

BOSCHENDAL FOUNDERS' ESTATES NATIONAL HERITAGE SITE

Section 27 NHRA application for Bulk Services



Prepared for Boschendal (Pty) Ltd

Prepared by Sarah Winter Heritage Consultant with input from:

Bernard Oberholzer Landscape Architect and Visual Specialist

SEPTEMBER 2022

David Halkett and John Gribble Archaeological Contracts Office

TABLE OF CONTENTS

A. INTRODUCTION	4
A.1 Study Brief and Scope of Work	
A.2 Site Description	
A.3 Project Description	
B. HISTORICAL OVERVIEW	17
B.1 Precolonial Period	
B.2 Earlier Colonial Period	
B.2.1 Silvermine	
B.3 Later Colonial RFF Period	
B.4 Apartheid Period	
B.5 Democratic Period	
C. HERITAGE SIGNIFICANCE	28
C.1 Statement of Heritage Significance	
C.2 Areas of Archaeological Sensitivity	
C.2.1 Silvermine Landscape	
C.2.2 Nieuwedorp	
C.2.3 Goede Hoop	
D. HERITAGE INDICATORS	34
D.1 Landscape Context	
D.1.1 General Principles	
D.1.2 Guidelines for Infrastructure	
D.1.2.1 Access Roads	
D.1.2.2 Stormwater Channels	
D.1.2.3 Culverts, Drifts and Bridges	
D.1.2.4 Landscape and Civil Works	
D.2 Archaeological Resources	
E. ASSESSMENT OF IMPACTS	37
E.1 Impacts on Landscape Context	
E.1.1 Access Roads	
E.1.2 Stormwater Channels	
E.1.3 River Crossings	
E.1.4 Reservoir	
E.1.5 Sewer Pump Station	
E.1.6 Landscape Rehabilitation	
E.2 Impacts on Archaeological Resources	
E.2.1 Pre-Colonial Archaeology	
E.2.2 Historic Remains	
E.2.2.1 Ore Processing Mill Sub-Precinct	
E.2.2.2 Goede Hoop	
E.2.2.3 Nieuwedorp	
F. CONCLUSIONS AND RECOMMENDATIONS	40
REFERENCES	41

LIST OF FIGURES

- Figure 1: Regional Location Plan
- Figure 2: Boschendal Estate within the context of the Dwars River Valley
- Figure 3: Farm Portions comprising the Founders' Estates
- Figure 4: Natural Landscape Constraints and Informants
- Figure 5: Cultural Landscape Constraints and Informants
- Figure 6: Site Photographs
- Figure 7: Proposed Service Infrastructure
- Figure 8: Proposed Roads and Stormwater
- Figure 9: Proposed Swale
- Figure 10: Cross-Section of Swale
- Figure 11: Typical Road Cross-Section with Interlocking Pavers
- Figure 12: Typical Road Cross-Section with In-situ Concrete
- Figure 13: Late 17th Century Map of the Settlement at Stellenbosch and Drakenstein
- Figure 14: Extract from Compilation of 1657-1750 Freehold Grants of the SW Cape Colony
- Figure 15: Portion of a Military Survey of the Valley 1808
- Figure 16: Survey Compilation 1830
- Figure 17: Drawing of the Upper Silver Mine Works 1743
- Figure 18: Map of the Lower Industrial Complex and Mill
- Figure 19: Detailed Map of the Mining Settlement Complex (Site 2).
- Figure 20: Cottage 1685 c 1930s
- Figure 21: Extract of 1923 Topographical Plan of a Portion of Rhodes Fruit Farms Ltd
- Figure 22: Goede Hoop c 1920s
- Figure 23: Old Watersluit between Good Hope and Nieuwedorp 1932
- Figure 24: Dam on Founders' Estates 1932
- Figure 25: Areas of Archaeological Sensitivity
- Figure 26: Two Sites comprising the Industrial Silvermine Complex
- Figure 27: Goede Hoop Werf
- Figure 28: Bulk Services Footprints in relation to Archaeological Sensitive Areas

LIST OF TABLES

- Table 1: Proposed Service Infrastructure
- Table 2: Road Dimensions

LIST OF APPENDICES

- Annexure A: Archaeological Assessment prepared by ACO (2022)
- Annexure B: Founders Estates Historical Timeline (2008)

A. INTRODUCTION

Sarah Winter has been appointed by Boschendal (Pty) Ltd to prepare a Heritage Statement to accompany a permit application to the South African Heritage Resources Agency (SAHRA) for bulk service infrastructure on the Founders' Estates National Heritage Site (NHS) located on Boschendal Estate within the jurisdiction of the Stellenbosch Municipality. The proposed development triggers the need for a permit application in terms of Section 27 (18) of the National Heritage Resources Act (Act 25 of 1999; NHRA). The report has involved in the input of Bernard Oberholzer Landscape Architect and Visual Specialist as well as David Halkett of the Archaeological Contracts Office (ACO).

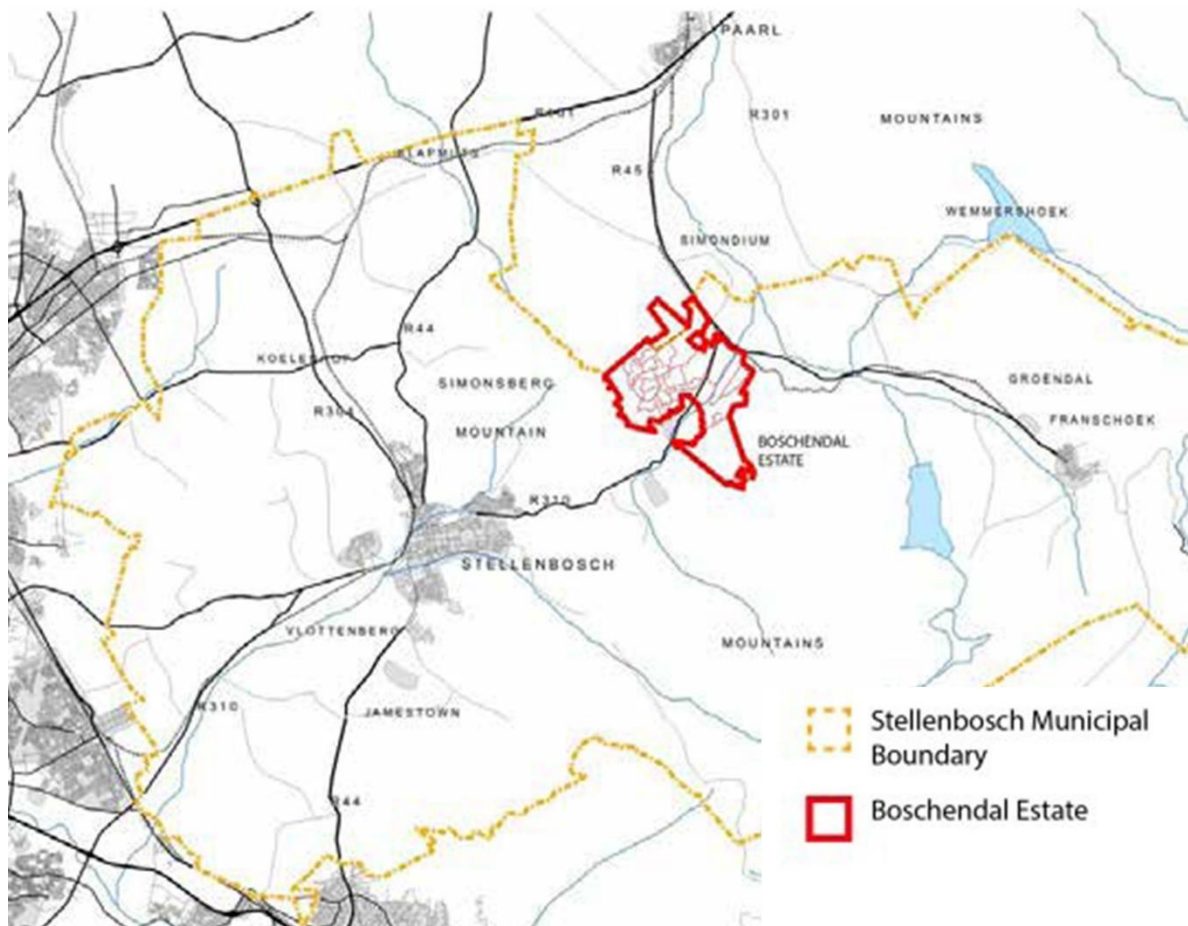


Figure 1: Regional Location Plan

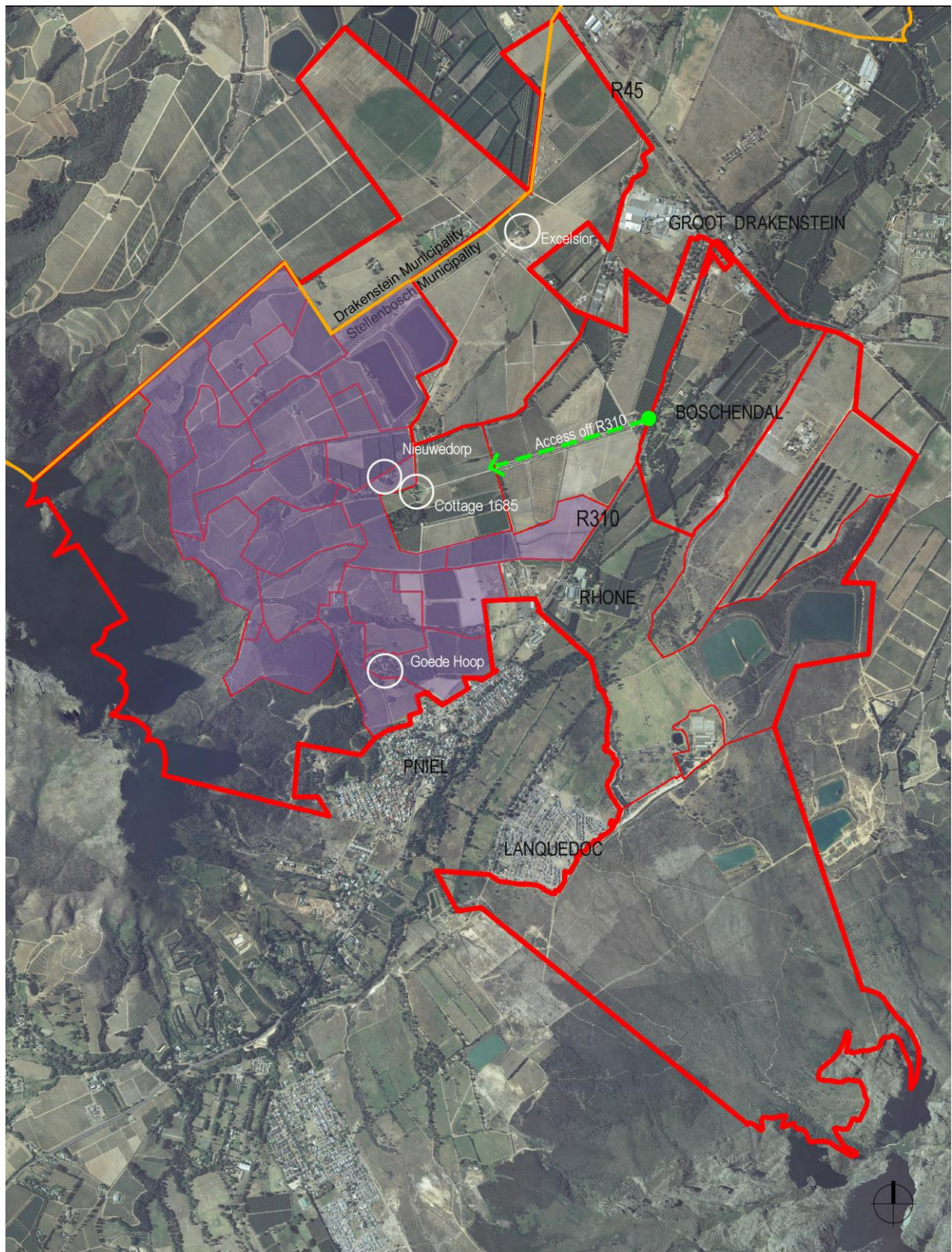


Figure 2: Boschendal Estate within the context of the Dwars River Valley. Founders' Estates is shaded in purple

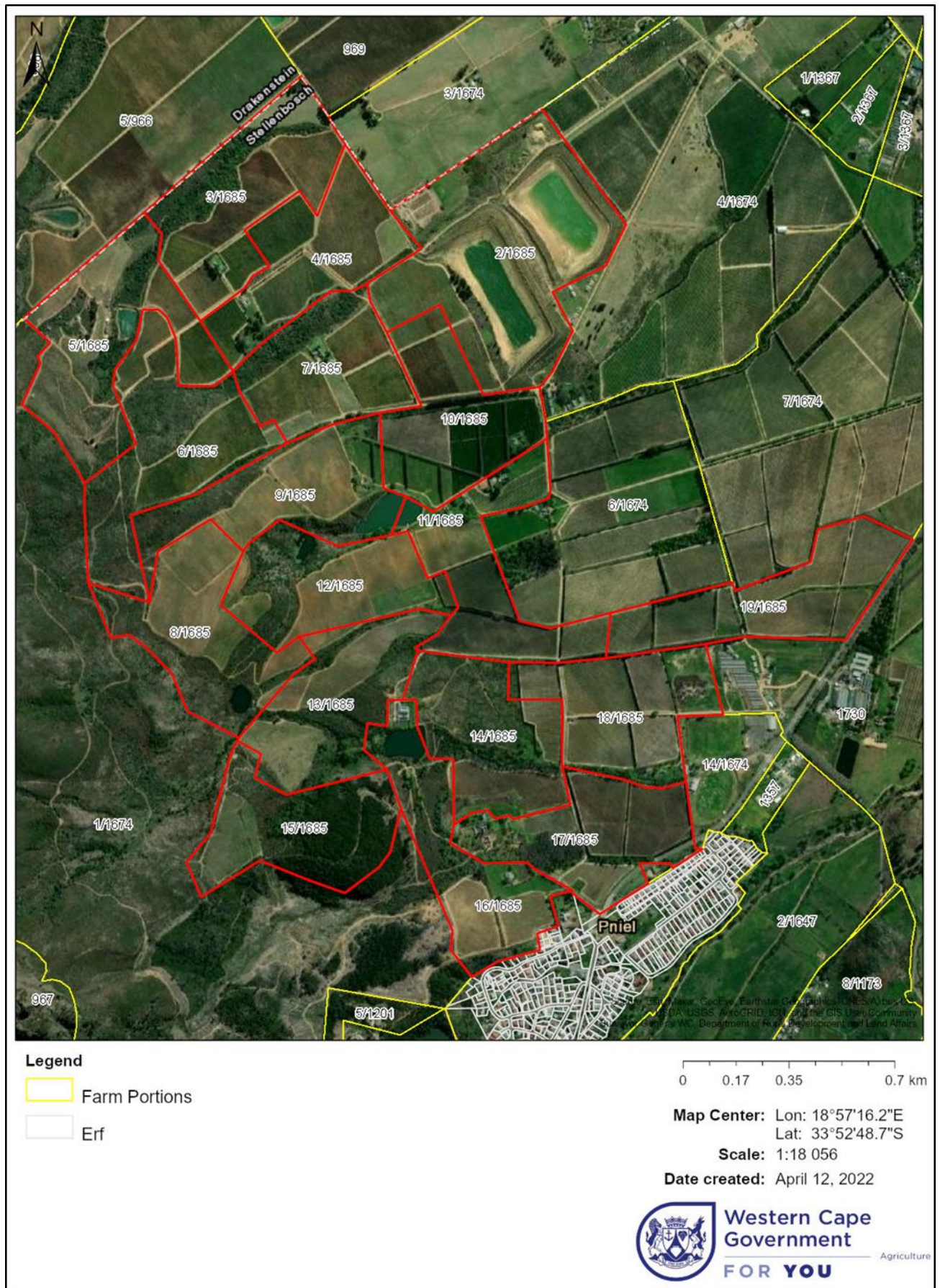


Figure 3: Farm Portions comprising the Founders' Estates

A.1 Study Brief and Scope of Work

The study brief is for a Heritage Statement including an assessment of the proposals on the heritage significance of the Founders' Estates NHS and for this to accompany a Section 27 (18) NHRA permit application to SAHRA.

