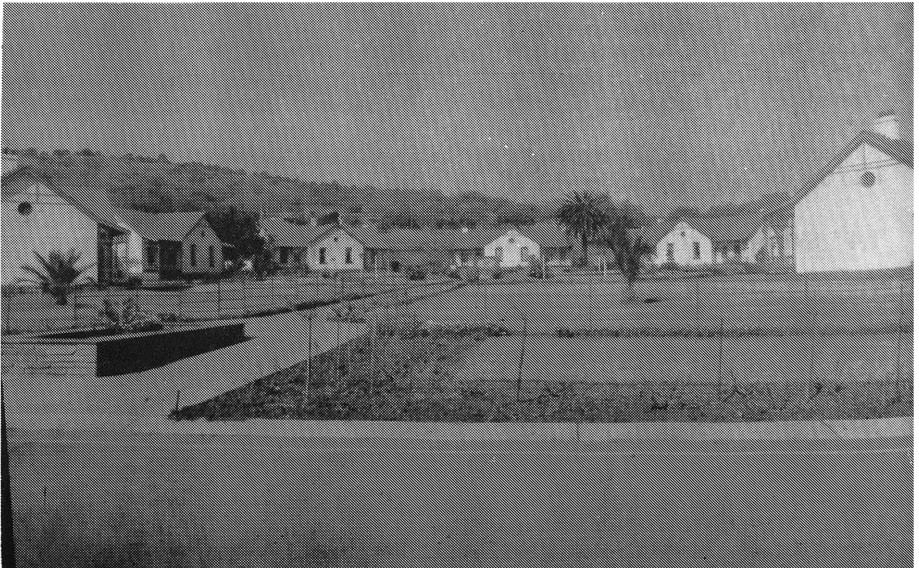


The first Pretoria station buildings, seen from the West  
Photo: *Gedenkboek uitgegeven ter gelegenheid der feestelijke opening van den Delagoabaaispoorweg 1895, door de NZASM, druk J.H. de Bussy, Amsterdam 1895*



The Salvokop NZASM houses - the central building is a 'C' type house : the others are all 'B' types.  
Photo: R.C. de Jong

and overhauled annually, and 300-400 Whites as well as about 170 Blacks were employed at the workshops.

The "Centrale Werkplaats" served the NZASM, IMR, CSAR and finally the SAR. After the completion of the giant new Koedoespoort workshops during the 1950's, all the functions of the Pretoria workshops were gradually transferred to the new premises. As the SAR had no further use for the empty NZASM buildings left standing in the end, they were demolished during the 1960's.

### **1.5 Site of original Fountains Halt**

Situated to the west of the eastern abutment of the bridge carrying the Ben Schoeman Motorway across the deep valley opposite the Fountains Valley entrance.

The railway from Elandsfontein (Germiston) to Pretoria was completed in 1892. Provision was made for those who wished to travel to Fountains Valley, which was already a favourite recreational area. A stopping-place was provided. The original railway line made a considerable detour to the west in order to avoid crossing the valley by means of a large and expensive viaduct. Consequently, the first Fountains Halt was situated at some distance from the present line.

Although the halt was only about three-and-a-quarter miles from Pretoria station, it took a NZASM train some 21 minutes to cover this distance. But life proceeded at a much more leisurely pace in those days, so complaints would have been few!

During the CSAR period (1902-1910) a station on the site of the present Fountains Station was taken into use, named Ashbury at that time. The arched concrete viaduct spanning the valley was completed by 1939, thus eliminating the old NZASM loop to the west, and with it Fountains Halt. Fortunately the name was retained, as Ashbury became Fountains.

