



## AFRICAN HERITAGE CONSULTANTS CC

2001/077745/23

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*First phase heritage impact assessment for the proposed decommissioning of historic industrial machinery inside Engine Room no.1 and Boiler Houses no.1 and 2 as well as the alteration to the roof of Boiler House no. 1 and the demolition of Boiler House no. 2 on the Vereeniging property of Rand Water, Gauteng Province.*



**March 2014**

**Sidney Miller.**

.....  
B.Sc (Engineering) Civ. M. (Architecture) Conservation. ASAPA member no 087.

**A. Title Page****a. Title.**

First phase heritage impact assessment for the proposed decommissioning of historic industrial machinery inside Engine Room no.1 and Boiler Houses no.1 and 2 as well as the alteration to the roof of Boiler House no. 1 and the demolition of Boiler House no. 2 on the Vereeniging property of Rand Water, Gauteng Province.

**b. Author.**

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**c. Developer and consultant's name.****c.1. Developer.**

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**d. Date of report.**

10<sup>th</sup> March 2014.

## **B. Executive Summary.**

### **a. Purpose of the study.**

Owing to a need by Rand Water (RW) to re-apply some of its historic buildings to modern use<sup>1</sup>, they appointed Mr M Naude, a representative of PGS Heritage & Grave Relocation Consultants, Professional Grave Solutions (Pty.) Ltd. to conduct a heritage scoping report of buildings of interest. This report was completed in July 2010. After much interaction between RW and its heritage consultants the following is now applicable.

In February 2014 African Heritage Consultants were requested to compile a first phase heritage impact assessment for proposed alterations and demolitions to Engine Room no 1 and Boiler Houses nos. 1 and 2 as well as the equipment used in the buildings by Rand Water during the last 90 years.

RW proposes to re-use the interior of Engine Room no.1 for office and other required space, while retaining one full set of the historic pumps in situ, as well as such historic machinery now seen as wall fixtures inside Engine Room no.1, that can possibly be preserved.

RW proposes to re-use the interior of Boiler House no.1 for office and other required space, while retaining one full set of the historic boilers in situ, as well as such historic wall fixtures inside Boiler House no.1 that can be preserved. This building may be altered to suit requirements as well as the preservation of some machinery.

RW proposes to completely decommission all equipment in Boiler House no 2, as well as the structure of Boiler House no 2.

The recommendation of PHRA-G on this first phase study will ultimately be applied to acquire competent (heritage orientated) architects to design and compile the necessary plans that will be used for the compilation of a second phase study and the proposed request for demolition permit/s.

### **b. A brief summary of the findings.**

The two Boiler Houses, no. 1 and no. 2, are steel and brick structures, clad with IBR sheeting, but are younger than 60 years and are *not protected by the sixty year rule*.

Engine room no. 1 is a brick and concrete structure built in the 1920's, enlarged and added-on to in 1935, and is *of high heritage significance*.

The equipment, pumps and boilers, housed in these three buildings are all older than sixty years and are of high heritage significance in the industrial history of South Africa. Ultimately the large volume of equipment will *make the preservation of all of it a difficult and very expensive project that the long term may not be in the interest of preservation and conservation work*.

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<sup>1</sup> Owing to operational requirements (maintenance and industrial safety liability), as well as the national security status (National Key Point) of the site in general, Rand Water officials have requested the alterations to the three buildings and its equipment. Rand Water is also in need of office space, parking, training facilities and limited toilet and kitchen facilities that may be accommodated on the premises under investigation.

**c. The recommendation.**

*It is recommended that the proposal of RW is accepted*

*It is recommended that detail drawings are to be prepared by competent (heritage orientated) architects that can be used to illuminate the second phase heritage impact assessment.*

A handwritten signature in black ink, appearing to read 'S. Miller', is positioned above a horizontal line.

Sidney Miller.  
B.Sc (Eng) Civ. M. (Architecture) Conservation. Asapa member no 087.

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**D. Background Information on the Project.****a. Type of report.**

First phase heritage impact assessment.

**b. Type of development.**

Demolition and alteration to important industrial heritage buildings and equipment.

**c. Rezoning required.**

No.

**d. Developer, consultant and owners names and contact details.****d.1. Developer.**

Rand Water. Contact person Me. Robyn San Environmental Assessor T +27-11-724-9348/50  
[www.randwater.co.za](http://www.randwater.co.za)

**d.2. Consultant 1.**

Aurecon. Contact person Roshantha Nanoolal Roshantha.Nanoolal@aurecongroup.com,  
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**d.4. Owner.**

Rand Water. Contact person Me. Robyn San Environmental Assessor T +27-11-724-9348/50  
[www.randwater.co.za](http://www.randwater.co.za)

**d.2. Consultant 1.****e. Terms of Reference.**

None.

**f. Legislative requirements.**

Act 25 of 1999

## **E. Background to the Archaeological History and other relevant heritage components of the area.**

**a. Literature review and archival research is sufficient to place the sites located in context.**

The site was not 'located', but was identified by the client, (owner and developer) and investigated by two consultants appointed by RW. (PGS Heritage & Grave Relocation Consultants (Mr Naude) and African Heritage Consultants (Mr Miller)).

The Naude Report in section O is important to place the site in historical perspective.

### **a.1. Stone Age**

i. The extensive work done by Van Riet Lowe (1920's to 1930's) (*Mason, R.J, 1968*) in the area and the proclamation at that point in time of at least three National Monuments on the Three Rivers area is of importance to note. Since then, far more important Stone Age sites were identified, such as the Sterkfontein complex some eighty kilometres to the northeast.

ii. Several later Stone Age engraving sites occur along the Vaal River in the vicinity, including the remarkable Redan site. None though occur in the direct vicinity of the project site. (*Mason, R.J, 1968*)

*Regarding the present study area, Stone Age remains will not influence the project.*

### **a.2. Iron Age**

#### **a.2.1. Early Iron Age remains.**

The only Early Iron Age remains known in the vicinity of Vereeniging is the Broederstroom village site, and the Melville Koppies smelting sites excavated by Professor Mason from the Department of Archaeology of WITS in the 1980s.

