, this was why Rietveld did not decide on the greys of the various wall surfaces of the Schröder House beforehand. He decided, wall by wall, as he walked around the house.<sup>7</sup> Thus, it is reasonable to suppose that the exact composition and intensity of the grey values was specified anew every time the house was painted (according to Mulder the walls needed to be repaired and repainted every five years).

During conversations in 1973, the question of just how many different greys there were or had been in the Schröder House was raised. Truus Schröder thought there were four, Han thought three.

The final repainting before the restoration was carried out in 1971 by the Van Poppel painting company, on the recommendation of construction company H.J. Jurriëns. Truus Schröder was not at all happy about this as the paint was applied in one go, just before the construction industry vacation.<sup>8</sup> Van Poppel only painted the south and east elevations. The company did not adhere to the agreement to first prepare samples and then paint each surface based on those samples. After the holiday period Veroude belatedly made samples of the colours used. There were four shades of grey and one white. Together with Mr Prins from Sikkens, Veroude examined the still visible undercoat of paint and made samples of six shades of grey and one white. This coat had been applied by the J.F. van Santen company, after Rietveld's death. Van Santen had used the same colours as on the previous occasion, in 1963, when he had painted the Schröder House in accordance with Rietveld's instructions. Mrs Schröder was very satisfied with his work. Van Santen was in fact a vehicle spray painter, but Mrs Schröder said that Rietveld actually found that interesting. He also did painting for exhibitions and had accompanied Rietveld to the Triennale in Milan (1957). Thus, Van Santen turned out to be an important source of information about the colours used for the house and about Rietveld's way of working. Mulder came into contact with him via the furniture maker Gerard van de Groenekan and so was able to engage him again to paint the exterior in 1974.<sup>9</sup>

In November 1973, at the suggestion of Truus Schröder (and board member Til Oxenaar), Schröder, Mulder and De Rook visited Mr and Mrs Slegers, for whom Rietveld had designed a house in Velp in the 1950s.<sup>10</sup> After a flawed initial painting, the paint was stripped away and the house repainted according to Rietveld's instructions. Mr Slegers recounted how he had had to order a large tin of grey paint to which small amounts of colour were repeatedly added in order to obtain a particular shade of

grey. Rietveld determined the colours from inside to outside, in relation to the points of the compass, the size of the surfaces, and as part of an overall composition. The group inspected samples of grey they had brought along, but concluded that any such choices would have to be made on site, 'and it would be best not to make too much of a fuss about it'.

## HISTORICAL PHOTOGRAPHS OF THE SCHRÖDER HOUSE

The Rietveld Schröder Archive (RSA), The Utrecht Archive and the Bertus Mulder archive contain a variety of historical photographs of the Schröder House. With just a few exceptions, the photographs are only approximately dated. Thanks to the nature and size of the vegetation around the house or based on recognizable features – such as the lettering 'Montessorischool', the presence or absence of the rooftop extension or the driveway – it is possible to place them in chronological order, and to compare them with one another. The vast majority of the photos are black-and-white and they are not all exposed and printed in the same way, which makes an exact analysis of colours – especially the grey values – difficult. The colour photographs, from the later period, are largely overexposed and as such almost more difficult to interpret. Nevertheless, the photographs are interesting sources from which it is still possible to infer one or two things about the paintwork, the colour composition and colour contrasts over the years.

In the very first photographs taken directly or not long after construction, it is possible to see that various wall surfaces, as Truus Schröder had recalled, look very spotty [FIG. 2.1]. Apart from the spots, the photographs reveal that the walls were painted in white and shades of grey. But these images do not allow the number of greys to be ascertained – maybe four, maybe five. Looking at the photos from the next decade, there appear to be differences in the composition of the white and grey values of the various surfaces, but it may simply be a case of differences in nuance.



