

SAHRA PERMIT APPLICATION  
HOUSES OF PARLIAMENT  
ERF 95165

OLD ASSEMBLY BUILDING REFURBISHMENT OF BASEMENT  
INFRASTRUCTURE  
DRAINAGE OF BASEMENT

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For

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# Motivation for alterations with Parliamentary precinct, Cape Town: drainage issues.

## Introduction

Mr Johan de Lange of BVI engineering has requested that ACO prepare an application for a permit to be submitted to SAHRA for trenching and alterations to an historic drain within the grounds of the Houses of Parliament (erf 95165).

The area in question is the old Assembly Building at the north east end adjacent to Government Avenue.

The problem at hand relates to the fact that the basement of the building which was built in the early 20<sup>th</sup> century is subject to damp and flooding which is having a slow but detrimental effect on the basement floor and ceiling. This area is used as an archive (Cape Stores) and is obviously in an unsatisfactory condition.

The proposal is to install a system of drainage to evacuate the excess ground water. This will involve dehumidifying the basement and installing pumps and a drainage system to take the water to the nearest storm water system (quite some distance) or discharge it into a large manhole that exists in the Parliament garden which is closer than the nearest storm water drain. The large manhole in question is an access point to the start of the Adderley Street vaulted drainage tunnel built under British governance in the 19<sup>th</sup> century.

The best engineering solution is to modify the vaulted drain to accommodate a discharge point so that excess water can be evacuated through the vaulted drain to its discharge point at the harbour.

## Background to the historic drains of Cape Town

The VOC were attracted to Table Bay because of the “Mountain Streams” – Platteklip, Devils Peak (Capel) and relevant to this project, the Varsche River. The VOC used these as the city’s water supply by at first building a canal to divert water to Waggenaar’s Dam followed by a formal canal building program that is reflected in the Street names – Heerengracht, Buitengracht, Kaisersgracht. Typically these canals were about 3 m deep and 4 m wide, stone lined and capable of accommodating flood water (see Hart and Dewar 2007: Report on archaeological investigation of the Canals at the grand Parade erf 4651 for the city of Cape Town and Cape Town partnership).

The Varsche River was very important as it was perennial. Fed from numerous springs on the lower slopes of Table Mountain (Breda Park, Waterhof, Leeuwenhof) it was reliable and became the main source of irrigation in the company garden, after which it flowed down the Heerengracht providing water for the residents of the City and discharging floodwater to Table Bay. Unfortunately the canals were not were maintained, became polluted and rancid in the dry season which prompted the British colonial rulers to dispose of them by filling them in. The Varsche River which ran down Government Avenue was diverted into a brick barrel drain down the centre of Adderley Street.

These very large brick drains are engineering marvels in their own right and are now used for the conducting of formal tours under the city.

By 1862 the Varsche River Canal is still discernible on the Snow survey of 1862 running down Government Avenue. Shortly after that it was diverted into a brick drain.

A very small portion of the original canal is still visible at the Company Garden gate to the Tuinhuis.

### **Proposed activity**

The proposed activity is the installation of a drainage system and digging of a trench along the side of the old Assembly Building to the start of the Adderley Street brick drain. The groundwater will be pumped from the basement and discharged via a buried pipeline to the brick drain inspection chamber in the Parliament Gardens. Some alteration of fabric will be necessary in the Parliament basement and also at the point of discharge where alteration and breaking through of the inspection chamber is required.

### **Possible impacts**

- Some intervention in original fabric in basement of Parliament and at entry to brick drain chamber.
- Low chance of archaeological impacts along drain trench (monitoring should be considered).
- Low chance of accidental impacts to ornamental Parliamentary boundary wall along Government Avenue (care required, shoring installed and in event of damage appropriate repair that is true to form).

### **Recommendation**

In balance the remedial action is necessary and far outweighs the significance of possible impacts.