*As these sites are extremely rare, it is unlikely that material from the same period will be encountered in the present study area.*

#### **a.2.2. Later Iron Age remains.**

From the fifteenth century onwards we find a diverse population of Iron Age people utilizing the grasslands of the Highveld. Towards the northwest there were first the ancestors of the Sotho/Tswana language groups and to the east the ancestors of Nguni/ Ndebele speakers. From the eighteenth century onwards stone-walled villages arose and cultural materials developed that distinguished the language groups from another. Owing to population pressure in the human landscape there were also shared landscapes that may have been brought about by either civil or belligerent interaction. In the second and third decades of the nineteenth century the appearance of Mzilikazi in the landscape to the north and east brought an abrupt halt to normal African life. Many hundreds of remains from this period can be seen in the non-urbanised areas between Parys and Heidelberg, which pointed to a rather intense occupation of the region. The best known remains are those excavated by Mason on Klipriviersberg. The most important of these later Iron Age sites is at Gatsrand, near Potchefstroom where there is a whole village located in an underground dolomite cave. It consists of an underground dolomite cave that was extensively inhabited during the *M'fecane* period.

*As these sites are relatively rare, it is unlikely that material from the period will be encountered in the present study area.*

### **a.3. European settlement.**

#### **a.3.1. The Great Trek**

The Great Trek is rather incorrectly named, as no more than between five percent and twenty percent of the Cape population in fact left British Authority, over a period of three to four years. With the split between the Maritz Group and the Pretorius group and the fragmentary nature of the 'Northern Group' there was little coherence in their 'settlement plan', and many were originally simply killed by indigenous people such as the Van Rensburg Trek, or by the rigorous and dangerous nature of Africa such as the Louis Trichardt Trek. Some prematurely settled in 'towns' such as De Clercq's Dorp and only over a period of ten years were Potchefstroom, Lydenburg, Ohrigstad and Schoemansdal born. Although towns were founded, they were only functional as focal points for religious, political, governance and trade activities. Most of the populace were settled on farms and retained townhouses for periodical visits.

Shortly after the end of the Great Trek around 1840 a number of families settled in, on and around the warmer Bushveld hunting ground to the north. However they soon became aware of the discomfort during the summer in the Lowveld regions and the obvious advantages of the Highveld where it was cooler with good grazing. This resulted in the two-farm system with entire households and their livestock moving back and forth between the two farms. All of these people were in need of accommodation and we then find that every era of the mining industry resulted in different architectural styles suited to the different economic and other layers of society.



*Fig. 01. The remains of one of the Schutte family's dwellings from the 1850s on the farm Deelkraal situated halfway to Potchefstroom and west of the site under investigation, which is typical of early pioneer architecture.*

### **a.3.2. Recent history.**

#### **a.3.2.1. Geographical information.**

Vereeniging is situated in the southern part of Gauteng Province, and neighbors Vanderbijlpark (to the west), Three Rivers (east), Meyerton (north) and Sasolburg (south). The city is currently one of the most important industrial manufacturing centers in South Africa, with its chief products being iron, steel, pipes, bricks, tiles and processed lime. The predominant language in Vereeniging is Afrikaans, followed closely by English and Sesotho.

#### **a.3.2.2. History**

The city was founded in 1892 and is situated on the banks of the northern loop of the Vaal River. Much of its early growth was due to the nearby coal mines. The city is known for being the location where the Treaty of Vereeniging ending the Second South African War (1899–1902) was negotiated. During this conflict, a concentration camp was set up by the British military in the area. The concentration camp at Vereeniging was set up in September 1900, and by October 1901 housed 185 men, 330 women, and 452 children. Conditions at the camp were very poor, water was brought by cart (there was no direct water supply) and only 24 latrines. Most inmates lived in bell-tents but there was a dispensary and a school. Today,



the site of the concentration camp has been replaced by the Maccauvlei Golf Course. Vereeniging was one of the first municipalities in South Africa to provide better housing for Africans. Near Vereeniging is the predominantly black community of Sharpeville, Gauteng, the site of the Sharpeville massacre in 1960. Since 1994, Vereeniging has been the home of southern Africa's annual LED<sup>2</sup> Festival. The city's motto is *Per Pacem ad Industriam* (Through peace to industry). It is currently one of the most important industrial manufacturing centers in South Africa, with its chief products being iron, steel, pipes, bricks, tiles and processed lime. Several coal mines are also still situated in the area, with reserves being estimated at four billion tons. Other mines nearby extract fire-clay, silica and building stone. Vereeniging also has several Eskom thermal power plants that supply electricity to the nearby goldmines.

Vereeniging has been mentioned jokingly as the town in South Africa which has the most vehicle dealerships per square meter. During the early twentieth century Vereeniging (and the Vaal River) became the major source of water for Johannesburg, the world renowned source of gold, with the building of the 'barrage' and later on the Vaal Dam. Opposite of the Rand water is also located the original Brick and Tile factory of Sammy Marks (now Verry Brick) one of the most influential characters in the early twentieth century South African Industrial history that became the first supplier of alcohol to the ZAR from his "Eerste Fabriek" facility to the east of Pretoria.