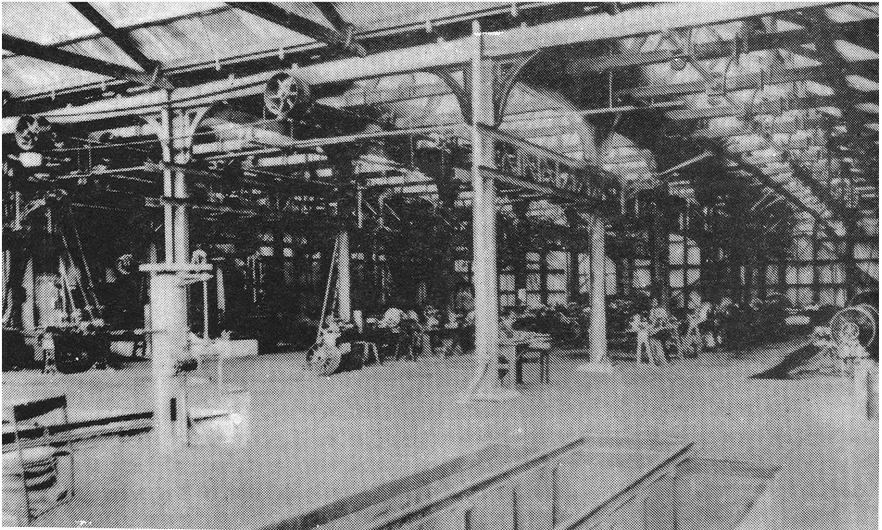
## **2. BUILDINGS**

### **2.1 Former NZASM store for printed matter, Railway Street**

Situated on the western side of Railway Street, opposite the Belgrave Hotel.

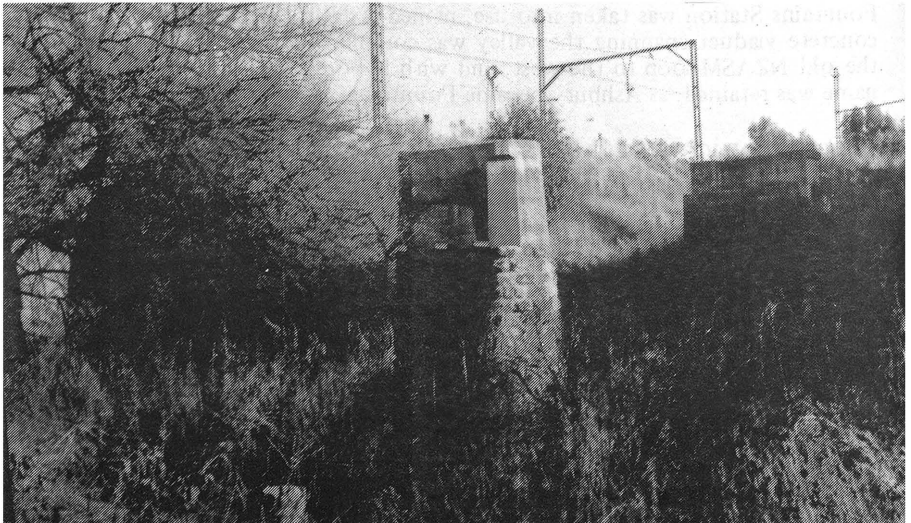
Once the scheduled train services to Elandsfontein and Komatipoort came into operation, goods and passenger traffic increased considerably. In the course of 1896 more space for the necessary administrative work in this respect was provided. A double-storied brick building with side gables and dormer windows was constructed. The builder is unknown. There are original plans of this building in the Plan Room of SATS, showing the two floors fitted with numerous shelves for the storage of timetables, leaflets, tickets, manuals etc.

The building later was converted into offices by the CSAR. Its existence was endangered when it was decided to demolish it in 1969 on account of its poor condition. As a result of an appeal by the Simon van der Stel Foundation the SAR restored the building. The old NZASM store for printed matter is the



Interior view of the 'Centrale Werkplaats' of the NZASM in Pretoria

Photo: *Gedenkboek uitgegeven ter gelegenheid der feestelijke opening van den Delagoabaaispoorweg 1895, door de NZASM, druk J.H. de Bussy, Amsterdam 1895*



Central pillar and western abutment of the old Moreletta Spruit railway bridge on the eastern side of Pretoria

Photo: R.C. de Jong

sole survivor of the company's office buildings in Pretoria. For this reason it was declared a National Monument in 1981.

## 2.2 The Salvokop NZASM houses

Eight buildings dating back to the NZASM era have survived in the railway suburb of Salvokop. Seven of these are houses, still occupied by SATS employees.

Activities at Pretoria station increased considerably once the lines from the south and the east had reached the town. A further influx of employees was generated when the main workshops were taken into use. Especially for the lower income groups cheap and adequate housing was at a premium.