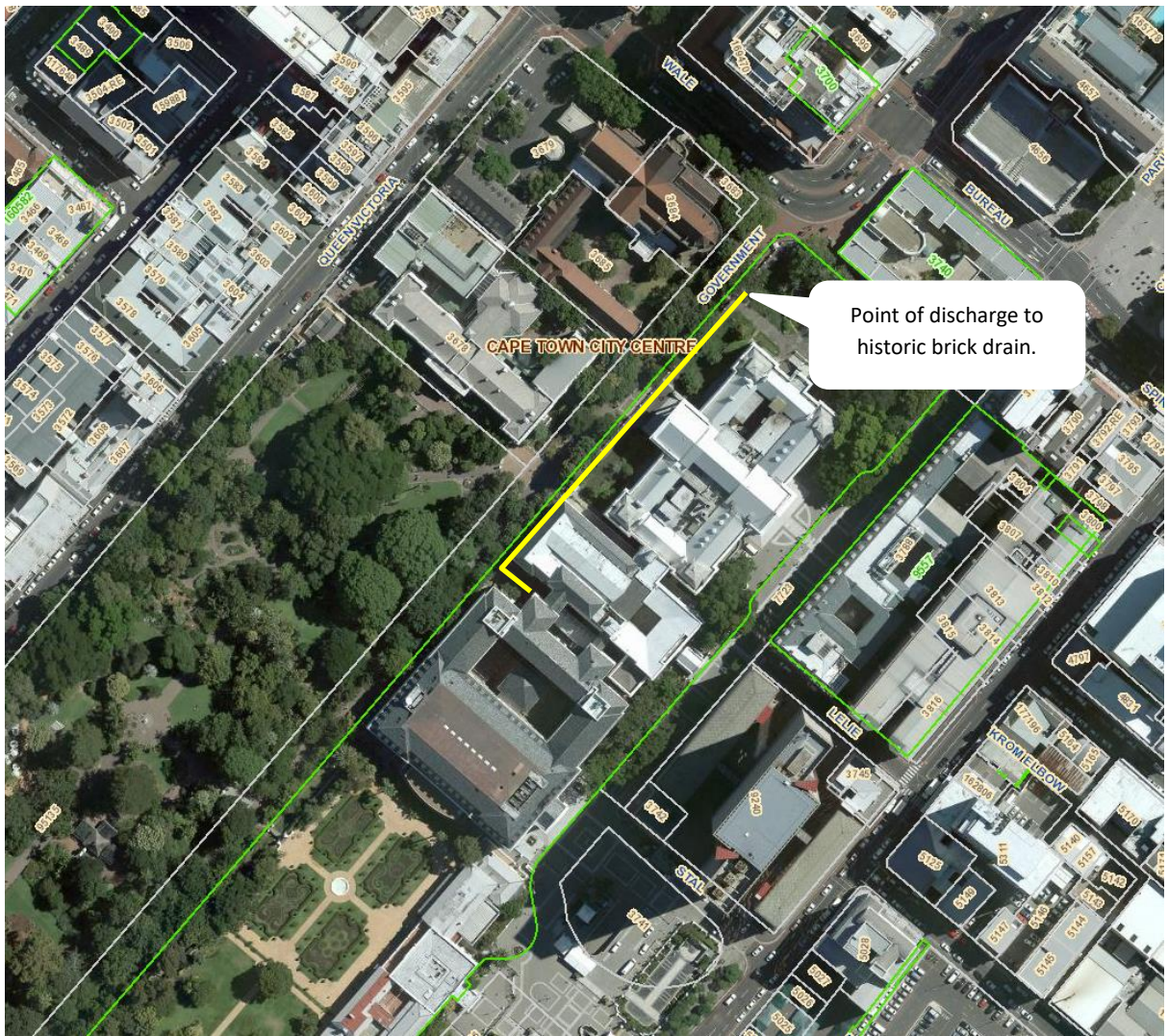


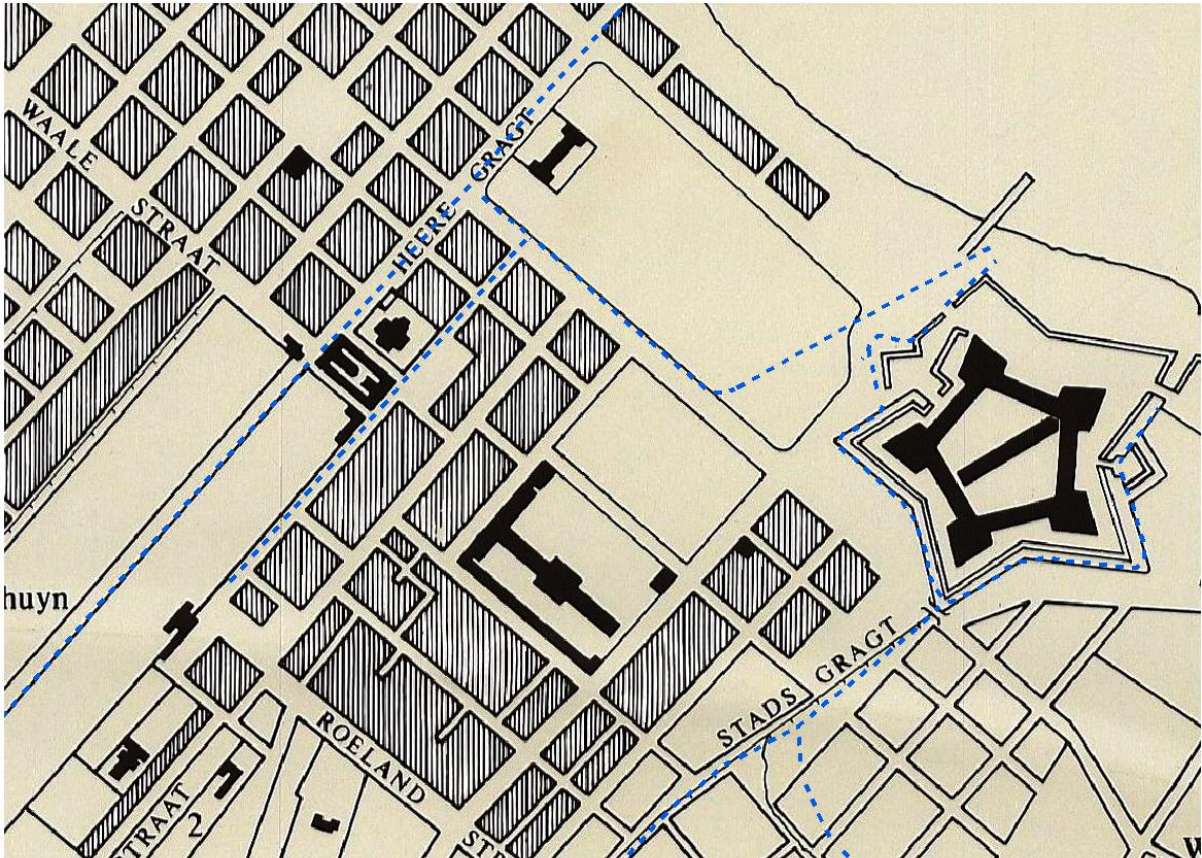
Figure 1 The yellow line indicates the proposed alignment of the drainage pipe.





C1680?? With water courses marked on Snow (blue dashed line)

Figure 2 Alignment of Dutch canals in Cape Town 17th century.



Ditto with the Verschoye tracing of the table valley c1820

Figure 3 Alignment of Dutch canals in the 19th century. Note the "Heere Gracht" flowing down Government Avenue.