#### **b. Reference to museum or university databases and collections.**

i. The Rand Water Board Archives and Library is located at its head office in Glenvista, Johannesburg. With the friendly assistance of Mr. Jannie Ferreira (Manager: Records and Knowledge Management) a vast amount of information with regards to the history of the Rand Water Board and the Vereeniging Pumping Station were obtained by Mr Naude, who compiled the general survey of the buildings under investigation. (*see addendum O*)

ii. The Vaal Teknorama Museum has two permanent exhibitions at the: the Local Leaders Hall and the Sedibeng Heritage Hall – Sedibeng being the name for the Vereeniging Municipal District. Both exhibits detail the history of Vereeniging and the Sedibeng area, with micro exhibits within them detailing and displaying the discovery of the Vereeniging Coal Fields in the late 1800's, the rise of the manufacturing and industrial industry upon which Vereeniging is built, Boer War heritage and archaeological and paleontological discoveries in the Vaal Triangle. There are also exhibits on the 1960 Sharpeville Massacre as well as other notable Apartheid memorabilia right up to the signing of the post Apartheid SA Constitution in 1996, and much more.

iii. The NWU is a unitary multi-campus institution with campuses - each with its unique characteristics - spread across two provinces. The Potchefstroom and Mafikeng Campuses are situated in North West and the Vaal Triangle Campus in Gauteng. The Institutional Office (head office) is in Potchefstroom within close proximity to the Potchefstroom Campus. Situated on the banks of the Vaal River in a proclaimed nature reserve, the Vaal Triangle Campus (GPS Coordinates: S26°43'31.0" E27°52' 45.2") with its diverse population also boasts a unique environmental setting, with various species of game roaming the campus grounds. The Campus has two faculties, namely the Faculty of Humanities with four schools and the Faculty of Economic Sciences and Information Technology with three schools. Contact person: The Campus Registrar: Ms Elbie Steyn Tel: (+27 16) 910-3111 Fax: (+27 16) 910-3116 E-mail: [Elbie.Steyn@nwu](mailto:Elbie.Steyn@nwu)

#### **c. Previous relevant impact assessment reports in the area.**

Naude Report 2010 (*Addendum O to this report*)

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<sup>2</sup> Light Emitting Devices

## **F. Description of the Property or affected Environment.**

### **a. Details of the area surveyed**

#### **i. Full location Data**

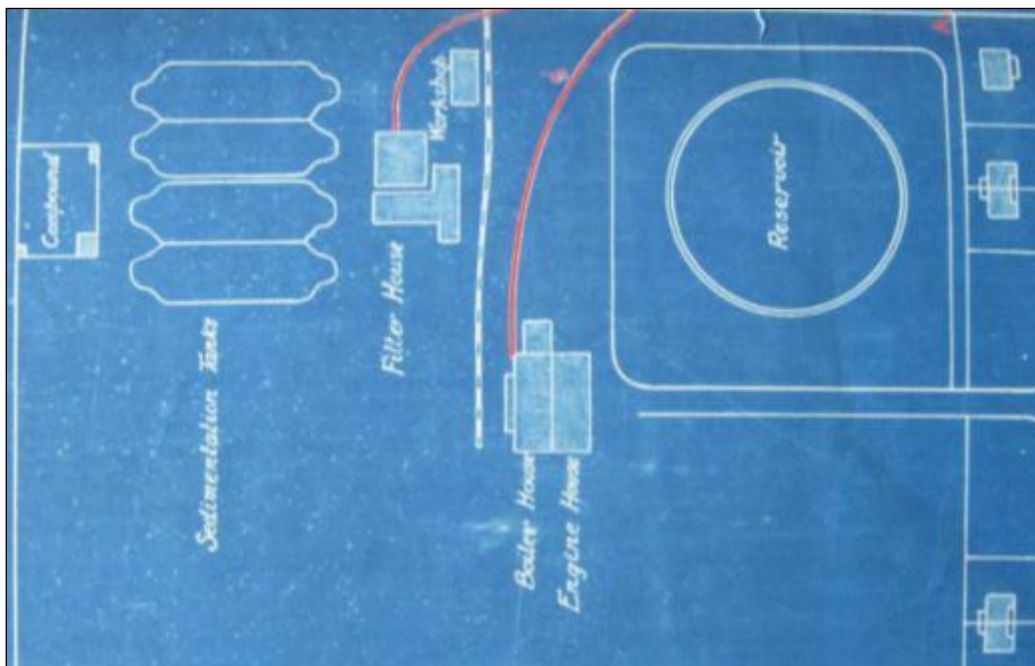
Gauteng Province, Vereeniging, Rand Water Facility

#### **ii. Location Map of the general area.**



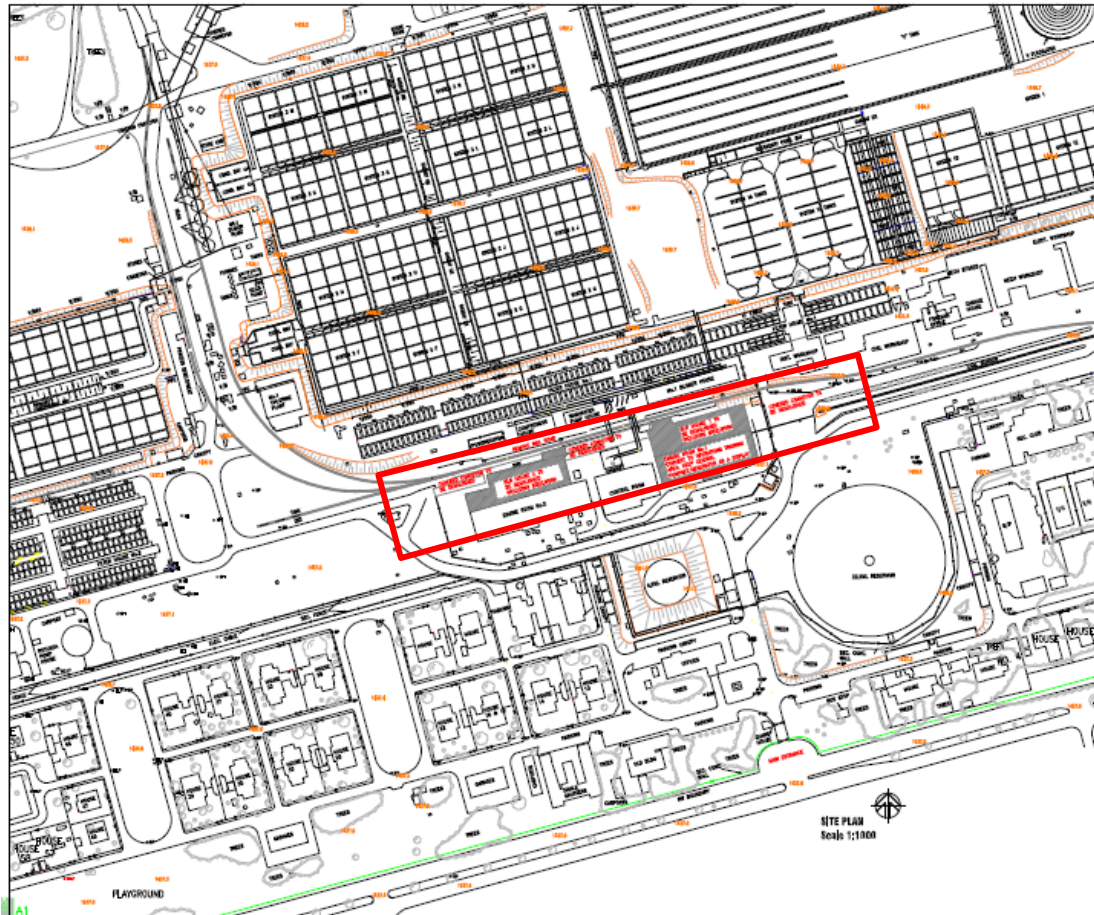
**Fig. 02.** The 1:50 000 map of the area is currently out of print. In lieu of that we illustrate the position of the Rand water facility relative to Vereeniging with the above Google Earth image. (Google Earth 2013.)