FIG. 2.1 One of the earliest photographs of the Schröder House, c. 1925





FIG. 2.2 The Schröder House in use as Montessori school, between 1933 and 1936



FIG. 2.3 The house in the late 1930s or early 1940s

In 1933-1936, the Schröder House was in use as a Montessori school [FIG. 2.2], and Truus and Marjan Schröder lived for a while on Erasmuslaan. In 1936, Marjan left the parental home and Truus Schröder returned alone to Prins Hendriklaan. Some practical alterations were carried out: the bathroom was renovated and Truus's bedroom was fitted out as a kitchen, allowing her to let out the ground-floor rooms. The rooftop extension, which was demolished in 1958 ahead of the exhibition on Rietveld in the Centraal Museum, also dates from this time. After the death of his wife Vrouwgien (in 1957), Rietveld came to live in the Schröder House as well, which was when the driveway was created for his car.

In the photographs taken in the period between the 1930s and 1960s, the house is increasingly hidden behind the foliage [FIG. 2.3/2.4]. This not only gives it a completely different presence than before, but the greenery also affects how the white and grey

values appear to interrelate in terms of composition and intensity. Variations in maintenance are also visible. Unfortunately, it is impossible to say whether the photograph with driveway and open gate but minus the rooftop extension shows the result of the final repainting under Rietveld's direction, in 1963, or the work of Van Santen after Rietveld's death. But it is quite possible that what we are looking at here is the final phase of the house from the Rietveld period [FIG. 1.1].

Most of the photographs dating from the early 1970s show the damage and poor state of repair – or perhaps the mediocre outcome of the Van Poppel paintwork – of the Schröder House. The contrasts between the greys are barely discernible, even in the colour photographs. According to Mulder, the greys from the period before the restoration were bluish as well, because back then the greys were only mixed with black [FIG. 2.5].<sup>11</sup>



FIG. 2.4 In the 1940s or '50s the house was increasingly hidden behind greenery



FIG. 2.5 A colour photograph from before the restoration shows that the greys had become bluish

Despite the fact that the interpretation of the historical photographs is hampered due to a variety of causes, these images do at least show that the Schröder House had started to look quite different in the course of 50 years.

## THE COLOURS OF THE EXTERIOR UP UNTIL THE RESTORATION

An important question when deciding on the colour scheme for the restoration of the house was which visual outcome those involved wanted to achieve. Was it the 1924 colour scheme, or that of 1963, when Rietveld himself oversaw the painting for the last time?<sup>12</sup> Mrs Schröder opted for 1924, and for returning the house to the originally intended state. She also suggested asking Hanneke for her memories of the colours. Mulder felt that the elements Rietveld had not expressly intended should at any rate be removed. De Rook thought that the alterations that had occurred over the years

should be recorded and he also felt that the ideas and contribution of Mrs Schröder were very important because the house was, after all, not the Rietveld House, but the Rietveld Schröder House. Mulder pointed out that if they were to opt for a return to the 1924 state, they would need to take account of the fact that the paintwork from that era had in all likelihood been removed during later repaintings and was therefore probably no longer recoverable.

After the first repainting – which Rietveld was evidently unhappy with because of the spottiness – the house was painted in a different way on each occasion. According to Mulder, Rietveld had initially believed that he could obtain the various shades of grey by adding black pigment to the plasterwork mortar. But that was not a success. Rietveld then had the rendered walls coated with whitewash mixed with linseed oil and varying amounts of black pigment. But when it rained that, too, was liable to become spotty, as can be seen in the early photographs.





FIG. 2.6 The house in spring 1975, about a year after the first treatment of the exterior

Sikkens' paints for exterior walls, first on a casein basis, later on a synthetic emulsion basis, were more weatherproof. New coats were applied over existing coats but sometimes, if older coats were too thick, Rietveld had these removed as well. Then a new coat was applied over the white base coat; that might be the first base coat, but equally well a newly applied base coat.<sup>13</sup>

Apart from the possible absence of the original, first colour coat, the historical photographs, as we have already seen, offered few clues as to the colour palette, especially the grey values. Rietveld did not make any drawings or plans for the original colour scheme. Nor could the coloured-in axonometric drawings of the Schröder House be used as sources for the 1924 state (photo on page 9).<sup>14</sup> Han Schröder herself had in fact collaborated on the first series of drawings. However, these drawings were redone in the early 1950s for the De Stijl exhibitions, and they gave an ideal rather than a realistic impression of the original colour compositions. These drawings were consequently of no use for the restoration.