The scope of work has focused on two primary heritage issues affected by the proposed development:

- Assessing the impact of the roads and storm water infrastructure on the landscape character of the Founders' Estates including reference to the Founder Estates Design Guidelines (2010) and draft Landscape Plan and Guidelines (2020).
- Assessing the impact of the proposals on archaeological resources including recommendations for the avoidance of areas of high archaeological sensitivity and/or archaeological monitoring. A copy of the archaeological assessment report prepared by David Halkett (ACO) is attached as Annexure A.

Sarah Winter and Bernard Oberholzer have worked with the project team since 2020 providing input in ensuring that the infrastructural proposals have a sense of fit with the natural and rural character underpinning the heritage significance of the landscape.

The bulk services trigger the need for a Basic Assessment Report (BAR) in terms of the provisions of the National Environmental Management Act (Act 107 of 1998; NEMA). The Heritage Statement will be included into the draft BAR advertised for public comment. As part of this public consultation process, the following local heritage organisations will be provided with an opportunity to comment:

- Pniel Heritage and Cultural Trust
- Franschoek Heritage and Ratepayers Association
- Stellenbosch Interest Group
- Stellenbosch Heritage Foundation
- Drakenstein Heritage Foundation

A.2 Site Description

Boschendal (Pty) Ltd has acquired the rights for the subdivision and development of eighteen (18) so-called Founders' Estates on a portion of its landholdings. The Founders' Estates comprise 18 different farms measuring between 21 and 44 hectares each with a defined area to accommodate a farmstead within an Excluded Area of 8000m² and the remaining farm being included in an agricultural lease area registered across the 18 subdivisions. A Developable Area has been determined within the 8000m² Excluded Area of each FE, ranging from 1200m² to 2400m². These Development Areas are not included in the scope of this project.

The Founders' Estates subdivision was approved by SAHRA in 2008 subject to a number of conditions including the preparation of Design Guidelines approved by SAHRA in 2010.

The Founders' Estates is a productive agricultural landscape situated on the slopes of the Simonsberg. It comprises three broad landscape zones as indicated in Figure 4 and 5. The three zones are as follows:

- A. The lower, more gentle slopes with their orchards, tree clumps (oaks, gums, poplars, olives), shelter belts and dispersed farmsteads or cottages.
- B. The mid slopes of weathered granite type soils with vineyards, farmsteads (Goede Hoop and Nieuwedorp), farm dams and some tree clumps.

- C. The upper, steeper mountain slopes with a mosaic of vineyards and indigenous scrub, or alien thickets, dissected by drainage ravines with existing and future homesteads generally located on or just above the 320m contour line.

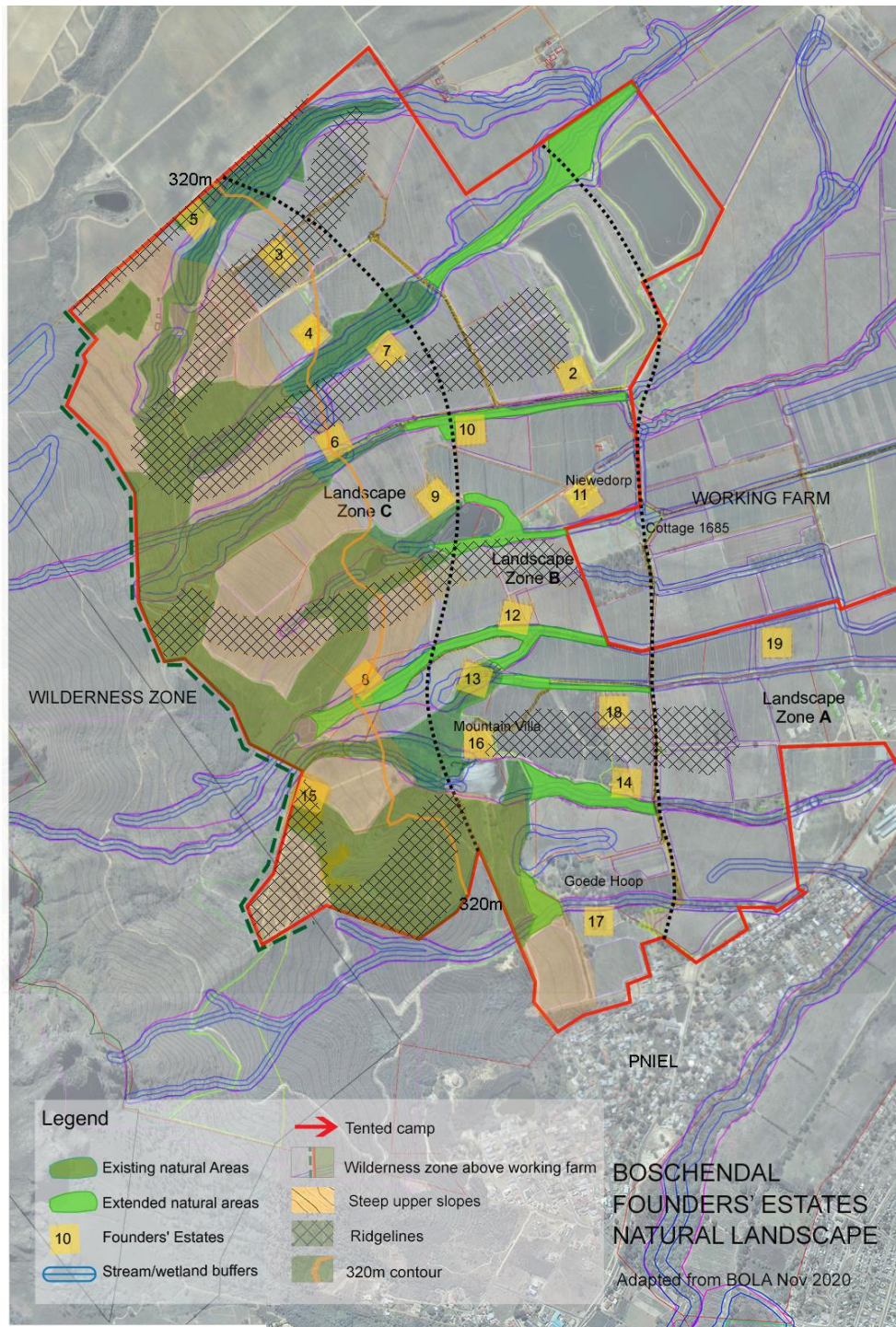


Figure 4: Natural Landscape Constraints and Informants

Access to the Founders' Estates is off the R310 and via a yellowwood avenue situated on axis with Cottage 1685 (formerly known as Rhodes Cottage). The yellowwood avenue intersects with the north-south historical route connecting the historical farmsteads of Goede Hoop, Cottage 1685, Nieuwedorp and Excelsior and which serves as the main structuring route for the vehicular access across the Founders' Estates. The farm roads across the Founders' Estates are mostly dirt roads with the exception of the north-south historical structuring route, which has exposed aggregate

concrete pavers, and the access route to Mountain Villa, which has exposed aggregate in situ cast concrete. It is proposed to use an exposed aggregate finish on all roads using a combination of concrete pavers and other with in situ cast concrete.

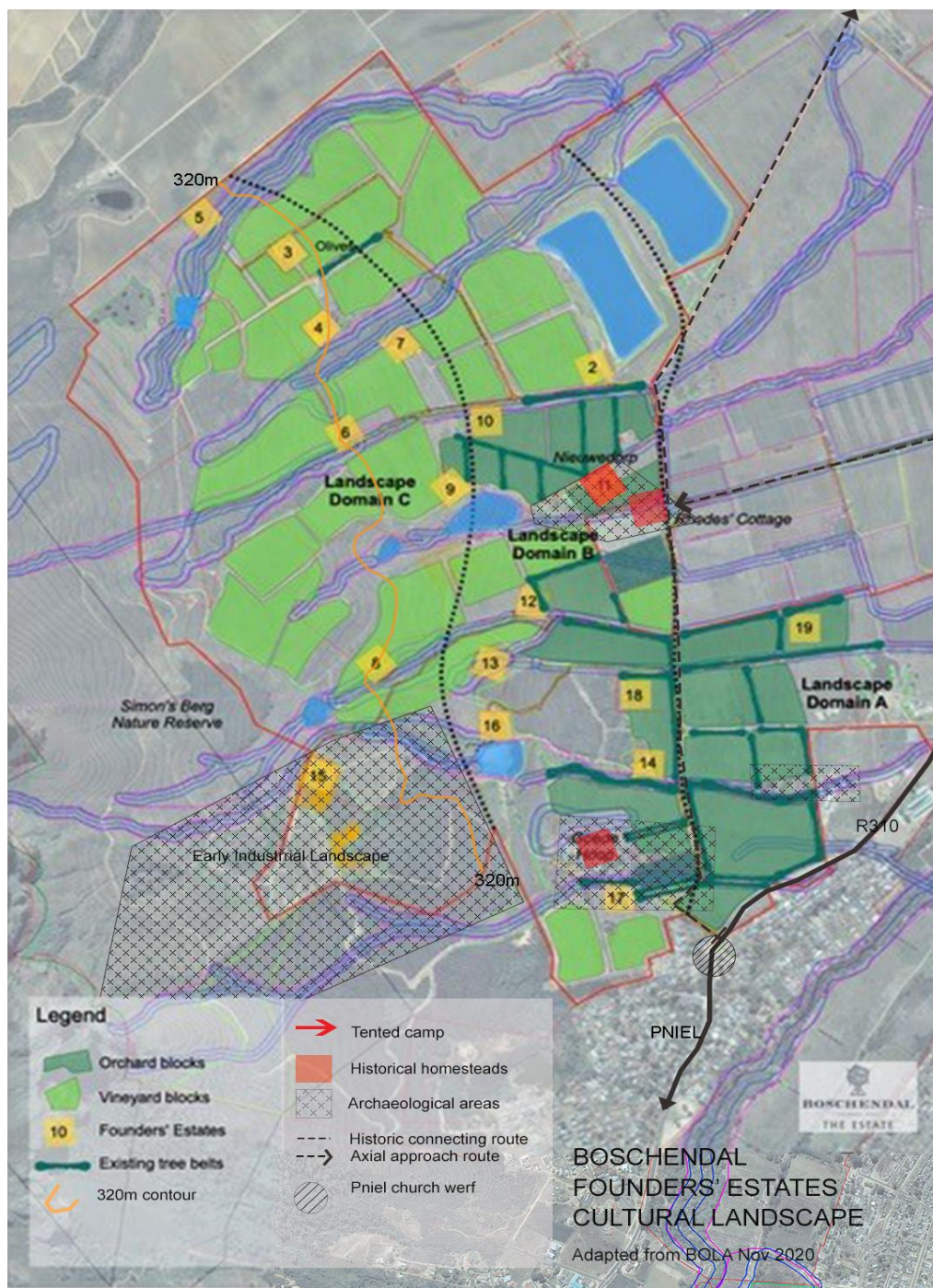


Figure 5: Cultural Landscape Constrains and Informants



Figure 6: Site Photographs (Source: Jody Patterson NMA August 2021)

A.3 Project Description

The following project description has been provided by the Chand Environmental Consultants responsible for the environmental application.

The proposal is to install new service infrastructure and expand on existing infrastructure to ensure that the entire Founders' Estates is serviced. The proponent also intends to formalise existing farm roads and develop new sections of roadway to provide access to the new farmsteads.

The scope of project includes the following:

- The installation of a new bulk foul sewer line, bulk water pipelines and rising main, stormwater infrastructure (swales and culverts) and fibre internet ducts.
- The expansion of existing electricity and irrigation lines.
- The upgrading of existing farm roads.
- The development of new sections of roadway expanding existing farm roads or tracks but retaining the existing road width.
- The construction of a new 100k'l reservoir and new sewer pump station;
- The installation of an 'external' (outside of the Founders' Estates) sewer pipeline and water pipeline in order to connect the Estate to the municipal network.

It should be noted that the Heritage Statement deals with those services within the Founders' Estates National Heritage Site and therefore does not deal with the 'external' services including the proposed sewer pipeline and water pipeline. These aspects are covered in a separate Section 38 (1) Notification of Intent to Develop to Heritage Western Cape prepared by ACO.

Most of the service corridors will be located within existing roadway or informal, transformed road shoulders. However, there will be installation of services beyond existing roadway, and/or close to, within, or across watercourses, which in some areas would also entail the clearance of indigenous vegetation. Where the routings of service lines overlap, services will be installed within the same 1m wide trench.