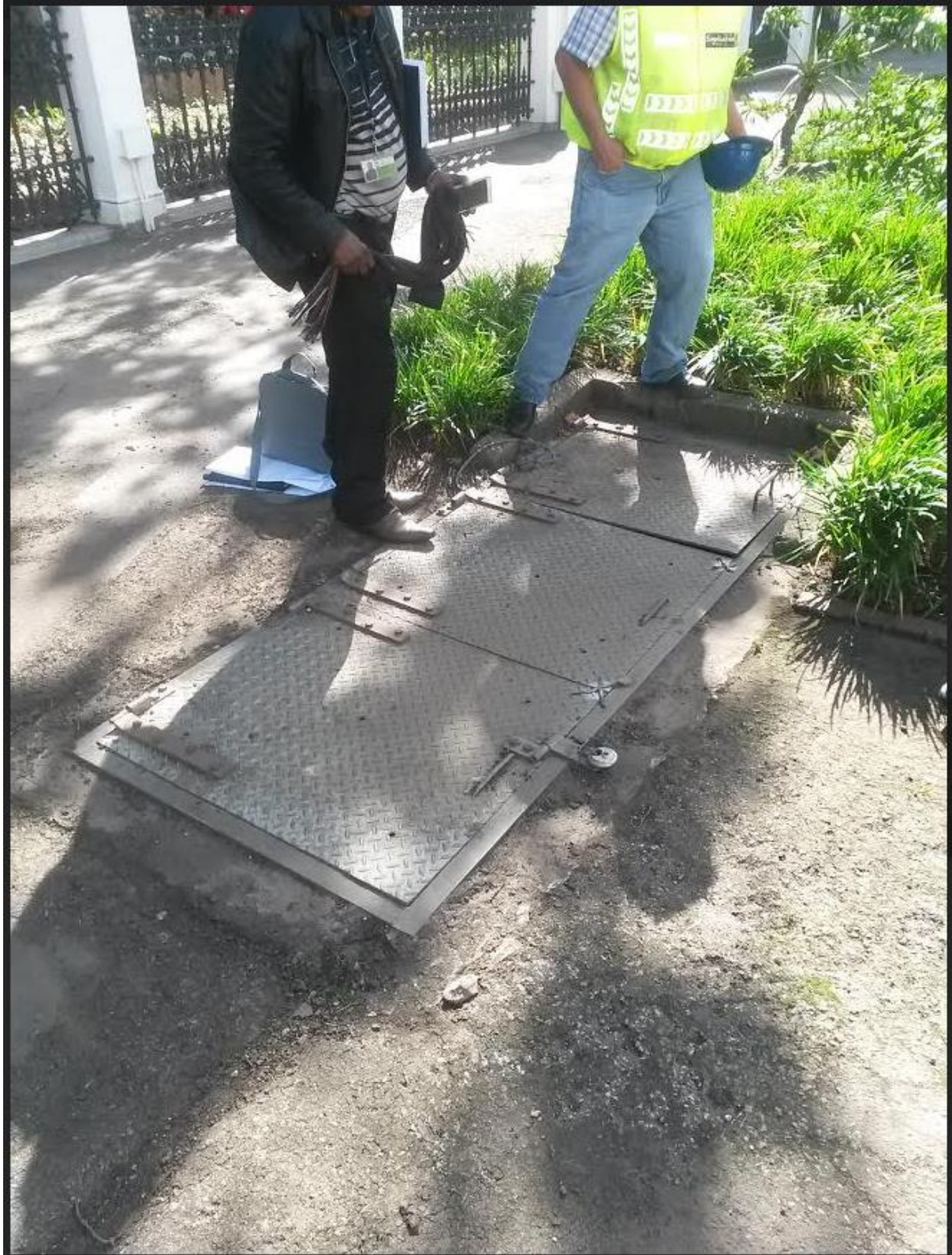


Figure 4 The manhole cover which gives access to the Heerengracht brick drain.





Figure 5 The brick drain.