FIG. 2.7 In various places, such as the chimney, B. Mulder found still more finish coats and colours that he could include in his colour research

According to Veroude's 1970 technical report, mentioned in the previous chapter, all existing coats of paint on walls, woodwork and steel were to be removed before the restoration. Before repainting, samples were to be taken, which would then be used as a guide to the new colours.<sup>15</sup> Mulder asked the TNO's Paint Research Institute whether it would be possible to separate successive coats of paint so as to reveal the colour of each coat. That would be no problem at all, TNO replied.<sup>16</sup> When the restoration was in full swing Mulder promised the foundation's board 'photos, specimens, colour samples and other relevant information' [FIG. 2.6].<sup>17</sup>

Despite the fact that the Schröder House had been regularly repainted (possibly as many as ten times), and colour coats had been removed on previous occasions, old paint was evidently still to be found in certain places, such as behind the prickly ivy or on the chimney [FIG. 2.7].<sup>18</sup> Mulder included these remnants in his colour research, and investigated their composition [FIG. 2.8].<sup>19</sup> Once the restoration was finished he threw the samples away.





FIG. 2.8 Plaster and colour samples packed in plastic bags



FIG. 2.9 Wall below the kitchen window in the east elevation; B. Mulder chose the dark grey of the top right corner for the new colour scheme

Upon inquiry Mulder turned out to have yet more information in the form of a series of slides and a set of colour samples.<sup>20</sup> Detail photos of the chimney show various finish coats and it appears possible to distinguish several colours. Even more interesting is a photo of the wall below the kitchen window in the east elevation [FIG. 2.9]. We can see various shades of grey, from light to dark, and between them the white of a base coat. Mulder's caption reads: 'I opted for a dark grey from top right corner.'<sup>21</sup> This is one of the wall surfaces that were not repaired and on which the original plaster is still present, according to Mulder. Nevertheless, we are left guessing about the dates of these grey coats because there is simply no further documentation and also because references to other wall surfaces are lacking. The layers of paint on the walls, which were entirely stripped in 1979, were removed together with the old layers of render.

All the woodwork and steel was also, in accordance with the planning, thoroughly cleaned so as to ensure that the new coats would bond properly.<sup>22</sup> This means that it is now more difficult

than ever to find enough walls and elements on the exterior of the Rietveld Schröder House with traces of original layers of paint that would allow the overall colour palette of the house in 'the most original state' to be pieced together.

## THE COLOUR SCHEME OF THE RESTORATION

In order to decide on his choice of colours and thus the exact colour composition of the exterior of the Schröder House, Bertus Mulder relied on his colour research and on his experiences and collaboration with Rietveld.<sup>23</sup> He had seen and learned how Rietveld determined the colours for the school in Badhoevedorp (1958–1962) and for the Pronk House in Enschede (1961–1962). He knew how Rietveld set to work and was familiar with his ideas on such matters as primary colours. Red had to be 'carmine-ish', not 'bloody'; blue should be 'ultramarine', and yellow had to be 'canary yellow', and not 'too orange'. According to Mulder, Rietveld used a colour fan when choosing the greys.