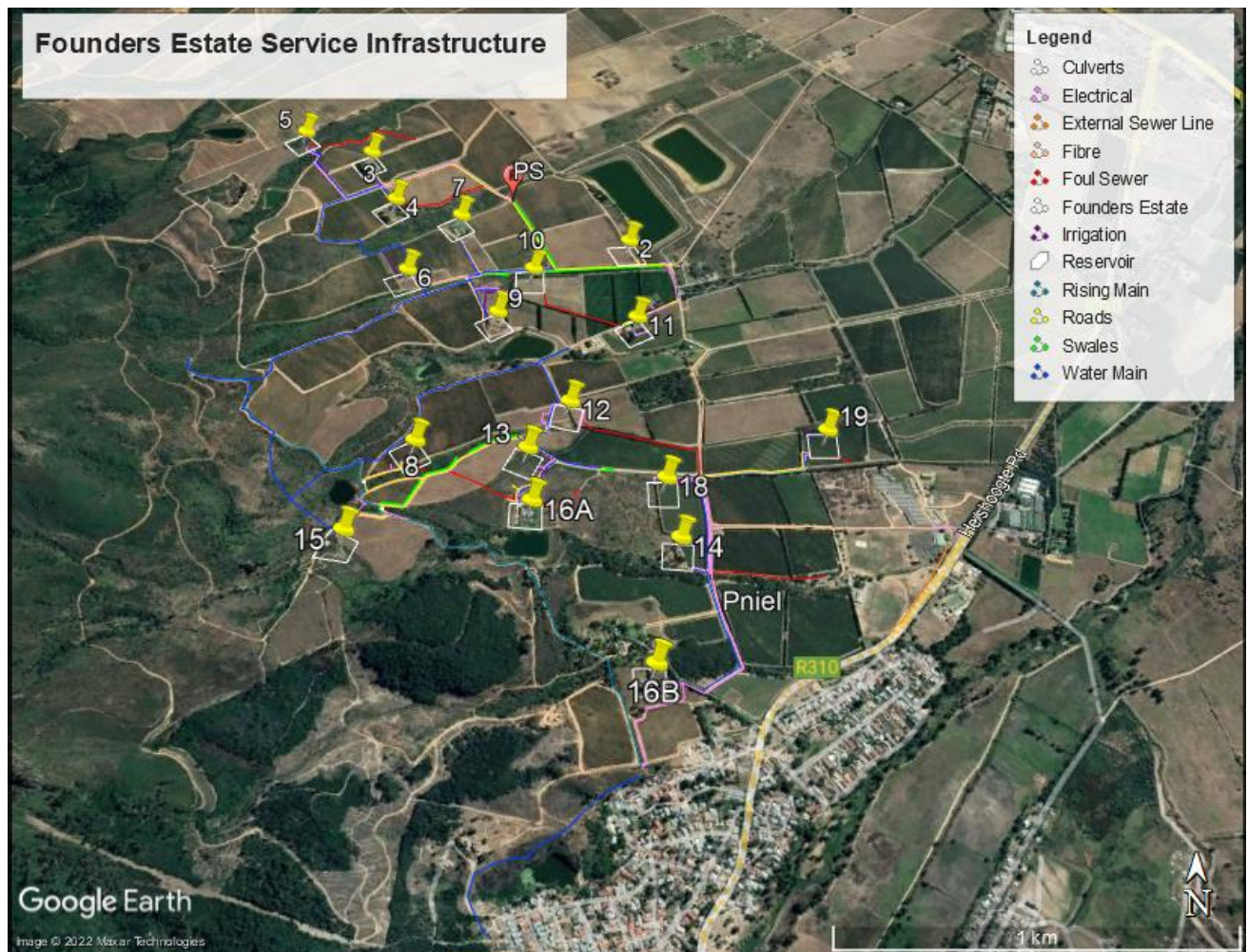


Figure 7: Proposed Service Infrastructure

Table 1: Proposed Service Infrastructure

	New Development component	Total length (m)	Width/diameter	Total footprint
Internal Services	Sewer pipelines – below ground	3 750 m	160 mm diameter	3 750 m ²
	Sewer pipelines - above ground	200 m	250 mm diameter	200 m ²
	Water pipelines	7 350 m	110 mm diameter	7 350 m ²
	Rising Main	2 350 m	75 mm diameter	2 350 m ²
	Electricity lines	5 200 m	N/A	5 200 m ²
	Irrigation lines	1 250 m	32 mm diameter	1 250 m ²
	Fibre ducts	6 100 m	90 mm diameter	6 100 m ²
	New roads	335 m	3.0 m – 5 m	1 435 m ²
	Reservoir	N/A	N/A	20 m x 20 m
	Culverts	N/A	N/A	TBC
External Services	Water Pipeline	750 m	250 mm diameter	750 m ²
	Sewer Pipeline	350 m	160 mm diameter	350 m ²

Water Supply Pipelines and Reservoir

A new water supply reticulation network will secure the supply from the existing municipal water reticulation network in Pniel. A total length of 7350 m pipe would be installed.

A new rising main would connect to a proposed new reservoir and run in a southerly direction along existing roadway to a new connection point on Farm 16/1685.

A new 100kl reservoir is proposed to be constructed directly adjacent to an existing reservoir located to the west of the site on the slopes of Simonsberg. The development footprint of the new reservoir is 400 m² and would also entail the clearance of indigenous vegetation

Sewer Reticulation

A new internal sewer reticulation network will connect to the existing municipal line in Pniel. A total of 3950 m of pipeline is mostly below ground but at stream crossings will be above ground.

A sewer pump station with a development footprint of approx. 100 m² is proposed on Portion 7 of Farm 1685 adjacent to an existing roadway, and beyond any freshwater buffers or sensitive vegetation.

Electricity Supply

Electricity supply is already being provided to the farm via an existing 11kV overhead power line. New connections would off-take from the existing overhead line and would be installed in underground ducting within the combined services trenches. A total length of 5200 m of electrical cables is proposed.

Irrigation Supply

Existing irrigation lines are presently extensive and connect to various farm dams. Connections to these lines are proposed. The total length of irrigation lines proposed is 1250 m.

Fibre Ducts

New fibre sleeves would be installed across the site. The total length across the site included in this scope is 6100 m

Storm Water Infrastructure (Culverts and Swales)

Eight new box culverts are proposed at watercourse crossings as identified in Figure 7. Swales will provide attenuation of the runoff from roadways. Storm water swales are proposed along Road A, Road B, Road C, Road D and Road D_1 as indicated in Figure 7. Note that the swales would be located within the disturbed footprints of existing roadways. The purpose of the swale is to allow any overland runoff from the proposed roadway to be treated, attenuated and discharged into the nearest stream. Where possible, multiple outlets will be provided to prevent concentrated flow. It is proposed that the outflows will be constructed with 2 dry-stone layers (open joints, no mortar) with rip-rap at the base of the outlet which will be lined with geotextile (Class A3). The runoff will spill out via this outlet towards the nearest stream (refer to Figures 8 and 9). The proposed outlets are to be constructed at 20 - 25m intervals.



Figure 8: Proposed Roads and Stormwater

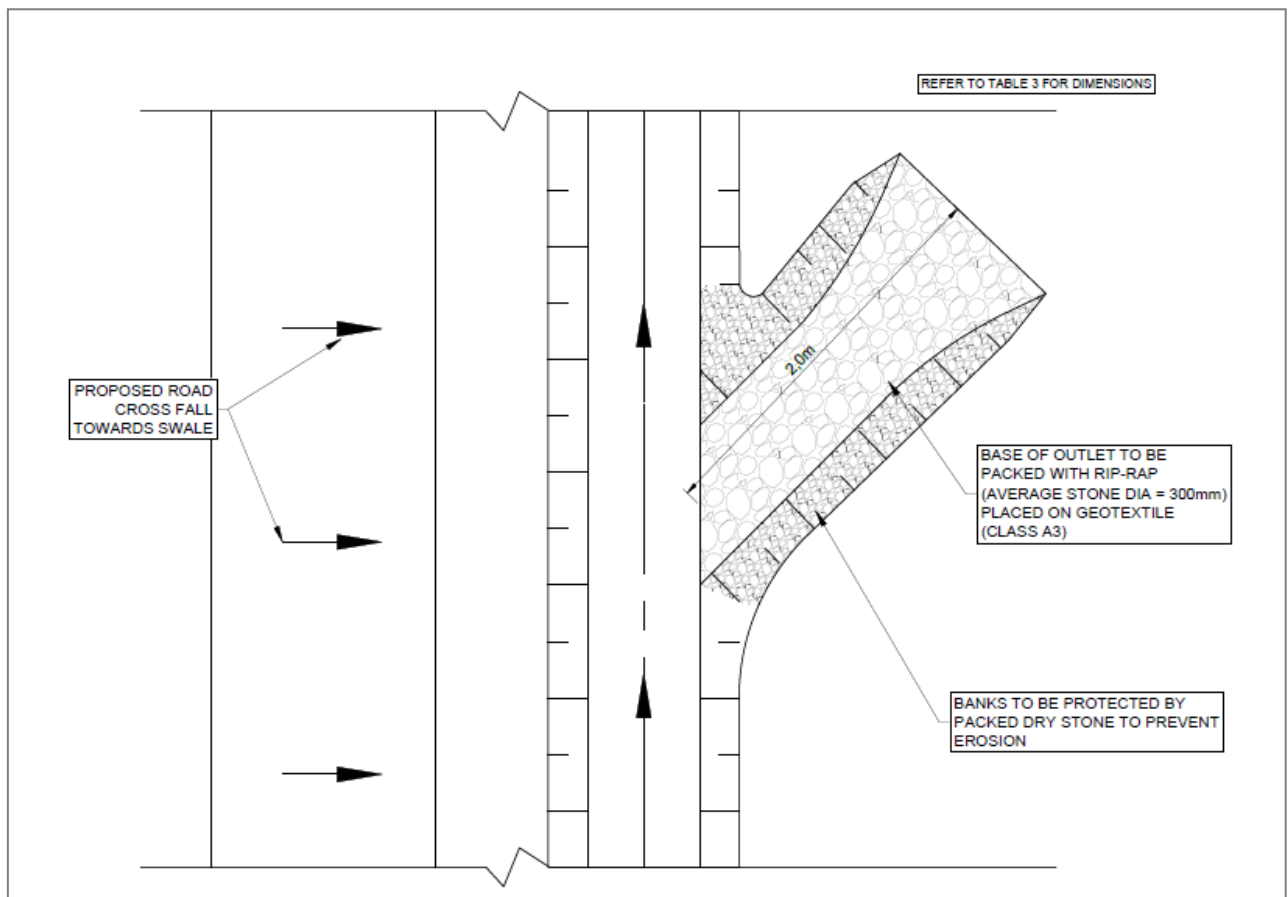


Figure 9: Proposed Swale with outlet towards stream at 20-25m intervals

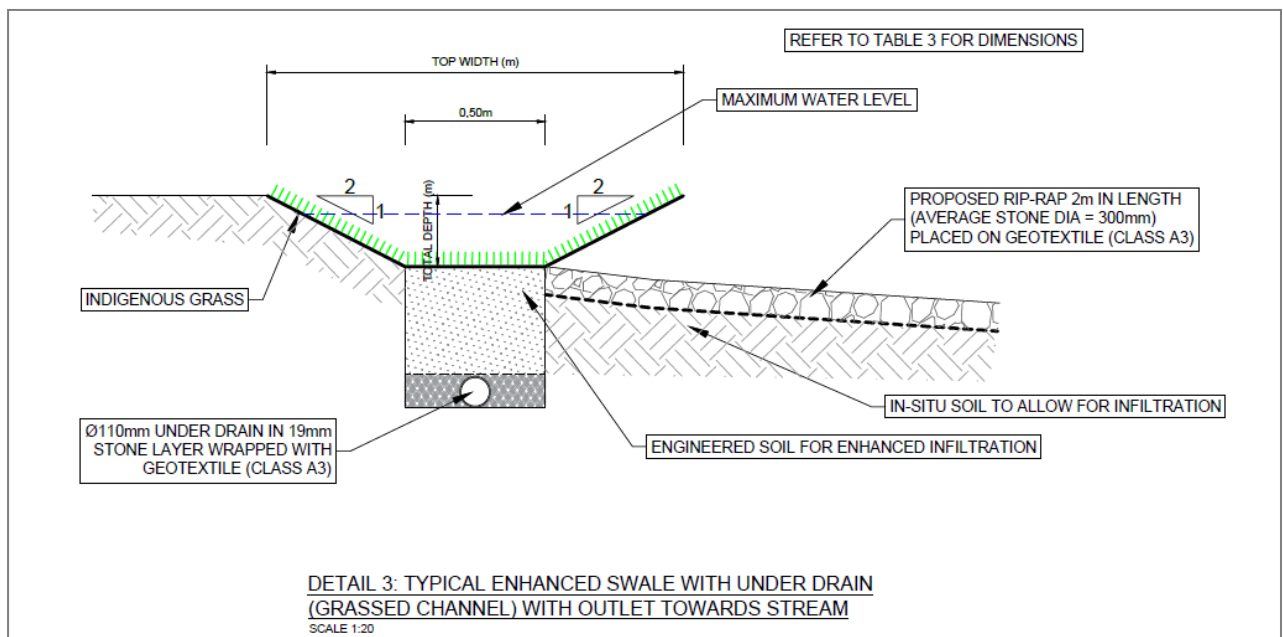


Figure 10: Cross-Section of Swale with outlet towards stream

Proposed New Roads

New road sections would be constructed on Portion 5, Portion 10 and Portion 19 of Farm 1685. A new road would also be constructed across Farm Portion 13 and 12. The sections and specifications of proposed new roadway are summarised in Table 1 below. The new road sections would connect to existing roads.

Table 1: Road Dimensions

Location	Road Length	Road Width	Development Footprint
Farm 1685/5	65 m	3 m	195 m ²
Farm 1685/10	45 m	3 m	135 m ²
Between Farm 1685/13 and Farm 1685/12	160 m	3.5 m	560 m ²
Farm 1685/13	26 m	3 m	78 m ²
Farm 1685/19	17 m	3 m	51 m ²
TOTAL	313 m	N/A	1 019 m ²

All roads would have an exposed aggregate finish, with interlocking precast concrete pavers (refer to Figure 11) or in situ cast concrete (refer to Figure 12).