Consequently the NZASM embarked upon a housing project, and during 1893 the first phase was completed. Around a central well from which water was obtained a number of double cottages were built. A school building was later added (1896), providing for the education of employees' children. Of this first complex seven double cottages (one of the "C", and six of the "B" type) have survived, as well as the little school. This unique complex, now called "NZASM Court", was restored by SATS during 1980-81. Hopefully these unpretentious, yet well-built cottages, will still serve SATS many years from now.

## 2.3 NZASM Memorial House, Rissik Street 62

Although probably not built for the NZASM, this well-known double-storied villa (also known as "Mea Vota") can be listed as a NZASM building.

Most NZASM employees, especially the higher-paid, lived outside the Salvokop township. The high officials could afford to live in stately homes comparable to other mansions like Melrose House, Parkzicht, Barton Keep etc. In 1898 two NZASM engineers, A. Westenberg and C. van der Made, bought a portion of an erf bordering on Rissik Street, and by 1899 their villa on this stand was completed.

As the building has many NZASM characteristics, it was probably designed by the company's architect, V. van Lissa, perhaps as a private venture. The builder could have been W.A. de Rapper.

Westenberg and Van der Made and his family had scarcely moved in when the Anglo-Boer War broke out. Like many Dutch citizens they were deported by the British during 1900.

After being a home for the Southgate, Hendrikse and Noël-Barham families, the mansion was purchased by the Willem Punt Society in 1978. The long-term objective of this society is to establish the "NZASM Memorial House" as a museum and a villa representative of its time.

Fortunately Rissik Street 62 now is a National Monument (declared in October 1980), through which its existence is virtually guaranteed.

### 3. BRIDGES

#### 3.1 Six Mile Spruit Bridge

Situated to the west of the bridge by which the old road from Irene to Olifantsfontein crosses Six Mile Spruit.

This railway bridge was built between August 1890 and January 1893 by A.L. Lawley, who had the contract for the construction of earthworks and masonry of the railway line to the south. In the SATS Plan Room drawings of this bridge across the "Hennops River" (sic) were discovered.

The bridge consisted of two sandstone abutments, supporting a 25 m long parabolic steel girder. This girder was manufactured in Germany by the Gutehoffnungshütte (Oberhausen), and was transported in sections by ox-wagon from Charlestown. At the spruit these sections were assembled.

The bridge gave good service until it was demolished by NZASM engineers on 31 May 1900, in order to delay the British advance to Pretoria. After the IMR had taken over, the bridge was repaired.

With the advent of longer and heavier trains the old bridge was replaced by the present double girder bridge on the other side of the road.

#### 3.2 Apies River Bridge

Pretoria's best-known old railway bridge (or rather, what is left of it), situated to the west of the Maria van Riebeeck Drive, right beside the present concrete railway bridge.

As soon as the line from the south (Vereeniging) had reached the town on 1 January 1893, work started on the western portion of the Delagoa Bay Railway. The Apies River was one of the number of streams which had to be crossed as the railway line progressed slowly in an easterly direction.

The first section was the one between the station and the east bank of the Apies River. Its earthworks and masonry were constructed by J.M. Mante, and thus it was he who built the Apies River railway bridge. It was completed by the end of 1893.

The bridge consisted of two sandstone abutments, supporting between them a single span 15 m in length. Contrary to the Six Mile Spruit bridge described above, this was no truss or lattice girder span, but a span of the plate-girder type the NZASM used for most of its bridges. These plate-girders came in standard lengths of 5, 10, 15 and 20 m. They were manufactured either in Germany by the Gutehoffnungshütte, or in the Netherlands by the "Pletterij Den Haag".

A unique feature of the bridge was that it lay in a rather sharp curve in the railway line, having a radius of 200 m. The plate-girder span was straight of course, but the rails on top of it were curved. The SATS Plan Room has plans showing the bridge's masonry and steel superstructure.

The bridge gained a measure of fame during the Boer War. Winston Churchill crossed it in the night of his escape (12 Dec. 1899), President Kruger's train (one of the last to leave Pretoria) rolled over it on 29 May 1900, and the British bombarded it (without success) on 4 June 1900 when Pretoria was taken.

The original 15 m span was replaced in 1914 by a similar but sturdier plate-girder, enabling larger and heavier trains to cross. A few years later a viaduct spanning the new Harmony Street extension to the south was constructed. With the doubling of the railway line, a new three-span concrete bridge was built in 1960, eliminating the old NZASM bridge and the road viaduct. During the construction of the Maria van Riebeeck Drive, the whole embankment between the eastern abutment of the old bridge and the viaduct was removed.