FIG. 2.10 The Rietveld Schröder House in 2017

Every time the house was repainted, he and the painter mixed the paints with reference to a new fan, so as to achieve the colours that came closest to the desired result, with 'white and black, a little bit of ochre and a speck of red'.<sup>24</sup>

The primary colours have not changed much over time, nor have the black and white. During the restoration, the steel elements were painted yellow and black; doors and window and door frames were also painted black and accents were in yellow, white, red and

blue. Mrs Schröder recalled that when she first met Rietveld, many people considered black obtrusive, but according to Rietveld black actually receded into the background. He used it for elements – like door and window frames – that were not intended to obtrude, with the result that everything appears to be in the same plane and the composition is emphasized [FIG. 2.6/2.10].<sup>25</sup>

Currently, the walls display not three, four or six, but five shades of grey, because that is what Mulder says he found during his on-site inspection [FIG. 2.10]. In consultation with the foundation he opted to return to the colour composition of the initial period. With that frame of reference, which involved mixing the greys on site with the painter, he made a composition with five greys (photo on page 22). For the record, Mulder said that making the different shades of grey was the most difficult part of the entire restoration and occasionally even drove him ‘to despair’.<sup>26</sup>

While there was not much variation in the other colours, the greys were repeatedly changed over the years; Mulder claimed that the grey he encountered in the 1970s was different from the grey from 1924. That changing image is likewise reflected in the historical photographs. Mulder’s colour research also showed that the contrasts between the various grey values was initially much greater than in later years: ‘At first they tended towards ochre, later they were more bluish’ [FIG. 2.5]. For the restoration he reinstated the earlier contrast, using an ochreous grey, ‘a sort of elephant grey’. These greys were reconsidered and, in consultation with Sikkens, produced in new compositions. Mulder saw it as his task to emulate Rietveld in creating a ‘balanced colour composition’.<sup>27</sup> He did not achieve that in one go though. During the restoration of the interior, as we shall see, he gained new insights with respect to the greys, after which all the greys on the exterior had to be altered.

In July 1974, when the plaster layer was painted after the first repair, Han Schröder shared a few worries about the way it was being carried out with Mulder. He had been away for ten days and in that time important decisions had been taken.<sup>28</sup> These also related to the ‘aesthetic’ aspect of the choice of colour and type of

paint. Han Schröder also emphasized the lack of colour samples. She felt that the house was not as light since the repainting, possibly because of the ‘matt black of the frames’ and the amount of ochre in the grey walls, which in her view meant that the ‘lively’ character of the house (in variable light) was no longer evident. As she remembered it, frames and doors had always been glossy, and not the ‘current insipid stuff’. She also observed that she had been told that Mulder intended having the rainwater pipe in front of the white wall painted white – based on an inaccurate drawing – instead of grey: ‘why would you search everywhere for “original colours” and suddenly venture to create “your own composition” unsupported by documents?’ she wondered. On being asked about this, Mulder was unable to recall whether Han’s words resulted in a different approach. In his view Han ‘idolized’ Rietveld too much and he was unable to work according to her ideas and opinions. At a certain moment he stopped opening her letters and took no more notice of her opinions.<sup>29</sup>

The various rainwater pipes were eventually treated in different ways. We can see both white against a pale grey surface (large wall Prins Hendriklaan) [FIG. 2.11] and pale grey against a white surface (to the right of the front door) [FIG. 2.12]. The pipe on the rear elevation is white against a white wall, and that next to the neighbouring building at Prins Hendriklaan 48 is pale grey against an identical pale grey background. This does not appear to be in accordance with the earliest period of the house. In photographs, especially those taken straight after the construction, the rainwater pipes are a natural zinc-grey in colour. But Mulder did regard the drainpipes and their colours as important elements of the overall composition. In an interview with *Cobouw magazine* in November 1974, a few months after the letter from Han, he raised the question of the rainwater pipes himself, in particular the white-painted downpipe on the ‘side elevation’, against the grey background. This downpipe had been absent for a while, was then painted in a zinc colour, and thereafter ‘painted white as [was] intended against the grey background’.<sup>30</sup> Thus, even the colours of the rainwater pipes could completely alter the character of the walls.