#### **iii. Site Maps and Google Earth image of the site.**



**Fig. 03.** The original 1922 site map showing the Engine Room before its extension in the nineteen thirties. The original brick boiler houses were replaced with the present steel structures in 1962. (Naudé Report)





**Fig. 04.** Above is a section of the layout of the rand Water facility as at present. The annotated areas are the buildings and facilities of interest. (RW Drawing)



**Fig. 05.** Above is an oblique Google Earth View of the area presented in the official drawing in **figure 04**. The impacted areas will be illustrated in **fig. 06**. (Google Earth 2013.)





**Fig. 06.** Above is a Google Earth near view of the affected structures that RW is proposing to demolish and or alter. The red area is proposed to be demolished in total, while the orange section will be altered internally. (Google Earth 2013.)



**Fig. 07.** The above is the portion of Jeppe's 1899 Map of the Transvaal showing the conditions surrounding the juvenile town. Note the triangular piece of land south of the town that is now the location of Rand Water. The anvil-like sign on the map indicates the presence of 'telegraph money order point', the 'auto bank' of the day. Note the rail crossing the Vaal River adjacent to Rand Water, the bridge-structure which still exists.

**b. Description of the Methodology.****i. How the area was searched.**

- i.1. All relevant maps and documents that pertain to the project were studied and considered by A.H.C. before venturing to the site.
- i.2. The site was visited and traversed on foot by one person on four occasions from December 2012 to July 2013. Photographs of the buildings were taken as well as of the areas surrounding the site. Photographs were also taken of the interiors of the buildings, and the equipment still present in the buildings.

**ii. Impediments.**

- ii.1. According to the Naude report the Engine room no 1 combined with its equipment is of high heritage significance.
- ii.2. According to the Naude report the equipment in the two Boiler houses are of high heritage significance.
- ii.3.
  - a. Rand water is proposing to demolish Boiler house no 2 and alter Boiler house no 1.
  - b. Rand Water is proposing to <sup>3</sup>remove all the equipment in the two boiler houses except one boiler unit that will remain on site
  - c. Rand Water is proposing to remove all the equipment in the Engine Room no1, except one turbine that is proposed to be maintained on
  - d. Rand Water is proposing to alter the interior of the Engine room office space, parking, training facilities and limited toilet and kitchen facilities.

**iii. How the data was acquired and detail of research equipment.**

- iii.1. The data was acquired by visual observation, photography and the use of forty years of experience retained mainly in memory.
- iii.2. Research equipment consisted only of a camera to capture images of the structures, academic qualifications and a long term memory of forty years experience. GPS was not required as the site is located in a modern town.
- iii.3. A number of meetings was held to extract information from the Rand Water team responsible for the proposed alterations to the site.

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<sup>3</sup> Equipment removed will either be sold for scrap or, sold to a museum, or moved to another RW site for memorialization. Thus its not confirmed as yet.

### G. Description of sites identified and mapped.

#### **a. Details of the location of all the sites.**

##### **i. Site Map.**



**Fig. 08.** Official layout of the RW facility in Vereeniging showing the location of the buildings under investigation. For its relationship to the larger area see figure 04. (The alterations to Boiler house no.1 is optional as described elsewhere in the report.)

##### **ii. GPS readings.**

Engine Room no 1.      26° 41' 21,51" S and 27° 55' 03, 10" E

Engine room no 2.      26° 41' 21,51" S and 27° 54' 59, 04" E

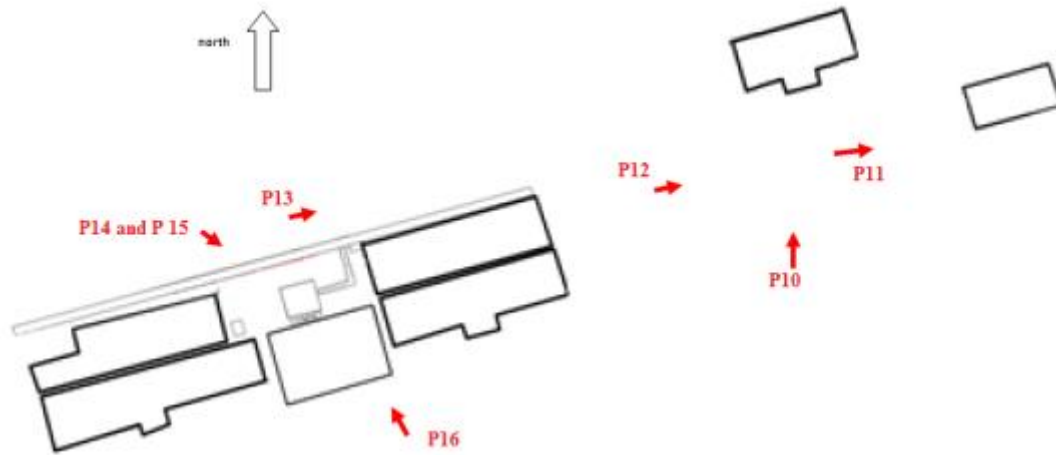
Boiler house no 1.      26° 41' 19,85" S and 27° 55' 02, 99" E