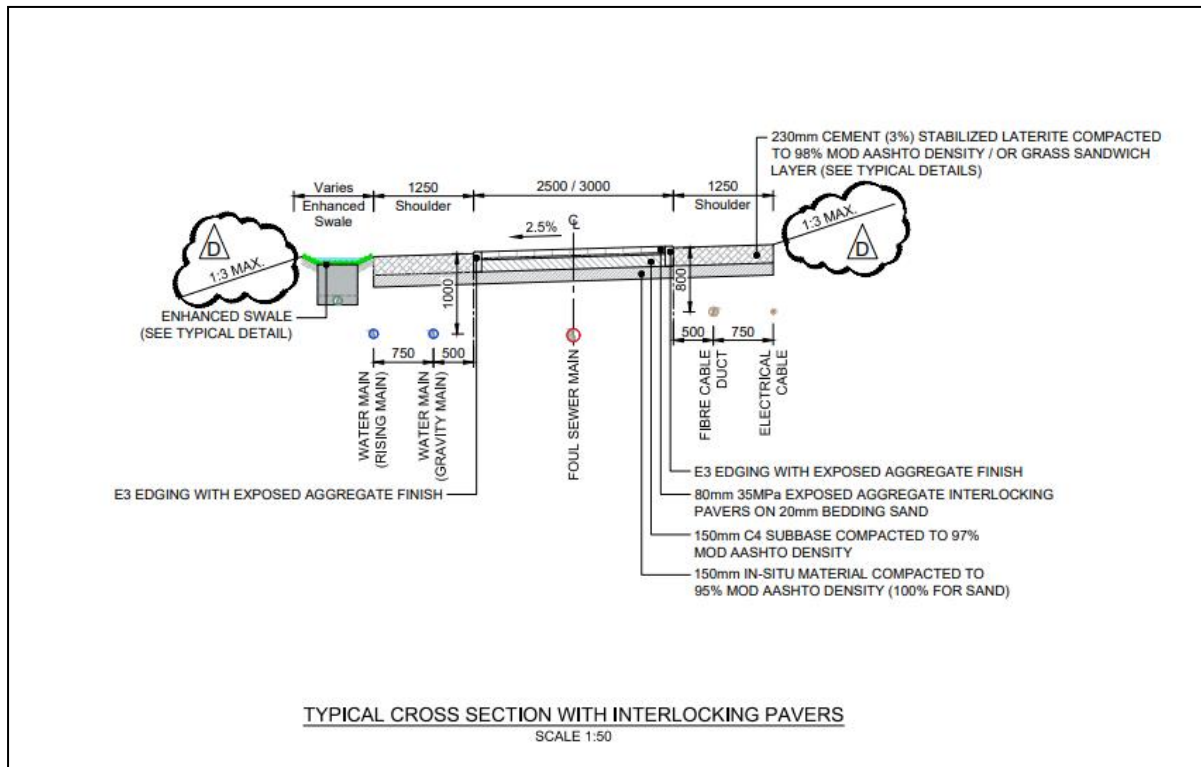


Figure 11: Typical Road Cross-Section with Interlocking Pavers

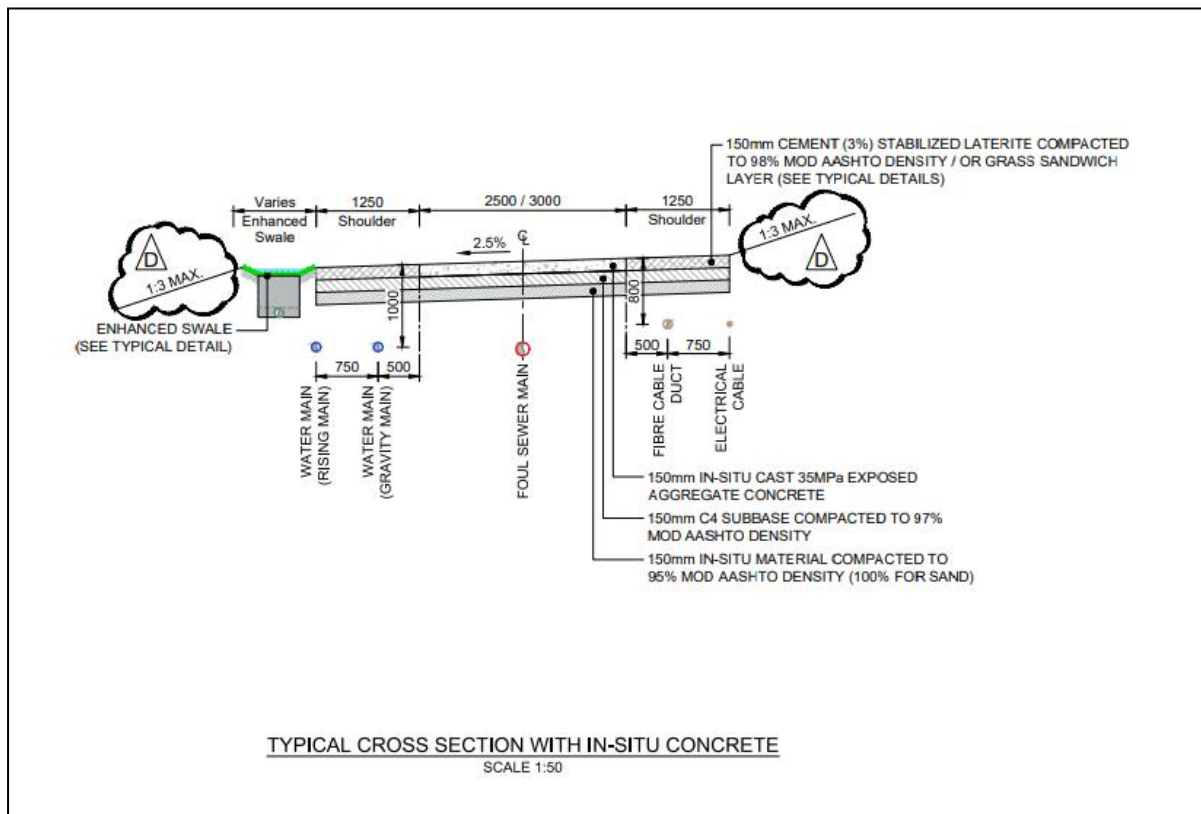


Figure 12: Typical Road Cross-Section with In-Situ Concrete

B. HISTORICAL OVERVIEW

Included with the Heritage Statement is a historical timeline of Founders' Estates prepared in 2008 and attached as Annexure B.

B.1 Pre-colonial Period

Human occupation is recorded in the Franschhoek region from the Early Stone Age onwards, with evidence for this long-standing occupation and utilisation of the landscape predominantly found in stone tools spanning the Earlier, Middle and Later Stone Ages. Maps and records from the early arrivals of Europeans into this area attest to the continued use and occupation of this landscape by indigenous people into the recent past.

Earlier Stone Age (ESA) tools are fairly ubiquitous in the region and are the most commonly identified Stone Age material in archaeological surveys. Occupation of the area continued through the Middle Stone Age (MSA), although such occurrences are not common in the region. The Later Stone Age (LSA) is poorly represented in the region, possibly a reflection of the extensive occupation and utilisation of the region in the colonial past that has resulted in archaeological material and sites being destroyed and/or reworked. One exception to this pattern is an archaeological site at Solms Delta on the banks of the Dwars River.

The excavations in proximity to the Delta homestead revealed a site with two broad periods of occupation, as determined by stone tool types and the presence of pottery in the second occupation (Orton 2005). The site, significantly, spans the arrival of ceramic technology at the Cape, the advent of which heralded the replacement of ancient hunter-gatherer systems with pastoralism, sometime in the past 2000 years (RSA, 2019).

The hunter-gatherers who had occupied the landscape until the arrival of herding peoples were either assimilated into nomadic pastoralist groups or displaced by them. These pastoralists, predominantly, occupied the landscape when the Europeans arrived. Their presence in the region is attested to in travel accounts and maps of the time. Indeed, European expeditions to barter for cattle with these pastoralists was responsible for much of the early incursion of the settlers into the interior (Malan 2016).



Figure 13: Portion of Late 17th century Map of the Settlement at Stellenbosch and Drakenstein (CA M1/273). 17th and early 18th century maps locate Khoekhoen kraals outside of colonial settlements, as depicted in this map

B.2 Earlier Colonial Period

The first Europeans arrived in this region in the mid to late 17th century, with early sorties to barter cattle soon deteriorating to skirmishes over grazing land (Malan, 2016). Trading parties were sent to Drakenstein to acquire cattle from the Goringhaiqua and the Gorachouqua, two of the pastoralist groups that were located in the vicinity (Titlestad 2008).

With the allocation of the first land to farmers in Stellenbosch in 1679, and Paarl, Simondium and Dwars River shortly thereafter, all pretense at alliance with then Khoekhoen was abandoned. By 1688, these early colonial farmers were joined by Huguenot refugees fleeing religious persecution in Europe, and the early grain and fruit farms of the region were increasingly turned into highly successful wine farms (RSA 2019). The primary purpose of these early farms was to supply agricultural produce to the refreshment station of the Dutch East India Company (DEIC:VOC). It was during this period that the farms Boschendal, Rhone, Goede Hoop and Nieuwedorp were granted; Boschendal in 1685, Nieuwedorp in 1689, Rhone in 1691 and Goede Hoop in 1708. Nieuwedorp was granted in five parts to relatives of Ansela of Bengal, a freed slave of Jan van Riebeeck's (Titlestad 2008).

From c1685 more or less uniform grants of land in narrow 60 morgen strips, abutting a local perpetual water source began to line the Valley, with common arable and grazing land between them. The cadastral pattern was set and essentially endured for two centuries. Outspans were centrally and marginally situated to accommodate travelling, transport and communal grazing (Titlestad 2008).

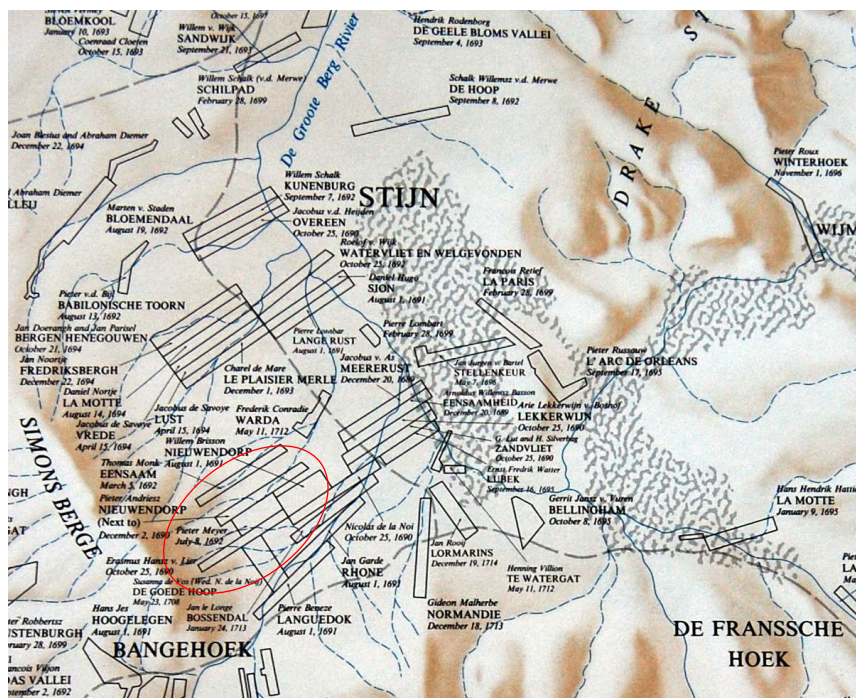


Figure 14: Extract from Compilation of 1657-1750 Freehold Grants of the SW Cape Colony prepared by Leonard Guelke. The circled area is the approximate area of Founders' Estates.

A dominant mixed pattern of agriculture was established with emphasis becoming wine based in the late 18th and 19th centuries, fruit based in the early 20th, and returning to wine in the late 20th century.

Despite resistance from the Khoekoen, by the early 18th century colonial settlement had destroyed their transhumance pattern of movement and their decimation was hastened by the indentured labour system and disease.

Nieuwedorp's land was granted in five parts from 1689, chronologically to Arnoldus Basson, Jacobus van As, Erasmus van Lier, Willem Basson and Pierre Meyer. Willem was the son of Ansela of Bengal. Once enslaved to van Riebeeck, she was later manumitted and transitioned to burgher society. She was the mother of Anna de Koning (born in slavery) and Jacobus van As. In 1701 the farm was a consolidation of five properties owned by Jacobus van As, who, like his mother, had acquired significant property and wealth. After his death in 1713 his estate was sold – most of it to Jacob de Villiers, son of Jacques De Villiers, owner of Boschendal in 1724. The De Villiers family now owned half of the Valley and retained control through the 18th and 19th centuries (Titlestad 2008).

The late 18th and early 19th century colonial landscape was associated with an emerging rural gentry, the building and expansion of farmsteads and the central role of slavery and indigenous farm labour in agricultural production and building construction. A rural Cape vernacular emerged with the classic Cape Dutch makeovers in the 1780s to 1820s extending into the British period (e.g. Boschendal, Rhone, Goede Hoop and Nieuwedorp) (Baumann et al. 2017).

The first half of the 19th century was characterised by a rising rural gentry, syncretic Cape Dutch and British trade and farming practices, slave emancipation, segregation and labour management. The introduction of the quitrent land grant system in 1811 resulted in substantially enlarged landholdings and effectively removing common arable and grazing land between them. The mission settlement of Pniel was established in 1843 mainly to accommodate freed slaves in the area (Baumann et al. 2017).

The second half of the 19th century was characterised by mineral exploitation in the interior and the consolidation of British colonial interests at the Cape including the development of the harbour and railway line. It was also associated with the decline in the wine industry and agricultural economy. In 1886 the outbreak of phylloxera virtually destroyed all the Cape vineyards, leaving many farmers bankrupt (Baumann et al. 2017).