The eastern abutment, together with the girder, finally had to go in July 1984, in connection with the traffic improvement scheme for Fountains Valley, which inter alia entailed the doubling of Maria van Riebeeck Drive. The western abutment was left in peace as a last memory of a bridge steeped in history.

### 3.3 Moreletta Spruit Bridge

Situated immediately to the north of the concrete railway bridge spanning Moreletta Spruit, east of Silverton station.

This spruit was the next important stream to be crossed after the Apies River. It formed part of the section Apies River – Eerste Fabrieken, the earthworks, bridges and culverts of which were constructed by G.M. Fall between June 1893 and May 1894.

Like its Apies River counterpart described above, the Moreletta Spruit bridge was situated high above water-level. It had two sandstone abutments and a free-standing central sandstone pillar, supporting between them two plate-girder spans of 10 m each, the length of the whole bridge thus being 20 m.

The bridge was not damaged during the Boer War. It served the IMR, CSAR and SAR. The latter strengthened the bridge soon after 1910 by replacing the old NZASM girders.

After the new concrete bridge was completed during the 1960's, its old NZASM predecessor fell into disuse. The girders were removed, and only the abutments and pillar are to be seen. (See photo 2 on page 12).

### 3.4 Pienaars River Bridge

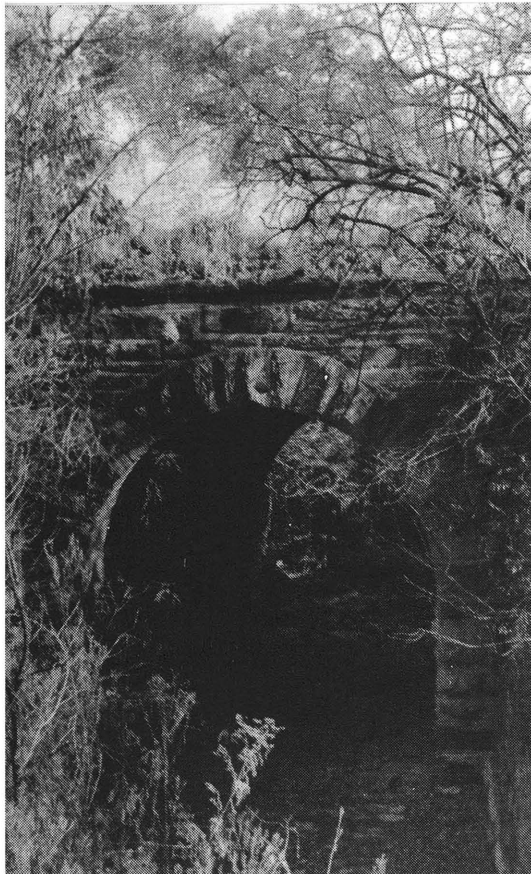
Situated to the west of Eerste Fabrieken station, immediately to the south of the concrete railway bridge.

This bridge was also built by G.M. Fall between June 1893 and May 1894. It is very similar to the Moreletta Spruit bridge, except that it is longer, having two free-standing pillars instead of one. The bridge was made up of two plate-girders of 10 m each, plus a central girder of the "fish-belly" type, 20 m in length.