Boiler house no 2.      26° 41' 20,76" S and 27° 54' 59, 21" E

#### **b. An adequate description of each site.**

Denomination	Engine Room no1	Engine room 2	Boiler house 1	Boiler house 2
i. Type of Site.	Pump house.	Pump house.	Boiler house	Boiler house
ii. Site category. Building Equipment	<b>Historic, industrial.</b>	Modern, industrial. <b>Historic, industrial.</b>	Modern, industrial. <b>Historic, industrial.</b>	Modern, industrial. <b>Historic, industrial.</b>
iii. Context.	Water purification and pumping plant.	Water purification and pumping plant.	Water purification and pumping plant.	Water purification and pumping plant.
iv. Cultural affinities.	20 <sup>th</sup> century South African.	20 <sup>th</sup> century South African.	20 <sup>th</sup> century South African.	20 <sup>th</sup> century South African.
v. Estimation or actual measurement of the site.	50 m x 15 m 7 m	50 m x 15 m 7 m	50 m x 15 m 7 m	50 m x 15 m 7 m
vi. Depth and stratification of the site.	Not applicable	Not applicable	Not applicable	Not applicable
vii. Sources of information about past environments.	Not applicable	Not applicable	Not applicable	Not applicable
viii. Photographs.	See below	See below	See below	See below

**c. General environment of the four buildings under investigation and two other historic structures.**



*Fig. 09. Above is a schematic layout of the site and the positions from where photographs were taken.*



*Figs. 10 and 11. The original offices, laboratory, filter-block and workshop from 1922 that has survived into the modern era. They are still in use today. (S.M.Miller 2013)*



*Figs. 12 and 13. The rail that served for coal delivery and the 1960's building north of the boiler house. (S.M.Miller 2013)*



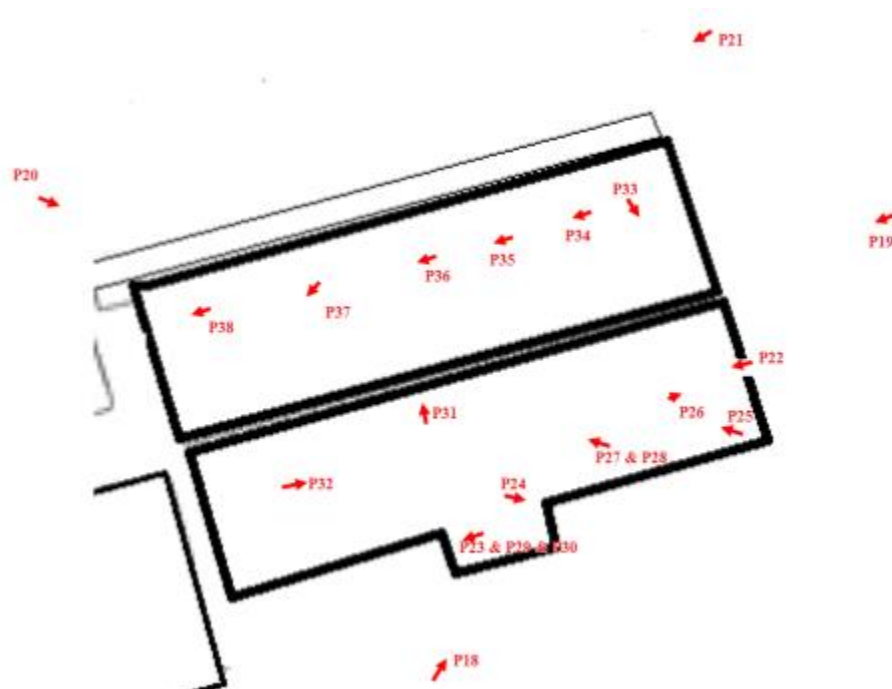


*Figs. 14 and 15. Buildings located between the two sets of buildings under investigation. (Naudé 2010).*



*Fig. 16. Building located between the two sets of buildings under investigation. (Naudé 2010).*

### **Engine room and boiler house number 1. Exteriors, interiors and equipment.**



*Fig. 17. Schematic layout of engine room and boiler house number 1 and positions from where the photographs were taken.*



### General exterior views of Engine Room no1 and Boiler House no 2.



**Fig. 18.** South elevation of engine room no 1. It was built in 1922 and two wings were added in the nineteen thirties. The boiler house in the background was built in 1962. (Naudé 2010).



**Fig. 19.** East elevation of engine room no 1 and boiler house no 1. This facade of the engine room was added in the nineteen thirties. The boiler house to the right was built in 1962. Both buildings still contain the original equipment. (S.M.Miller 2013)



**Figs. 20 and 21.** West and north elevations of boiler house no 1. The boiler was built in 1962. It still contains the original equipment. (S.M.Miller 2013).