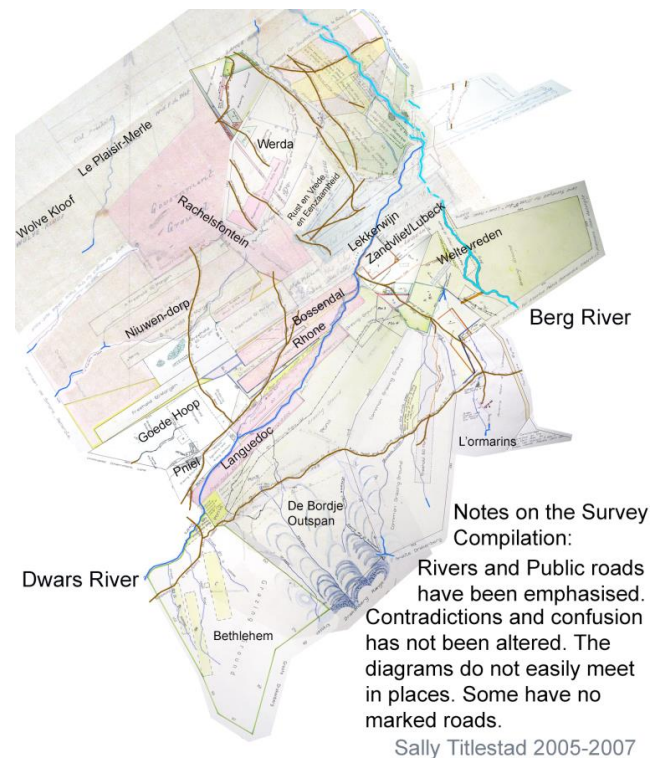
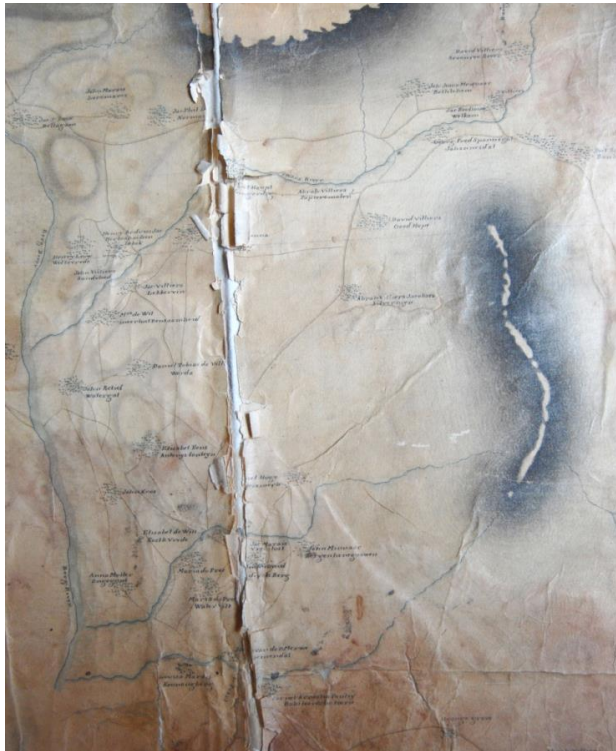


Figure 15 (above left): Portion of a Military Survey of the Valley (CA M3/405, Thibault 1808). This shows the degree of settlement and the connections between farms

Figure 16 (above right): Survey Compilation at c1830. This shows the incorporation of common land into private ownership by quitrent grants and the expansion of landholdings across the Valley

B.2.1 Silvermine

The silver mine complex is an early industrial landscape which according to Vos (2004) must surely be one of the earliest colonial period mines in South Africa. The background history of the mine was researched in some detail by Lucas (2004, n.d.). The “discovery” of precious metals in the Simonsberg Mountains by Frans Diederick Muller led to him motivating the development of a mining association involving many prominent members of the local VOC who funded the operation which commenced in about 1743 employing up to 20 VOC employees and 19 slaves.

Despite sinking two complexes of mine shafts on the upper and lower slopes of the Simonsberg (Figure 5) and substantial investment of funds by senior politicians, no metals of any value were ever found. Muller was exposed as a fraud, and was deported to Batavia without his possessions in 1750.

The mining operation, albeit relatively short lived, left a substantial footprint on the landscape including mine shafts, a number of buildings, roads and an ore processing mill and smelting facility. The archaeological footprints of a number of these have survived, while others not found previously, may still lie hidden in the dense thickets of the Simonsberg. The ruin of Muller’s house and other mining associated structures have been partially excavated by Lucas. The ruins and shafts, though very well known to the Pniel community who visit regularly and identify closely with the sites as local heritage, have not been formally documented.

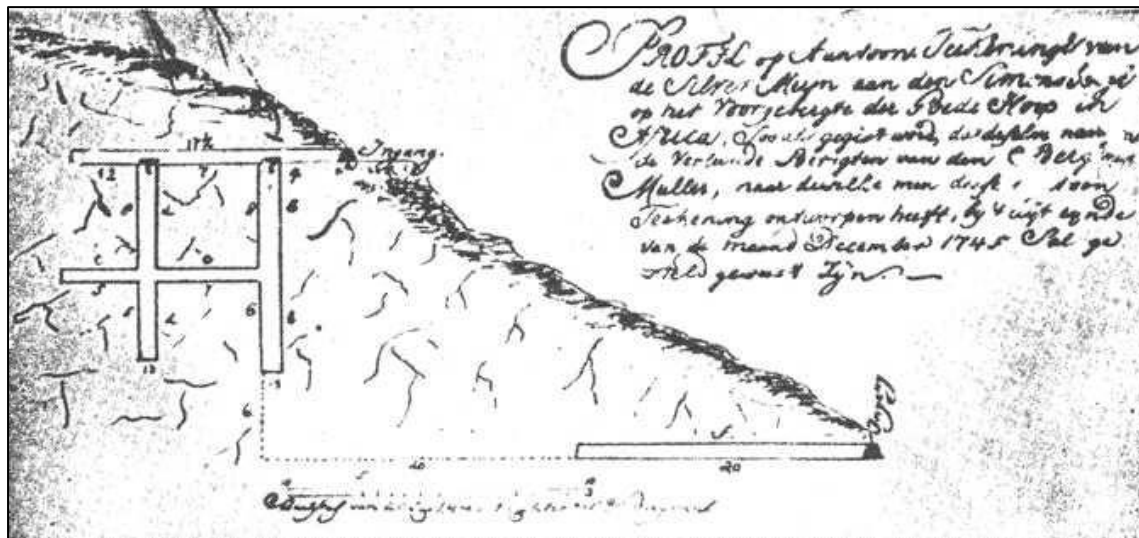


Figure 17: Drawing of the Upper Silver Mine Works from 1743 (Source: South African Library MSB 974/2 in Lucas 2004:45)

1) Ore processing mill and smelt house

The substantial ruin of the 'mill' is located alongside a stream on Founders' Estate and Lucas has suggested that this was a water operated crushing plant where "ore" from the mine was brought for processing (Figure 6). Vos however is not convinced by this hypothesis and argues that the mining operation and the mill may not be contemporary.

Built from stone and calcrete mortar, the building once contained three levels, the lowest of which contains several large stone built 'mountings' of an industrial nature. The numerous openings are arched and finished with well fired brick. No woodwork or joinery has survived though beam rests and sockets are visible in the masonry and attest to the use of wood. Dense plant growth has severely impacted the structure through root movement and at least one fallen tree has collapsed a large section of walling in the past. Large trees continue to grow in close proximity and threaten sections of the walls. Immediately to the south is a second structure, which has been identified as the smelt house.

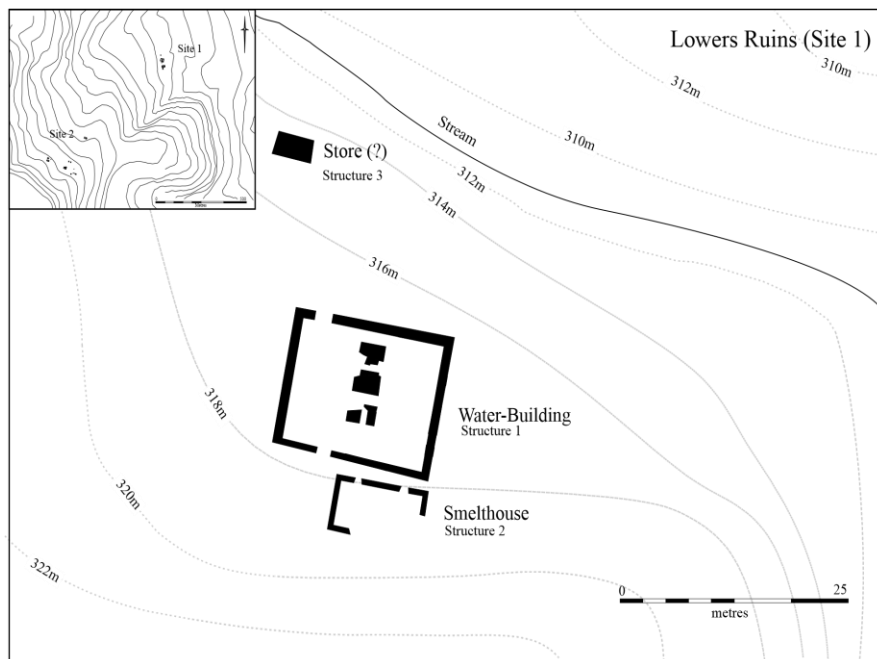


Figure 18: Map of the Lower Industrial Complex and Mill. Mapped by Lucas (undated) and reproduced in Hart (2020)

Although not shown on the drawing, there is another less substantial structure ~20m upslope to the south, on the other side of a farm service road. There appear to be a few rooms visible, and it may been some form of dwelling. Another structure located downslope is believed to have been a store.

In reality the significance of this and associated structures is not very well understood. It is clear that its construction method contrasts to the comparatively rudimentary building methods used for Muller's own house, but a lot more work is needed to explain the age, function and purpose of this enigmatic structure and those associated.

If indeed they are associated with the mine, then we must assign to the group, a high degree of significance as the only surviving mine of its kind in South Africa. The site begs substantial archaeological investigation and conservation.

2) Aspects of the mining site on land outside Founders' Estate

The mining settlement is located ~600 m upslope to the south west and the layout is indicated in Figure 16.

Muller's house and associated ruins

Muller's house has been excavated by Lucas who succeeded in collecting a significant amount of artefactual material and exposing the ruins themselves. The ruins consists of stone and mud walls and brick paving. Eradication of alien vegetation has opened the site and meant that root movement in the foundations of the structure has been reduced. Other structures include a kraal and an oven, stores and labourers cottages. Lucas also documented wagon tracks associated with the mining operations

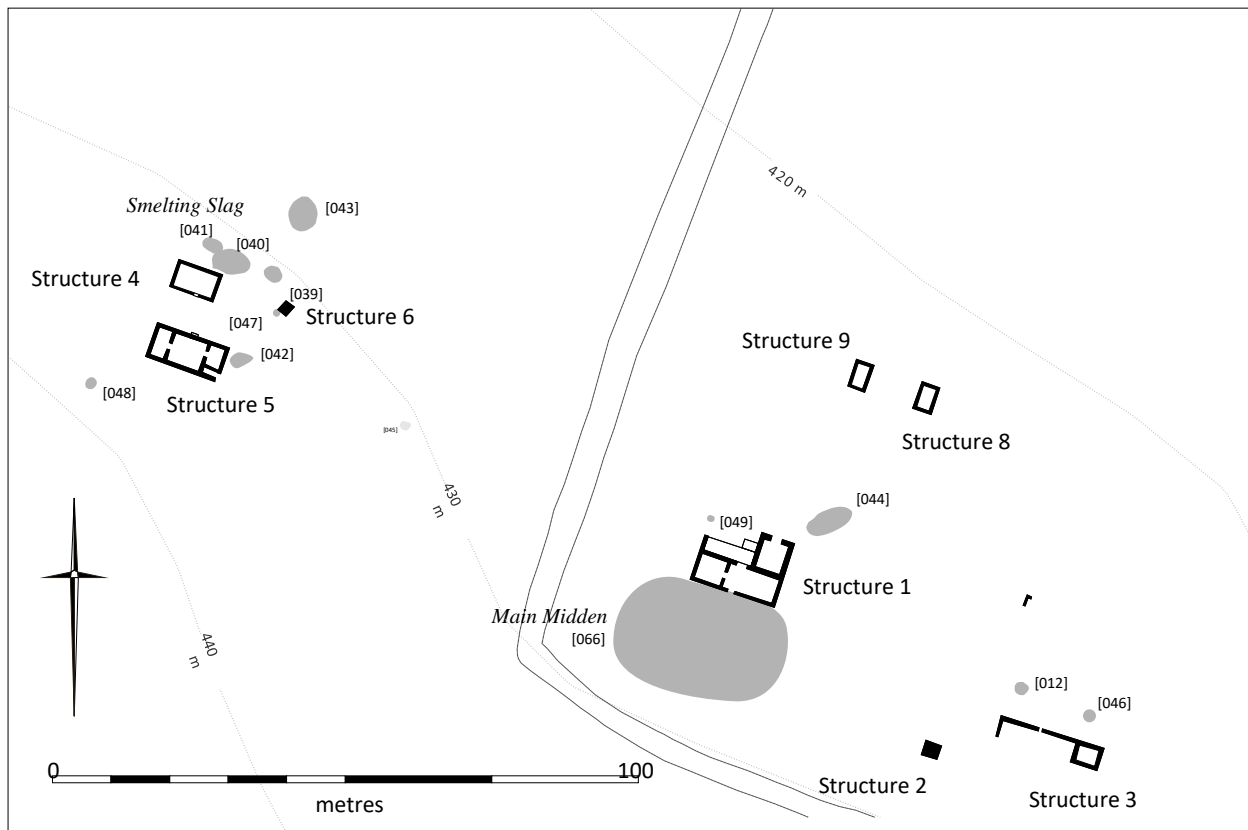


Figure 19: Detailed Map of the Mining Settlement Complex (Site 2). Located midway between the Mine Shafts and the Ore-Processing Precinct. This shows the foundations of structures as well as the slag and domestic middens associated with the buildings. Structure 1 is Muller's House. (After Lucas undated)

Mine shafts

Although Lucas included a section drawing of the mine layout (Lucas 2004:45; see Figure 14) the mine shafts themselves have never been mapped in detail in recent times. The shafts have been inspected by Vos and Lucas and more recently by Gribble who compiled a basic description of the visible layout and condition (in Hart 2020).

B.3 Later Colonial RFF Period

The first half of the 20th century was characterised by the Union of South Africa, Cape Revival movement and a rising corporatism. It was associated with the development of the fruit industry in the Valley, new workers' housing, farm infrastructure, railway infrastructure and improvements to the road network. It was during the late 19th and early 20th century that the settlements of Johannesburg and Kylemore were established and the planned labourer's village of Lanquedoc was constructed.