FIG. 2.11 Prins Hendriklaan wall, white rainwater pipe against pale grey background, 2017



FIG. 2.12 East wall beside front door, pale grey rainwater pipe against white background, 2017

## THE RESULT

The painting was finally carried out in 1979 using a paint with a synthetic resin base, and not with silicate paint as recommended by the STS trade organization.<sup>31</sup> This can be

inferred from an internal memo from the RDMZ.<sup>32</sup> The memo was in response to the question: 'Can the new external plasterwork be retrospectively approved?'. The answer was: 'With one or two qualifications the new plasterwork cannot be rejected'. The explanatory note refers to the fact that Rietveld had made his



decisions on the basis of outward appearance – ‘a kind of “décor design”’ – and that the problems relating to building physics were not recognized at that time. The hygroscopic properties of the materials, their thermal length changes, and the use of disparate materials had all led to problems in due course. With respect to the cracks filled with synthetic mortar it was noted that specific information (for example about elasticity) was lacking, and it would have been preferable to inject the remaining cracks.<sup>33</sup> In addition, according to the RDMZ, the chosen paint should not only have been less vapour-permeable, but would also require more maintenance and, because of its deviating hygroscopic behaviour (soiling), would also start to display hairline cracks.

The paint concerned is Alphatex IQ, the strongest wall paint Sikkens could supply. The single-brick wall is not watertight, but this dense coat of paint did make the wall somewhat more watertight. But the house, according to Mulder, is ventilated on all sides; ‘it’s as leaky as a sieve’. Owing to increasing vehicle traffic, the house quickly became dirty; it is now cleaned by hand once a year with an all-purpose cleaner to prevent dirt from becoming ingrained.<sup>34</sup>

The RDMZ concluded its 1980 memo by noting that the time-consuming and costly venture involving the STS could have been avoided if ‘they had sought contact at an early stage’ [sic!]. This is quite remarkable given that this agency, which was officially responsible for supervising the restoration, had kept its distance during all those years. For the record, the RDMZ’s final conclusion was that the chosen solution was not the best, but neither was it the worst.

The exterior of the Rietveld Schröder House – the composition of colours and their intensity – was entirely conceived by Bertus Mulder in the ‘spirit of Rietveld’. According to Mulder there is not a ‘centimetre of colour’ that was not determined by him. He was confident that he had the full backing of his client, the Rietveld Schröder House Foundation. Truus Schröder was also very satisfied. She followed the work closely and Mulder kept her constantly informed of what was happening. The fact that

she had said that the restoration was in good hands with Mulder touched him deeply, he wrote.<sup>35</sup>

During the restoration the colour formulas were not recorded: the colours were the result of intensive, on-site consultation between Mulder and the painter.<sup>36</sup> While the work was ongoing, Mulder kept the plaster samples properly organized and labelled, as can be seen in figure 2.8. Once it was finished he threw everything away. Colour samples from that period are also nowhere to be found, not in Mulder’s archive or that of the RSA, not even in that of the foundation. During the restoration the foundation’s board had regarded specimens, samples, photographs and other material relating to the restoration as important ‘safeguards’. After it was finished the matter was not referred to again and it seems that everyone assumed that the documentation was in good hands with the restoration architect. The foundation’s archive does not even contain a photographic record of the restoration process. That, too, is quite remarkable for board members with so much expertise and interest in modern architecture, as well as for the first major restoration of a ‘young monument’.

The colour samples the restoration architect recently handed over to the Centraal Museum are the ones that Akzo Nobel – which took over Sikkens – made for Mulder in 1992.<sup>37</sup> Even after the restoration, the Rietveld Schröder House had to be regularly repainted. In 1986, based on new insights into the colours of the interior, the exterior walls were all repainted in revised shades of greys. After the restoration, Mulder himself took charge of maintenance and necessary repairs. This occurred mainly on an ‘ad hoc’ basis, so in 2002 he suggested that the maintenance of the house be tackled periodically, in accordance with a maintenance plan based on advice from Sikkens.<sup>38</sup> During major maintenance in 2010 all the colours were again determined by Mulder, who on this occasion had arranged with Sikkens for the formula to be fully documented.<sup>39</sup>