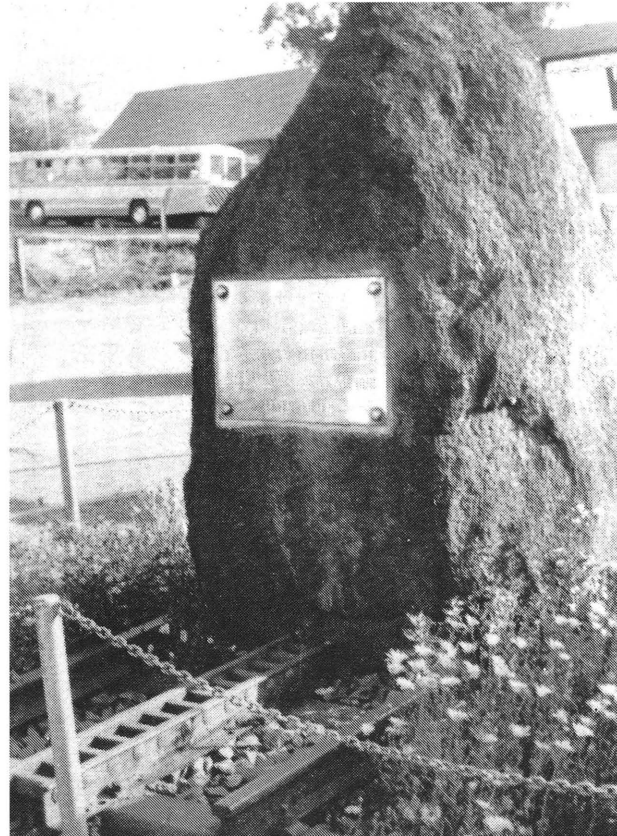
The bridge's history runs along the same lines as the story of the Moreletta Spruit bridge.

## 4. CULVERTS

Because of their relatively small size the NZASM culverts in and around Pretoria are the least-known of all old railway structures. However, their signi-



Old arched culvert under the previous NZASM railway near  
Fountains Valley entrance  
Photo: R.C. de Jong



Die gedenkklip met koperplaat met inskrip vir die personeel van  
die Nederlandsche Zuid-Afrikaanse Spoorweg-Maatschappij  
(NZASM) wat by die aanleg van die Oosterlyn en die gebruik  
daarvan die lewe verloor het, onthul voor die stasie op Waterval-  
Boven op 28 Augustus 1934. Voor die klip lê 'n stuk van die  
tandradspoor wat in die NZASM-tyd Waterval-Boven en Waterval-  
Onder verbind het.  
Foto: C. de Jong

fiance should not be underestimated, as many are still in use, hunched underneath the tracks carrying heavy modern trains.

Beginning at Pretoria station and ending in Lyttelton, one comes across the following culverts, all of which were built by A.L. Lawley between August 1890 and January 1893:

- (1) An arched sandstone culvert carrying the railway across a spruit which divides Salvokop and Schanskop. This actually is quite a remarkable culvert because of its great length (14 m).
- (2) Another arched culvert to the west of Hadden Bridge, also still in use.
- (3) A large and picturesque sandstone culvert (arched), situated in the detour or loop the old railway line made opposite the Fountains Valley entrance. This culvert (no longer in use) is about 500 m to the west of this entrance.
- (4) A small sandstone culvert of the rectangular type, situated above the present railway line to the north of Fountains station, forming part of the old line higher up against the hill.
- (5) A small, arched sandstone culvert to the south of Fountains station. This one is very difficult to spot.

## 5. ROLLING STOCK

Very few examples of NZASM rolling stock have survived. Pretoria is fortunate in this respect : not only does it have a standard mainline locomotive on display, but also the company's most luxurious carriages.

### 5.1 46-tonner NZASM locomotive "TELEGRAFIE", Pretoria station

The NZASM placed 167 locomotives of the "46-tonner" class in service from 1893 to 1899, these being their heaviest and also standard mainline type. Only five of these 46-tonners have survived, one of which is displayed at Pretoria station.

A short article on this locomotive appeared in *Pretoriana* of November 1985, so the history and description of this engine will not be repeated here. However, the loco was not built in the Netherlands as stated, but by the Maschinenfabrik Emil Kessler at Esslingen (Germany) in 1897, with the works number 2861. All except two of the NZASM's 46-tonners came from this factory.

This particular locomotive was declared a National Monument in November 1968. Recently the author discovered that the loco's NZASM number was 203 (works no. 2861), and that it was named 'Telegrafie'.

### 5.2 Managing Director's carriage

Coupled to the 46-tonner described above, is a luxurious private carriage which once was used by the NZASM's managing directors (and guests) on official visits and inspection trips.

Originally this was a double carriage, consisting of two units coupled close



together, each unit mounted on a four-wheeled chassis. To improve stability at higher speeds they were later joined together and placed on a longer truck chassis with two bogies.

The carriage was built by the "Koninklijke Fabriek van Rijtuigen en wegmateriaal J.J. Beijnes" in Haarlem (Netherlands) in 1894, at a cost of 18 000 guilders (£ 3164). It served Middelberg and his successor, Van Kretschmar van Veen, as carriage no. 200, and after 1910 the SAR as Private Carriage No. 18.