### General interior views of Engine Room no1 and Boiler House no 2.



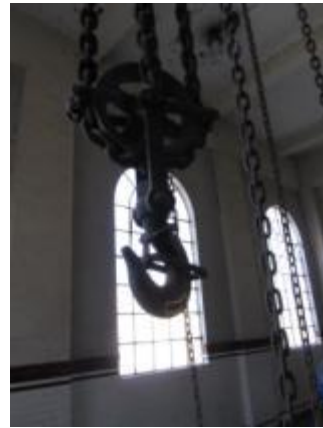
*Figs. 22 and 23. General view of the interior of Engine Room no1 and detail of the foyer door. (S.M.Miller 2013).*



*Figs. 24 and 25. Detail of the tiled walls and the training section where equipment had been removed. (S.M.Miller 2013).*



*Figs. 26, 27 and 28. Eastern door and substructures of engine Room no 1. (S.M.Miller 2013)*



*Figs. 29 and 30. Typical equipment in Engine Room no 1. (S.M.Miller 2013)*



*Figs. 31 and 32. Typical equipment in Engine Room no 1. (S.M.Miller 2013)*



*Figs. 33 and 34. Base of modern smokestack and historic boiler in Boiler house no 1. (S.M.Miller 2013)*





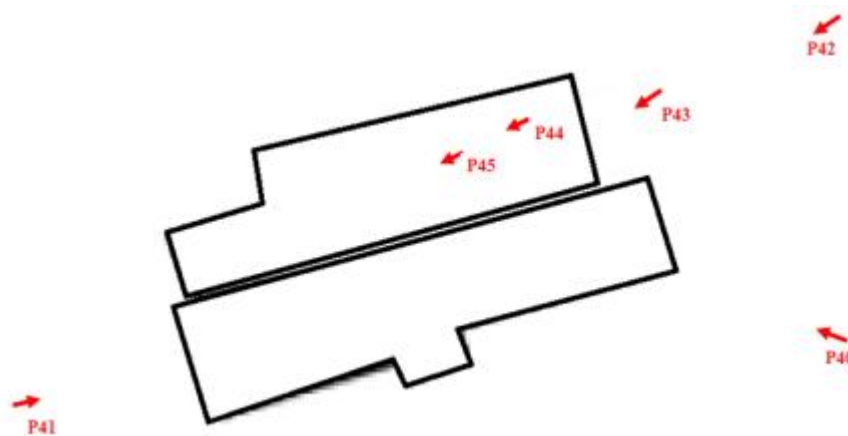


*Figs. 35 and 36. Historic boilers in Boiler house no 1. (S.M.Miller 2013)*



*Figs. 37 and 38. Image recording the dimensions of Boiler house no 1 and its western doorway. (S.M.Miller 2013)*

### **Engine room and boiler house number 2. Exteriors, interiors and equipment.**



*Fig. 39. Schematic layout of engine room and boiler house number 2 and positions from where the photographs were taken.*



*Fig. 40. South-eastern elevation of Engine Room no 2 with Boiler House no 2 in the background. Even though these building are not historic structures, and are not protected by the sixty year rule, it is not proposed by Rand Water to demolish or alter Engine Room no 2. They do propose to demolish Boiler House no 2 as well as its historic equipment. (Naudé 2010).*



*Fig. 41. Western elevation of Engine Room no 2 and Boiler House no 2. (Naudé 2010).*