The 20th century began with the South African War (previously referred to as the Anglo-Boer War) and was characterised by increasing racial prejudice, concretised in the election of the National Party in 1948 and the introduction of apartheid (Titlestad 2008).

The landholdings of Boschendal, Rhone, Goede Hoop and Nieuwedorp were amongst 26 farms in the Valley to be incorporated into Rhodes Fruit Farms (RFF) at the turn of the 20th century. This corporate agricultural entity established over the greater part of the Valley lasted more than a century becoming Amfarms in 1969 until 2003 when it became Boschendal Estate.

After retiring as Prime Minister of the Cape in 1896 and with the collapse of the wine industry, Cecil John Rhodes invested in an innovative agricultural scheme for the development of the fruit industry. The scheme was originated by H.E.V. Pickstone who persuaded Rhodes to buy up derelict wine farms in Groot Drakenstein, Wellington and Stellenbosch. Rhodes instructed his agents to give preference to farms with Cape Dutch homesteads and set aside substantial sums for their maintenance (Titlestad 2008).

The agricultural scheme was carried out under the management and technical advice of Pickstone, whose technological advances and international expertise influenced fruit production in South Africa. Assisted by 12 young managers, many of whom also trained in California, the farms were transformed using modern methods of pruning, grafting and irrigation. Deciduous fruit trees were extensively planted with fruit becoming the primary produce of the Valley (Titlestad 2008).

Rhodes died in 1902 before the vision of a Cape fruit industry was fully realised. The company Rhodes Fruit Farms Ltd was established in the same year. Pickstone managed the consolidated agricultural group until 1905. The scheme, initially established as an experimental and training centre for the development of the Cape fruit industry, was soon to become the centre of a thriving export fruit industry (Titlestad 2008).

The introduction of corporate farming methods and new employment opportunities resulting from the growth and diversification of the fruit industries necessitated the construction of new agricultural buildings as well as farm managers' and workers' houses, including the planned labourer's village of Lanquedoc. The railway line to Groot Drakenstein was opened in 1903 and a railway station built. The trains were equipped with refrigeration cars, vital for the trade and export of fruit (Boschendal Museum 2008).

Facilitated by the construction of the railway line, the R45 and R310 developed into an agro-industrial precinct. A cannery was built in 1903 and a jam factory in 1906 to provide an outlet for excess fruit. By 1907 the company's business was organised in three distinct departments: farm, packhouse and factory. The new offices of RFF were built in 1909. A new central packshed was erected in 1931 (Boschendal Museum 2008; Baumann et al. 2017).

Herbert Baker's extensive architectural intervention in the Valley began at Rhodes' request. Baker designed a cottage for Rhodes that was constructed on or adjacent to the site of the ruined Nieuwedorp homestead. It combined Cape cottage features with the Arts and Craft movement. Rhodes died before it was complete. Rhodes Cottage, now known as Cottage 1685, became a guesthouse for use of the company's executives and international political and business personalities.



Figure 20: Cottage 1685 in the 1930s (Source: UCT MSSA BC860, C1, Titlestad, 2008)

De Beers took over RFF in 1925 and in 1927 appointed an international expert in the fruit industry, Alfred Appleyard, as Managing Director with the aim of efficient consolidation and restructuring of the business operation. In 1937 De Beers sold RFF to Abe Bailey and, after his death in 1940, a syndicate of business interests acquired RFF and they owned and developed it for the next 28 years.



Figure 21: Extract of 1923 Topographical Plan of a Portion of Rhodes Fruit Farms Ltd (Source: Surveyor General, Boschendal Collection).



Figure 22: Goede Hoop c 1920s (CA E754)



Figure 23: Old Watersluit between Good Hope and Nieuwedorp 1932 (MSSA BC 860, C1,19:9)



Figure 24: Dam on Founders' Estates 1932 (UCT MSSA BC860, C1,21:20)

B.4 Apartheid Period

The landscape of the second half of the 20th century was characterised by apartheid, massive expansions and improvements in infrastructure and new attitudes to farm labour. It was during this period that Pniel, Lanquedoc, Kylemore and Johannesdal were declared “coloured areas”, various clusters of farm workers’ cottages were built and the Thembaletu Hostel was built to the east of the Dwars River to accommodate black migrant workers.

Jack Manning was appointed Managing Director of RFF in 1949. Under his management during the 1950s and 1960s massive expansions and improvements were undertaken – new dams and irrigation doubled the productive agricultural area, the factory precinct was enlarged including the construction of a saw-mill and a new cannery to the west of the R310, new workers’ housing was built, transport was mechanised and refrigeration technology was improved. The export markets boomed and by 1968 RFF employed hundreds of people and produced and packaged large-scale export crops (Titlestad 2008).

In 1969 Anglo American and de Beers purchased RFF to become Amfarms for the next 31 years. In 1976 the Boschendal homestead, outbuildings and gardens were restored/renovated to their 19th century appearance by Gabriel and Gwen Fagan. The Boschendal werf was declared a national monument in 1979 (now a Provincial Heritage Site). In the late 1970s it was established as a museum/tourism/restaurant facility, one of the first establishments of its kind within the Cape Winelands (Titlestad 2008).

Anglo turned its attention to wine making in the 1980s and the wine was marketed under the Boschendal label. Boschendal played a key role in the development of the local and export wine industry, and wine tourism. A state of the art wine cellar was built at Rhone in the 1990s (Titlestad 2008).

B.5 Democratic Period

The 21st century landscape is characterised by a shift to South African democracy, a change in corporate ownership and increased tourism use.

In 1998 Amfarms decided to dispose of its landholdings in the Dwars River Valley. In 2003 a consortium of investors known as Boschendal (Pty) Ltd purchased 2242 hectares of these landholdings. Since then the landscape has undergone significant changes. Between 2003 and 2005 about 3000 employees and their families living on Boschendal were relocated to a large extension of Lanquedoc called “New Lanquedoc”. Numerous farm worker’s cottages across the estate became vacant including the four cottages at Nieuwedorp. These cottages have very recently been renovated for staff accommodation is known as Kropman Village.

In 2008 the Founders’ Estates subdivision was approved by SAHRA and in 2009 the entire Founders’ Estates was declared a national heritage site. In 2012 Mountain Villa on FE 16 was approved by SAHRA, the only new farmstead to have been built on Founders’ Estates since 2008.

In 2013 Tony Tabatznik became a shareholder of Boschendal (Pty) Ltd and in 2018 he acquired the company as the sole shareholder. Since 2013 the landscape has undergone significant further changes focused on the expansion and diversification of the hospitality, tourism and agricultural sectors. The agricultural emphasis is on the diversification of the farm through regenerative farming practice and moving away from monoculture. The Boschendal werf has become the focal point of considerable investment in a range of tourism infrastructure. Overnight accommodation and visitor activities have been extended across the estate including the newly established tented camp on FE 5 and hiking and bike trails across the Founders’ Estates.

C. HERITAGE SIGNIFICANCE

The heritage significance of the Founders' Estates has been unpacked in previous heritage studies dating to 2006 including cultural landscape, built environment, archaeological and visual studies. Emanating from these studies is an overarching statement of heritage significance. Given that potential impacts on landscape character and archaeological resources are the primary heritage issues relevant to this project, these aspects are addressed in more detail in Section C.2 and C.3

C.1 Statement of Heritage Significance

The Founder's Estates is a national heritage site described in the gazetted declaration notice as follows:

The Boschendal Founders Estate, Dwarsrivier Valley, Cape Winelands Cultural Landscape is a product of the interaction between the natural landscape of great scenic beauty, the tireless labour of a slave population, biodiversity and human activities and responses over a long period which have created features and settlement patterns that are equally celebrated for their beauty, richness and diversity. The Dwarsrivier Valley, more than any of the other CWCL landscapes is a showcase of the genius of the slave infused society of the Cape, with the majority of the slave descendants still working the soil. This cultural landscape encompasses a great variety of significant heritage resources, developed out of the interaction between peoples of many cultures with each other and the place. (Government Gazette Notice 31884, 13-02-2009)

A further unpacking of heritage significance is set out below.

Historical Value:

- It reflects a pattern of early colonial settlement and expansion during the late 17th and 18th centuries with an emphasis on agricultural production concentrated in the well-watered fertile valleys.
- The role of the landscape as both a pioneering and continuous agricultural base since late 17th century, when rectangular plots were granted at the foot slopes of Simonsberg in relation to the Berg and Dwars Rivers.
- Although almost entirely cadastrally redefined, the enduring nature of this role is evident in the continuity of the Goede Hoop and Nieuwedorp farms from the 17th century.
- The temporal and thematic layering of the landscape in terms of:
 - Land ownership patterns (colonial dispossession, freehold, quitrent, feudal, family networks, institutional/corporate).
 - Patterns of labour (slavery, indentured labour, wage labour, migrant labour) and related shifts from a feudal to a corporate to a democratic order.
 - Patterns of built form (18th century origins of Goede Hoop farm werf, possible remains of 18th century Nieuwedorp farm werf and its later early 20th century expression, cottage clusters dating from the early 20th century onwards)
 - The planted landscape (windbreaks, tree lined routes, forests, field patterns).

- Historical-associational linkages across the landscape in terms of ownership patterns with most of the farms being owned by extended family networks for more than a century and then farmed as a single entity since 1897 under Rhodes Fruit Farms, later Amfarms until 2003.
- The role of Goede Hoop farm werf as an agricultural entity dating to late 17th century and evidence of layering relating to shifting social-economic trends over time (livestock farming, wine production, fruit farming, labour, family networks).
- The contribution of Goede Hoop and Nieuwedorp to a collection of historical farmsteads (Boschendal, Rhone, Rhodes Cottage, Champagne).
- The role of the landscape in the history of the fruit industry with the establishment of Rhodes Fruit Farms and its association with important figures in the development of the export fruit industry at the turn of the 20th century.
- The presence of a major corporate institution (Rhodes Fruit Farms- Amfarms) spanning more than a century and its associated impacts on the landscape in terms of farming, infrastructure, built form, patterns of labour and institutional memory.
- The incorporation of an early industrial mining landscape, possibly one of the earliest colonial-period in mines in South Africa; representation of a mid-18th century VOC mining operation linked to global trade and other VOC prospecting efforts at the Cape; layering of use over time from intensive mining activities to a place of refuge/retreat and 'passive' forms of natural resource utilisation.

Social Value:

- Enduring value of the upper slopes of the Simonsberg to local community as a landscape of memory, retreat/exploration and natural resource utilisation.

Aesthetic Value:

- The cohesive and iconic visual quality of a broad agricultural sweep framed by the Simonsberg and forming a spectacular backdrop to a collection of historical set pieces located on the lower slopes (Goede Hoop, Rhodes Cottage and Nieuwedorp).
- Views towards the landscape from the main movement network through the Dwars River Valley (R45 and R310).
- A coherent landscape structure in terms of an orthogonal field pattern reinforced by windbreaks and tree lined routes, a system of water courses feeding the Dwars and Berg Rivers and the movement network.
- The strong east-west axis terminating at Rhodes Cottage (Cottage 1685) at the base of Founder's Estates reinforced by the yellowwood avenue and linking the historical set piece with the Boschendal-Rhone Historic Core Precinct.
- The primary north-south movement route linking the historical set pieces of Goede Hoop, Rhodes Cottage, Nieuwedorp and eventually Excelsior near the R45.
- Positive response in the form of a range of historical built form typologies (farmsteads, managers' houses and farm cottages) that reveal a sense of fit in the landscape in terms of a response to topographical conditions (following the contours, avoiding steep or visually exposed slopes, below the 320m contour), generally with limited footprint embedded in an agricultural landscape and located within a copse of trees.

Architectural Value:

- The representative nature of the built form in terms of typology, hierarchy and historical layering.
- The intact and representative nature of Goede Hoop reflecting various stages in evolution of Cape farm werf tradition with strong evidence of historical layering and possessing a distinctive linear layout.
- The significance of Rhodes Cottage at the base of Founders' Estates as a formal set piece in the landscape, its visual spatial linkages with Boschendal Rhone, its associations with the work of Herbert Baker and Rhodes Fruit Farms; an intact, representative and fine example of the cottage typology with Arts and Crafts stylistic influences. (It should be noted that while Rhodes Cottage is not within the Founders Estates boundaries, they are visually spatially and historically connected).
- The significance of Nieuwedorp with visual-spatial and historical linkages with Rhodes Cottage and having architectural significance in its own right.

Archaeological Value:

- The primary area of archaeological significance in the Founders' Estates is the Silvermine Landscape, which has national and international significance.
- Other areas of archaeological significance and sensitivity include the area around Goede Hoop and Nieuwedorp farmsteads.

C.2 Areas of Archaeological Sensitivity

The archaeological assessment identified no pre-colonial remains of significance.