In 1961 the carriage's long term of service ended. It was restored by the SAR, and in September 1965 came to its final place of rest on Pretoria station's main platform. Like the locomotive, the carriage is a National Monument.

### 5.3 President Kruger's private carriage

Parked underneath a protective canopy behind the Kruger House Museum is a carriage identical to the one described above if one looks at the physical characteristics. However, its interior is much more sumptuous, as this was a carriage designed and built for a head of state, namely the President of the South African Republic.

Like the carriage at Pretoria station the one made for Kruger originated in J.J. Beijnes' carriage works. It was ordered by the NZASM as a gift to the President, and built in Haarlem during 1894 at a cost of 24 000 guilders.

The interior arrangement was similar to that of the other NZASM private carriage mentioned above. The rear half contained a lounge with an open balcony, whilst the front part was fitted with two dual-purpose compartments (sleeping or seating), as well as a small bathroom and a toilet.

As carriage no. 198 it travelled many kilometres, having President Kruger and his cortège as passengers. It took Kruger on his last journey from Pretoria to Machadodorp in May 1900, and from there to Lourenço Marques (Maputo) during August-September the same year.

Originally the carriage consisted of two parts, which the NZASM workshops later joined together and mounted on a longer chassis.

During the carriage's SAR period it was known as Private Carriage No. 17. After years of use on SAR lines it became part of the Railway Museum's collection at Kaalfontein during the early 1950's. From here it was transferred to the Kruger House Museum, where this venerable and very historic NZASM carriage now has found its final and most fitting home.

## 6. TRACK

The locomotive and Director's carriage at Pretoria station, as well as Kruger's coach, are each mounted on a short section of steel-sleepered NZASM track. Both sections are fitted with a central rack which once formed part of the famous rack railway between Waterval-Onder en -Boven.

The rails are also of NZASM origin. They were supplied in lengths varying from 6 to 8 m, and were manufactured by the Bochum and the Union (at Dortmund) steel works in Germany. The steel sleepers to which the rails are tied likewise came from these factories. Most NZASM sleepers, however, were wooden ones of tough Indonesian teak, imported specially from Java.

Hundreds of the old steel sleepers and NZASM rails are still in existence, being used for fences and railings.

## **7. STREET NAMES**

### **7.1 Middelberg Street, Muckleneuk**

Named after Gerrit Adriaan Arnold Middelberg, who was the NZASM's Managing Director in Pretoria during 1890-1898.

### **7.2 ZASM Street, Waltloo**

Note that the spelling is incorrect, as it should be 'NZASM'. For the sake of an easy pronunciation, the company's official abbreviated name often was shortened to ZASM. Even the NZASM did this on many occasions, e.g. on its locomotives, most of which bore the letters ZASM. The official abbreviation 'NZASM' must however be followed at all times, as it is historically speaking wrong to make use of 'ZASM' : the latter was not a South African company ('Zuid-Afrikaansche Spoorweg-Maatschappij'), but a Dutch company, as the letter N denotes.

## **8. MONUMENTS**

### **8.1 Monument to major (later Governor) J.J. Machado**

This monument (a brass plaque) is to be found right beside the NZASM carriage mounted on the main platform of Pretoria station.

It must be remembered that it was Machado who surveyed the first practical route of the planned Delagoa Bay Railway. He was a highly-skilled Portuguese army engineer, and he surveyed the projected railway on behalf of the Transvaal Government during 1883-1884 in less than eight months. Although better routes were later developed by NZASM engineers for certain sections, most of Machado's surveyed route was adhered to when the line was built during 1889-1895.

Further it is known about Machado that he later became Governor-General of Mozambique (1890-1900).

### **8.2 NZASM emblem, Salvokop**

NZASM Court in Salvokop (see section 2.2) was built around a central well, which later dried up.

During 1980-1981 the seven double cottages and the school were restored by SATS. On 6 November 1981 the then Minister of Transport, Hendrik Schoeman, officially opened the restored complex by unveiling a large NZASM emblem at the site of the former well.

This emblem takes the form of a polychrome mosaic, depicting a winged wheel from which bolts of lightning emanate. This logo is encircled by the company's full name. A pond surrounds this mozaic, and a bronze plaque briefly