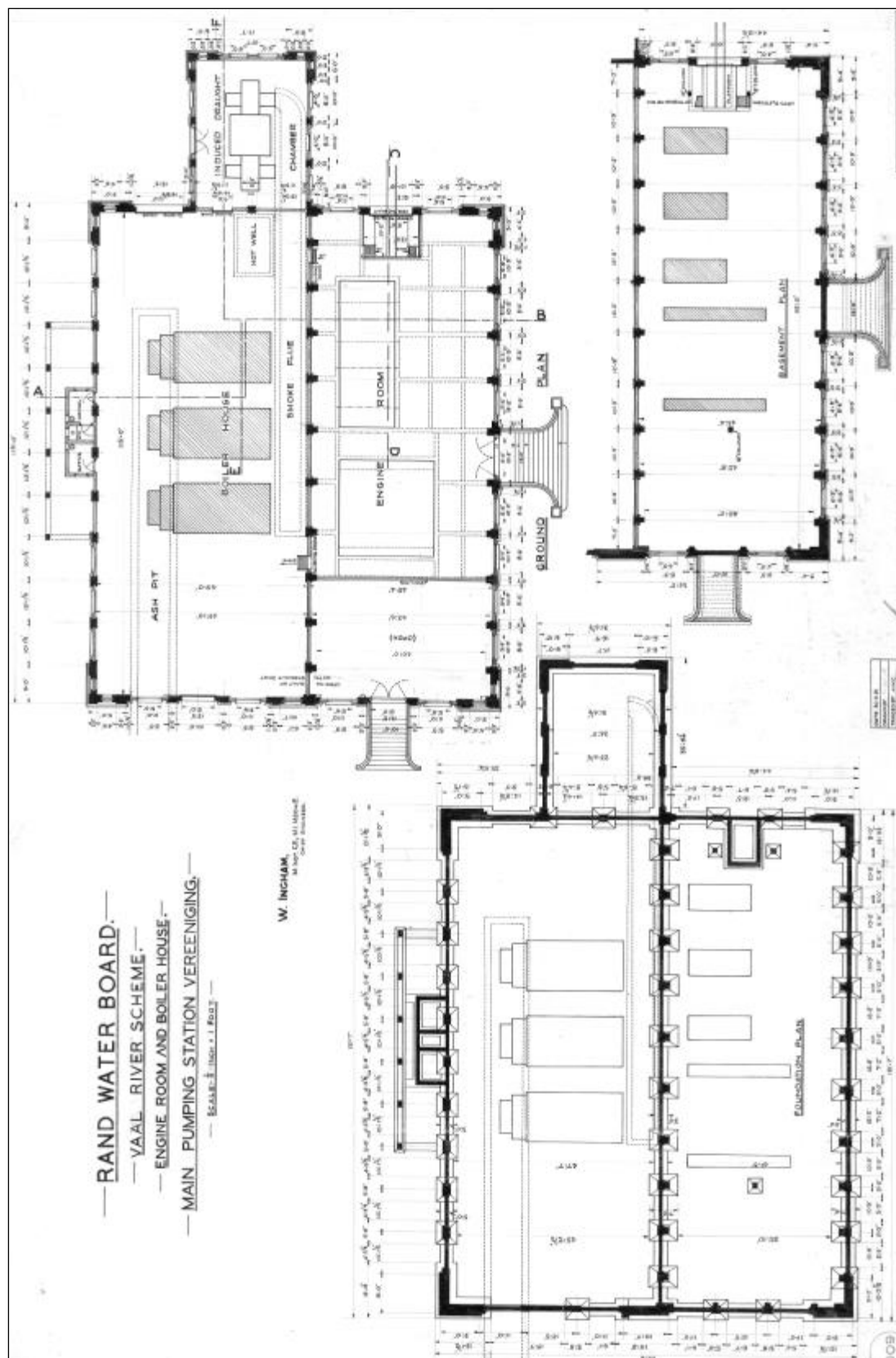


*Figs. 42 and 43. Eastern elevation of Engine Room no 2 and Boiler House no 2 to the left and more detail of the eastern elevation of Boiler House no 2. (Naudé 2010).*



*Figs. 44 and 45. Internal views of the equipment in Boiler House no 2. All of this is historical equipment . (Naudé 2010).*

**Typical original layout-plans that is available of the buildings.**



**Fig. 46.** Ground plan of the Engine Room and Boiler House no 1. It was drawn on 30 September 1921 and is signed by the Rand Water Board's Chief Engineer at that time, Mr. W. Ingham (**Rand Water Board, Technical Drawings, and Plan 1009**).

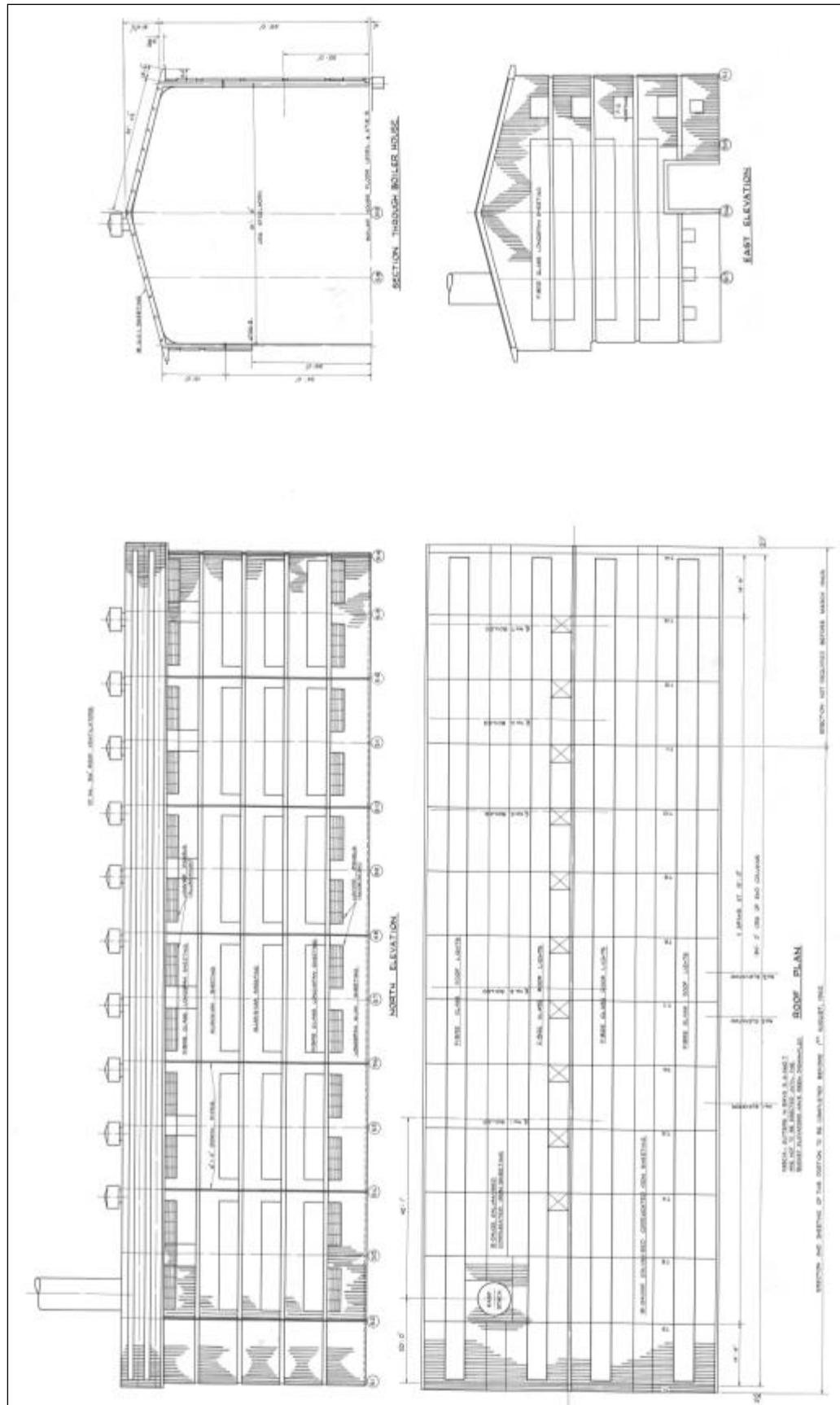


Fig. 47. Plan of the "new" boiler house. The plan was signed on 16 February 1962 (Rand Water Board, Technical Drawings, Plan 4105).



**Threats or Sources of Risk**

One of the two boiler houses are proposed to be demolished (Boiler House no 2) while the second (Boiler house no 1) is proposed to be adapted to retain some significant equipment.

The equipment in both Boiler Houses no 1 and 2 are proposed to be scrapped and one boiler and associated equipment is proposed to be retained on site in Boiler House no 1 and memorialised.