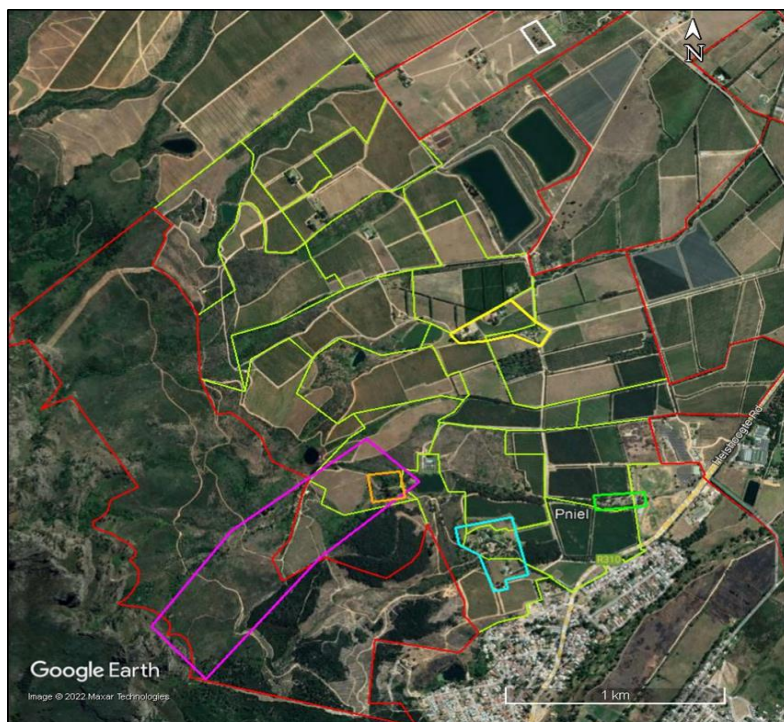


Figure 25: Areas of Historical Archaeological Sensitivity on the Founders' Estates (after Hart 2005). Nieuwedorp (yellow), Goede Hoop (blue), mining landscape (purple), old workers housing (green)

C.2.1 Silvermine Landscape

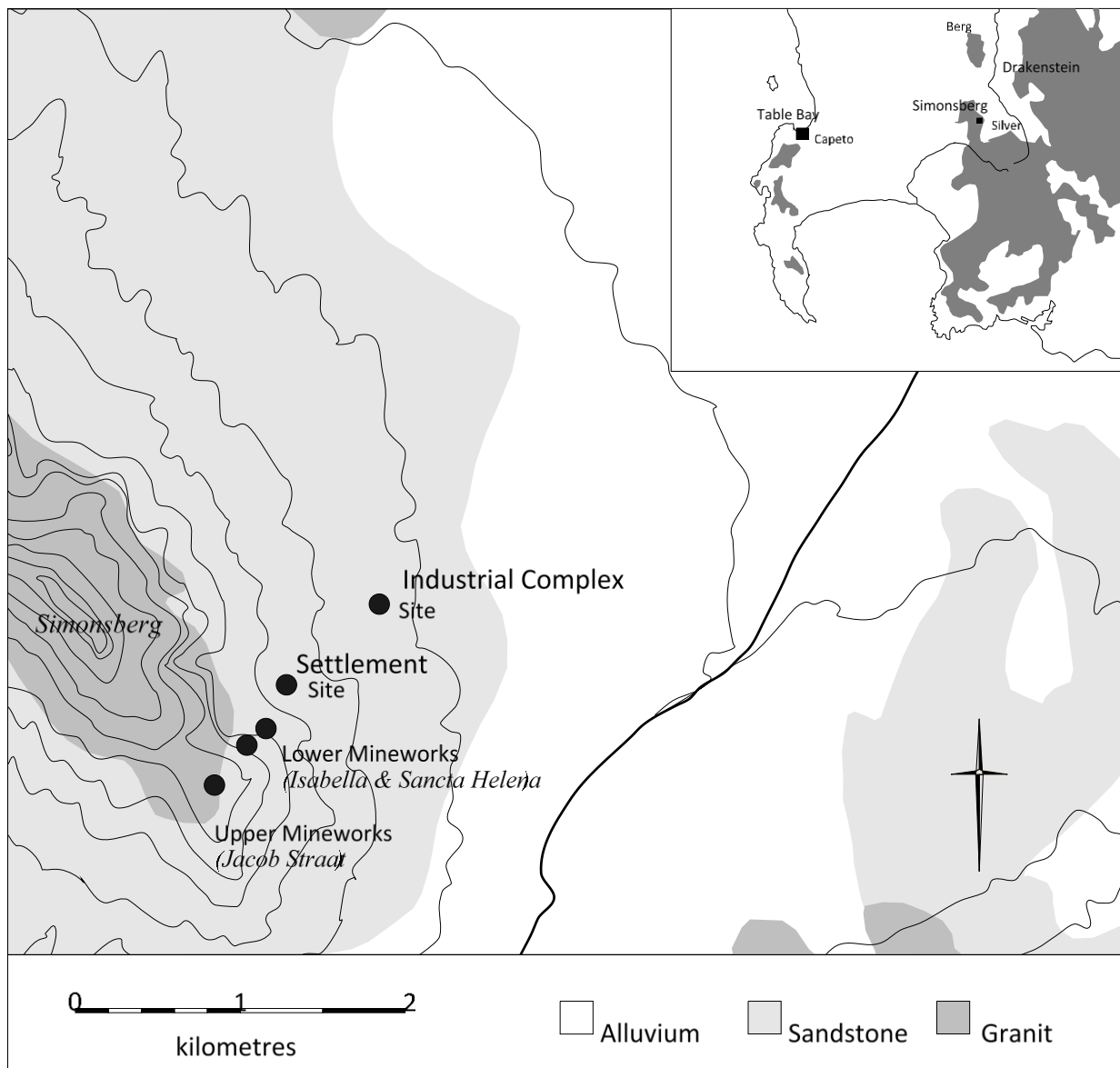


Figure 26: Two Sites comprising the Industrial Silvermine Complex, as well as locations of known mine shafts (courtesy of Lucas, G in Hart 2021)

Historically the site represents an interesting albeit unsuccessful interlude in Cape history, that saw significant funds being spent on this project while the lure of wealth for members of the VOC establishment was overarching. While clearly Muller knew how to establish a mine, it seems incredulous that Muller expended so much energy and placed lives in danger in establishing a fraudulent operation. Unfortunately, we do not know much about Muller's background although clearly, he had some form of mining experience. That it was possible to defraud the establishment certainly seems a probability as VOC knowledge of mining was generally extremely poor and they were gullible in these terms. Then again, Muller may well have been convinced that the "ore" had potential but had no scientific means of assaying this, and persisted with the mining in hope, and eventually out of fear. Interestingly, Muller moved on to Batavia as a free man which indicates the allegations of fraud in the historic writings may have been a little embellished (Hart 2020).

As an historical event that had an impact on the Cape, the event is minor but certainly provides insight into the Cape elite of the day. What is significant is the establishment of a full-fledged mine – certainly one of the oldest in the Cape. The technology used was one of a kind, and indeed it is difficult to find references to stamp batteries of this age as most preserved ones are of 19th or early 20th century age. If we are correct in our identification of the mill as a stamp mill and processing plant, it is likely to be the oldest to have survived in what was the VOC hegemony and possibly in the world. The mine represented the lowest level of employment in the Cape, injuries and illness were frequent, dereliction was high even among the paid staff on site. Slaves who worked on the mines probably suffered a great deal working in terrible conditions and likely, exposed to toxin. The mill would have been one of the places where the mine workers spent their daily existence shoving wettened ore through the stamp battery. The site is considered to have high technological significance. Its identity and purpose has yet to be confirmed.

C.2.2 Nieuwedorp

Cottage 1685 and surrounds

It has been hypothesized that the original Nieuwedorp homestead was built here in the early 19th century but was demolished when Baker built Rhodes' Cottage in 1902. There are no visible traces of archaeological material on the surface in the immediate vicinity of the cottage, but it is quite probable that foundations exist below surface.

1685 Cottage Annex

This small separate cottage contains early elements. It is said to have been a mill that was once associated with the Nieuwedorp farmstead. A nearby *leiwater* may once have fed a mill race, although there is no immediate evidence of this. A closer examination of the Annex building that involves excavation and fabric analysis may be able to verify if the structure was in fact a mill in the past.

Barn

The area around the Nieuwedorp barn appears to contain old building rubble and evidence of earlier construction in the general vicinity. Archaeological excavation and fabric analysis may be able to shed light on the early phases of the structure and reveal its uses.

Area of Sensitivity

Given the possibility of finding the remains of demolished structures pre-dating Cottage 1685, and possible remains of a mill race, the area encapsulated within the yellow polygon (Figure 23) is considered to be potentially sensitive to development activities. Development activities within the demarcated zone should be monitored, and if any archaeological remains found, they should be explored to identify possible age and use.

C.2.3 Goede Hoop

The Goede Hoop werf and associated structures as a complex (Figure 25) is considered high archaeological sensitivity as it has been demonstrated to contain a more or less complete archaeological sequence from the earliest period of the farms existence until the present day. The buried remains of one of the earliest structures is located between the Slave Lodge and the 1821 homestead. Furthermore, artefactual material is plentiful both within and outside the existing werf wall. As yet, little is known about the developmental sequence of various individual structures such as the main house, annex, stables and mill building – all of which have high archaeological potential.



Figure 27: Goede Hoop Werf; 1. Main house, 2. Wine cellar, 3. Slave lodge, 4. Stables, 5. Mill, 6. Cemetery, 7. Second house

D. HERITAGE INDICATORS

The following heritage indicators are focused on the two primary heritage issues, namely:

1. The need for bulk services and infrastructure to respect the visual aesthetic and environmental integrity of the landscape.
2. The need for bulk services to avoid areas of high archaeological sensitivity and/or to be subject to archaeological monitoring.

D.1 Landscape Context

Underpinning the Design Guidelines (2010) and the draft Landscape Plan and Guidelines (2020) is the recognition of a natural and cultural landscape of outstanding heritage value. These documents specifically refer to the need for new development including infrastructure to be subservient to the landscape context.

D.1.1 General Principles

- The need for development to harmonise, complement and respond to the qualities of the broader landscape and the unique features of each Founders' Estate.
- The principles of authenticity and integrity being applicable in terms of ensuring a positive response to all historical layers of the landscape as well as its role as a consolidated working farm as opposed to an ornamental, suburban or fragmented landscape.
- A positive response to the historical patterns in the landscape that have endured over time specifically the pattern of buildings in relation to topography, water and patterns of access; buildings did not occur randomly in the landscape but in response to a carefully considered and environmentally based set of structural principles.
- New development should be subordinate to the landscape in terms of scale, massing, design and movement patterns.
- The addition of a new contemporary layer in the landscape but not at the expense of existing layers of heritage significance.
- Structures should not compete or contrast sharply with the rural landscape qualities in terms of massing, scale, height and design; no urban or suburban built form typologies.
- Structures should be visually recessive in the landscape; they should be nestled into rather than being superimposed onto the landscape.
- Natural features such as mountain backdrops, significant vegetation, slopes and water courses should be carefully considered in the design and planning of improvements.
- Retain the landscape setting of heritage places including views towards and from a place, as well as historical and visual spatial relationships between places.
- Do not introduce built form or landscaping patterns which erode the agricultural character of the working farm by establishing a clear interface between the agricultural components of the working farm and the homestead domains.

- Maintain landscape features contributing to the aesthetic and historical character of the landscape, e.g. treed settings of homesteads, tree lined avenues, windbreaks, forests, indigenous thicket, orchards and vineyards.
- Protect the rural quality of farm roads with careful consideration to the appropriate nature of boundary treatments, entrances, signage and road engineering interventions (road width, surfacing and edge treatments).

D.1.2 Guidelines for Infrastructure

Of direct relevance to this project are specific landscape guidelines for estate infrastructure. The following principles are highlighted:

- The need for emphasis on a low-key 'soft' engineering approach to infrastructure, particularly road and stormwater systems.
- Low-carbon or 'green' building methods are promoted, as well as waste minimalization and recycling as part of any new development.
- A major theme is the use of local stone from the farmland for stormwater channels, headwalls and gabions, which means that hardly any cement or concrete needs to be used for these structures, helping to reduce the carbon footprint of the Estate's infrastructure.
- Principles of Sustainable Urban Drainage Systems (SUDS) are to be implemented across the Founders' Estates, in both the Leasehold Areas and Excluded Areas, in order to increase natural infiltration of runoff across the whole Estate, and thereby avoid the need for hard engineering structures.

D.1.2.1 Access Roads

- Access roads should utilise existing farm roads and tracks wherever possible. New roads should be kept to a minimum.
- The upgrading of roads should retain their rural character in terms of road width, surfacing and edge treatments
- Access roads to the Development Areas should be as narrow as possible. The paved section of these roads would be kept narrow, ranging from 2,5 to 3,0m.
- Materials to be considered include grass, gravel, laterite, exposed aggregate concrete/pavers, cobbles and clay bricks.
- The road surface material is to be exposed aggregate interlocking pavers on the lower slopes and exposed aggregate *in situ* concrete on the steeper upper slopes, in keeping with precedent and the rural character of the Estate.
- Stabilised shoulders are to be provided for passing vehicles and farm tractors. No formal kerbs or gutters are permitted, and only natural stone or exposed aggregate edging is to be used. Aggregate to be a brownish sandstone type throughout.

D.1.2.2 Stormwater Channels

- All stormwater design to follow the approach of sustainable drainage systems (SUDS).
- No stormwater to be discharged directly into wetlands and water courses. Existing farm dams to be used for stormwater collection.
- Lined stormwater channels and pipes to be avoided where possible, as these increase the velocity of runoff water and cause potential flash-flooding and erosion downstream.
- Grassed swales and dry-packed stone channels, using local stone from the farm, are recommended to allow infiltration of runoff, which in turn replenishes ground water for dry periods.

- Where erosion gullies have formed, these to be filled and stabilized with suitable plant cover, depending on the location. Deep gullies to be regraded where necessary and stabilised with stone packing and/or gabion weirs, and re-vegetated with suitable plant species.

D.1.2.3 Drifts, Culverts and Bridges

- Drifts are recommended where access roads or farm roads cross drainage courses, swales and stormwater channels, depending on slope gradients being reasonably shallow.
- 'Reno' type mattresses would provide a suitable trafficable surface for drifts to prevent erosion, and avoid the need for concrete in or near water courses, and furthermore avoid the hardening of streambeds and banks.
- Culverts may be used where drifts are not practical, and should be as large as possible to prevent blockages, and allow for movement of fauna along drainage courses. For this reason, box culverts are preferred to pipes.
- Headwalls and wing walls are to be constructed of gabions using local stone, as these have the advantage of not requiring foundations, thereby avoiding the use of concrete in drainage courses or stormwater channels.
- Where stream embankments are high or steep, clear-span bridges are recommended for road crossings. Timber bridge construction is preferred in the rural context of the Estate.

D.1.2.4 Landscape and Civil Works

- New civil works or rehabilitation of disturbed areas across the Estate to be guided by the input of a professional landscape architect with experience working in the Cape Winelands.
- The cost of landscape rehabilitation, in relation to the provision of infrastructure or any civil works to be included in the civil construction tenders.

D.2 Archaeological Resources

All earthmoving in the sensitive precincts such as Nieuwedorp, Goede Hoop, and in the Silvermine precinct (specifically the ore processing mill sub-precinct) must be monitored to determine if traces of previous structures may be present in those sites.

E. ASSESSMENT OF HERITAGE IMPACTS

E.1 Impacts on Landscape Context

The proposals conform with the heritage indicators in terms of a positive response to the landscape guidelines.

E.1.1 Access Roads

- The proposals make use of existing roads and farm tracks.
- The engineering design of the internal estate roads conform with the landscape guidelines.in terms of road width, surfacing and edge treatments and ensure that the camber follows the slope thus reducing cut and fill.

E.1.2 Stormwater Channels

- The development of a proper stormwater management plan and details conform with the landscape guidelines.
- The Environmental Management Plan (EMP) must address the need for any erosion gullies to be stabilised with stone packing and /or gabion walls, and revegetated with suitable plant species.