Some of the equipment in Engine room no 1 is proposed to be removed and one turbine and associated equipment is proposed to be retained as-is as a 'memory'. Wall fixtures are proposed to be maintained.

Engine Room no 1 is proposed to be adapted internally for modern use.

**H. Description of the artefacts, Faunal, Botanical or Other Finds and Features.****a. Raw material, type, maximum dimensions, frequency, significance of stone tools on surface**

Not applicable.

**b. Basic description of ceramics, other artefacts and occurrences such as rock art.**

Not applicable.

**c. Description of features.**

Not applicable.

**d. Basic description of faunal or botanical taxa and estimated frequencies.**

Not applicable.

**e. Photographic and graphic representation.**

Not applicable.

**f. Location of repositories where artefacts are kept.**

The Rand Water Museum and on site.

**I. Clear description of Burial Grounds and Graves****a. Written and photographic description of graves.**

Not applicable.

**b. Exact or estimated age and affinities of the burials.**

Not applicable.

**c. Clear description for the client of the legal implications and who is responsible**

Not applicable.

**J. Field Rating (Recommended grading or field significance) of the site.**

Denomination	Engine Room no1	Engine room 2	Boiler house 1	Boiler house 2
a. National.	Not applicable	Not applicable	Not applicable	Not applicable
b. Provincial. Building Equipment	<b>Applicable</b> <b>Applicable</b>	Not applicable Not applicable	Not applicable <b>Applicable</b>	Not applicable <b>Applicable</b>
c. Local, Field Rating/Grade IIIA significance	<b>Applicable</b> <b>Applicable</b>	Not applicable Not applicable	Not applicable <b>Applicable</b>	Not applicable <b>Applicable</b>
d. Local, Field Rating/Grade IIIB significance	<b>Applicable</b> <b>Applicable</b>	Not applicable Not applicable	Not applicable <b>Applicable</b>	Not applicable <b>Applicable</b>
e. 'General' Protection A (Field Rating IV A).	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable
f. 'General' Protection B (Field Rating IV B).	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable
g. 'General' Protection C (Field Rating IV C).	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable

**K. Statement of Significance (Heritage Value).**

Denomination	Engine Room no1	Engine room 2	Boiler house 1	Boiler house 2
a. Its importance in the community, or pattern of South Africa's history.	<b>It has provided housing for equipment that supplied water to Johannesburg for nearly a century.</b>	It has provided housing for equipment that supplied water to Johannesburg for fifty years.	<b>It has provided housing for equipment that supplied water to Johannesburg for nearly a century.</b>	It has provided housing for equipment that supplied water to Johannesburg for fifty years.
b. Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.	<b>Equipment housed in this building is extremely rare.</b>	Equipment housed in this building is rare.	<b>Equipment housed in this building is extremely rare.</b>	Equipment housed in this building is rare.
c. Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage.	<b>High potential.</b>	<b>High potential.</b>	<b>High potential.</b>	<b>High potential.</b>
d. Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
e. Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.	<b>High potential.</b>	Low potential.	Low potential.	Low potential.
f. Its importance in demonstrating a high degree of creative or technical achievement at a particular period.	<b>High potential.</b>	Low potential.	<b>High potential.</b>	<b>High potential.</b>
g. Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.	The industrial character of South Africa's development	The industrial character of South Africa's development	The industrial character of South Africa's development	The industrial character of South Africa's development
h. Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.	The industrial character of South Africa's development	The industrial character of South Africa's development	The industrial character of South Africa's development	The industrial character of South Africa's development
i. Its strong or special association with slavery in the history of South Africa.	Low potential.	Low potential.	Low potential.	Low potential.

### **L. Recommendations.**

#### **a. Assessment of the potential impact of the development on this site relative to sustainable social and economic benefits.**

If the present proposals are not adhered to there exist a very real possibility that none of the buildings and equipment will survive in the long term. This is owing to the upgrading of technology that relegates the buildings and machinery in contention to redundancy.

If the proposals are accepted then at least sufficient 'memory' of these buildings and machinery will be retained in the national heritage estate.

#### **b. Proposals for protection or mitigation relating to:**

##### **i. Possible alternatives.**

To be negotiated between PHRA-G and Rand Water

##### **ii. The need for mitigation of adverse aspects**

To be negotiated between PHRA-G and Rand Water

##### **iii. The need to conserve certain sites because their heritage value is high.**

To be negotiated between PHRA-G and Rand Water

#### **c. Detailed recommendations with regard to burial grounds and graves. This must inform the client about the full process.**

##### **i. Recommendation for the protection of the graves.**

Not applicable.

##### **ii. Recommendation for the relocation of graves.**

Not applicable.

#### **d. Indications what must be done at every site.**

##### **i. When sites are of low significance.**

To be negotiated between PHRA-G and Rand Water

##### **ii. When sites are of medium significance.**

To be negotiated between PHRA-G and Rand Water.

##### **iii. When sites are of high significance**

To be negotiated between PHRA-G and Rand Water

**M. Conclusion.**

- i. The engine room no 1 and its equipment is of high significance in the provincial Gauteng heritage estate.
- ii. The equipment in boiler houses numbers 1 and 2 is of high significance in the provincial Gauteng heritage estate.
- iii. The proposals of the RW is positive and it should be regarded as the best way to preserve a portion of Gauteng's industrial history buildings and machinery.

## **N. Bibliography.**

### **Publications**

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### **Reports.**

- Naude, M. 2010. Heritage scoping report. Proposed decommissioning of the boilers and associated infrastructure at the Vereeniging pumping station, Vereeniging, Gauteng

## **O. Appendices.**

### **a. The Naudé Report from 2010. It is appended as a known document from 2010.**

### **b. Declaration of independence.**

I, Sidney Mears Miller (ID 5412135029082) declare that:

- I act as an independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the National Heritage Resources Act (No 25 of 1999) and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

#### Disclosure of Vested Interest

I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity AND OR proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations,



SIDNEY MEARS MILLER