E.1.3 River Crossings

- Concern was initially raised with respect to the use of concrete culvet pipes at river crossings. However, the proposals were amended to accommodate only box culverts as per the landscape guidelines.
- Provision has been made for headwalls and wing walls constructed of gabions using local stone.

E.1.4 Reservoir

- The new reservoir constructed directly adjacent to an existing reservoir and at a height of approximately 2m will have minimal visual impact.

E.1.5 Sewer Pump Station

- The proposed new pump station will be buried and therefore have minimal visual impact.

E.1.6 Landscape Rehabilitation

- There is a need for the rehabilitation of civils works to be done by a landscape contractor and overseen by a landscape architect and for this to be included in the EMP.

E.2 Impacts on Archaeological Remains

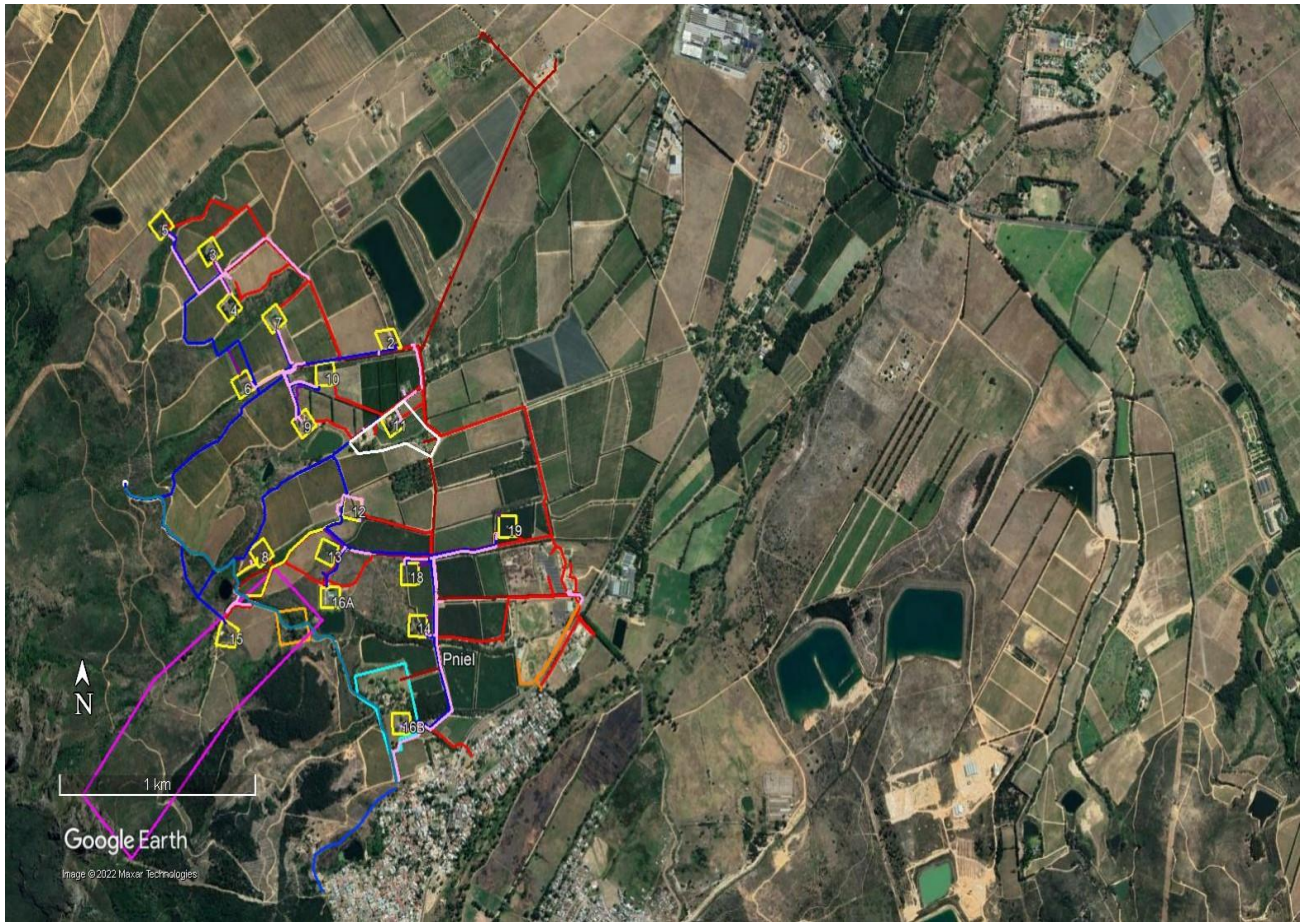


Figure 28: Bulk Services Footprints in relation to Founders' Estates (yellow squares). Sensitive Archaeological Areas: Nieuwedorp – white; Goede Hoop – turquoise; Mining Landscape – purple. Services: dark blue – water; rising main – light blue; electrical – pink; foul sewers – red, fibre optic – dark red, road sections – yellow lines; irrigation connections - dark purple

The findings and recommendations of the archaeological assessment of proposed bulk services are set out below.

E.2.1 Pre-Colonial Archaeology

Few pre-colonial archaeological resources in the bulk services footprints which are for the most part in disturbed areas. A few isolated ESA artefacts were found in disturbed agricultural areas. No LSA or MSA material was observed.

E.2.2 Historic Remains

Visible historic resources were limited in the bulk services footprints on Founders' Estates, and since no new resources were identified beyond those described by Hart (2005), earlier recommendations remain applicable. All earthmoving in the sensitive precincts such as Nieuwedorp, Goede Hoop, and in the Silvermine precinct (specifically the ore processing mill sub-precinct) must be monitored to determine if traces of previous structures may be present in those sites.

Trenching for bulk services outside those areas may proceed without monitoring or mitigation.

E.2.2.1 Ore Processing Mill Sub-Precinct

The location of the rising water main pipeline within the road close to the ore processing mill will have a potential impact on archaeological remains associated with this complex. The following mitigation measures are recommended:

- Any trenching along the approximately 50 m trench section of the road in the vicinity of the two historical structures will need full-time monitoring by a professional archaeologist for the duration of the works.
- An archaeological monitoring programme between the archaeologist and the contractor must be agreed to well in advance of the commencement of any excavation activities in this area.
- The trenching should be done initially by hand but and if deemed safe to do by the archaeologist say can then proceed with a mini trench digger.
- In the event that archaeological material is uncovered it may be necessary to stop work until the recording and safeguarding of archaeological material is undertaken;
- In order to avoid delays in the overall project programme it is advisable to first commence work on this section of the pipeline.
- The Section 27 permit application to SAHRA should make provision for an archaeological excavations in the event of archaeological material being uncovered.

E.2.2.2 Goede Hoop

All trenching in the precinct is to be monitored. Few new services are indicated in the core of the precinct but services will be provided to the development area known as Site FE16B. While electrical and water services pass by the cemetery, they are several meters distant. While burials outside the walled cemetery are not anticipated, excavations in this area will need be monitored and if any remains are encountered, services will need to be relocated.

An archaeological monitoring program between the archaeologist and the contractor must be agreed to well in advance of the commencement of any excavation activities in this area.

E.2.2.3 Nieuwedorp

All bulk services trenches in the sensitive precinct need to be monitored. Particularly those around the site known as FE11 (Nieuwedorp Cottage and Barn).

An archaeological monitoring program between the archaeologist and the contractor must be agreed to well in advance of the commencement of any excavation activities in this area.

F. CONCLUSIONS AND RECOMMENDATIONS

The Heritage Statement focuses on two primary heritage issues affected by the proposed development:

- Assessing the impact of the roads and storm water infrastructure on the landscape character of the Founders' Estates including reference to the Founder Estates Design Guidelines (2010) and draft Landscape Plan and Guidelines (2020).
- Assessing the impact of the proposals on archaeological resources including recommendations for the avoidance of areas of high archaeological sensitivity and/or archaeological monitoring

The findings of this Heritage Statement are that the proposed bulk services are largely in accordance with the landscape guidelines with an emphasis on a low-key 'soft' engineering approach to infrastructure, particularly road and stormwater systems.

In terms of potential impacts on archeological remains, three areas of potential sensitivity were identified, namely the area around the ore-processing mill precinct related to the silvermine, the area around Goede Hoop and the area around Nieuwedorp.

It is recommended that a Section 27 NHRA permit be issued for proposed development subject to the following conditions:

- Rehabilitation of civils works to be done by a landscape contractor overseen by a landscape architect and for this to be included in the EMP.
- Archaeological monitoring of any excavation work within the vicinity of the ore-processing mill precinct, Goede Hoop and Nieuwedorp as per the recommendations set out in E.2 of the report.
- Submission of a close out report to SAHRA within 30 days of practical completion of the work.

REFERENCES

Boschendal Founders' Estates' Design Guidelines (2010)

Baumann, Nicolas and Winter, Sarah (2006). Boschendal Farmlands Founders Estates Heritage Impact Assessment. Prepared for Boschendal (Pty) Ltd

Baumann, N., Winter, S., Dewar, D. and Louw, P. Heritage Impact Assessment: Boschendal village node, Portion 7 of Farm 1674 and Portion 10 of Farm 1674, Boschendal, Stellenbosch Municipality, August 2017. Prepared for Boschendal (Pty) Ltd

Hart, T (2005). Archaeological Impact Assessment of the proposed Founders Estate, Boschendal. Unpublished report prepared for Baumann and Winter Heritage Consultants. Archaeology Contracts Office, UCT

Hart, T (2020). Draft Archaeological Residues Conservation Management Plan for the Founders' Estate, Boschendal. Unpublished report prepared for Boschendal Pty Ltd. ACO Associates cc

Kaplan, J. (2005a). Phase 1 Archaeological Impact Assessment Proposed development of Boschendal Lands, Dwars River Valley. Unpublished report prepared for Doug Jeffery Environmental Consultants. Agency for Cultural Resource Management

Lucas, G, De Villiers J, Abott, M & Hall, A. (n.d.) 'Goede Verwachting: An Eighteenth century Silver Mine at the Cape. Unpublished report. Fornleifastofnun Íslands, Barugata 3, 101 Reykjavík, Iceland

Lucas, G. (2004). An Archaeology of Colonial Identity. Power and Material Culture in the Dwars Valley, South Africa. London: Kluwer Academic

Malan, A. 2016. An Archaeological, Archival, Oral and Spatial History [online]. Available at: <http://www.stellenboschheritage.co.za/wpcontent/uploads/> [Accessed 15 may 2020].

Oberholzer, Bernard (2020). Draft Landscape Plan and Guidelines for Boschendal Founders' Estates. Prepared for Boschendal (Pty) Ltd

Orton, J. (n.d.). The Stone Age at Delta: The Evidence of Artefacts. Unpublished manuscript

Rennie Scurr Adendorff (2019). Boschendal Baseline heritage report. Prepared for Boschendal (Pty) Ltd. Cape Town: RSA Architects

Titlestad, S. (2008). Drakenstein Valley, Boschendal Estates Timeline and Catalogue of Historical Images and Evidence. Unpublished report for Boschendal Ltd. Cape Town: Titlestad.

Vos, H. (2004). Zilvermijn at Simonsberg. Unpublished report

Vos, H. (2004). De Goede Hoop Farm, Dwars River Valley, Drakenstein: Historical Survey of the Owners. Unpublished Report for Boschendal Estate.

Winter, S. (2020). Unpublished SAHRA information package

Winter, Sarah and Rennie Scurr Adendorff Architects (2021). Heritage Statement: Kropman Village, Nieuwedorp, Founders' Estates National Heritage Site, Boschendal Farmlands, Dwars River Valley, Stellenbosch. Prepared for Founders Estates 11 (Pty) Ltd

Winter, Sarah, Rennie Scurr Adendorff Architects (2021). Heritage Statement: Tented Camp, Farm 1685 Portion 5, Founders Estates, Boschendal, Dwars River Valley, Stellenbosch. Prepared for Founders' Estates 5 (Pty) Ltd

DECLARATION OF THE SPECIALIST

I SARAH WINTER as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.



2 November 2022

Signature of the Specialist:

Date:

SARAH WINTER HERITAGE CONSULTANT

Name of company (if applicable):

ARCHAEOLOGICAL ASSESSMENT OF BULK SERVICES ON THE BOSCHENDAL FOUNDERS ESTATE, STELLENBOSCH.

To inform a S27 application in terms of the National Heritage Resources Act

Prepared for

Sarah Winter Heritage Consultant

On behalf of

Boschendal (Pty) Ltd

April 2022



Prepared by

David Halkett

ACO Associates cc

Postal & Physical: 8 Jacobs Ladder St James, 7945

david.halkett@aco-associates.com

Cell: 0731418606

Fax to e-mail: 086 603 7195

1. INTRODUCTION	3
1.1 Background	3
1.2 Statement on the regulatory mechanisms	3
1.3 The Receiving Environment	5
2. PRE-COLONIAL BACKGROUND FOR THE REGION	5
2.1 Early Stone Age (ESA)	5
2.2 Middle Stone Age (MSA) and Later Stone Age (LSA):	5
3. PREVIOUS ARCHAEOLOGICAL ASSESSMENTS OF BOSCHENDAL	6
3.1 Pre-colonial material	6
3.2 Historical archaeological remains	7
3.3 The 2005 Hart assessment	7
3.4 Areas of historical archaeological sensitivity on the Founders' Estate	7
3.4.1 Nieuwedorp	8
3.4.1.1 Rhodes Cottage and surrounds	8
3.4.1.2 Area of sensitivity	9
3.4.2 Goede Hoop	9
3.4.3 Silvermine complex	10
3.4.3.1 Ore processing mill and smelt house	10
3.4.4 Proposed Founders' Estate residential development sites	11
3.4.5 Aspects of the mining site on land outside Founders' Estate	14
3.4.5.1 Muller's house and associated ruins	14
3.4.5.2 Mine shafts	15
3.5 Harts' conclusions with respect to Founders' Estate	15
4. RECENT 2022 ARCHAEOLOGICAL OBSERVATIONS IN RELATION TO BULK SERVICES	16
4.1 Method	17
4.2 Findings and recommendations	17
4.2.1 Pre-colonial archaeology	17
4.2.2 Historic remains	17
4.2.2.1 Specific conditions	17
4.2.2.1.1 The ore processing mill sub-precinct	17
4.2.2.1.2 Goede Hoop	17
4.2.2.1.3 Nieuwedorp	18
5. REFERENCES	18

1. INTRODUCTION

1.1 Background

ACO Associates was requested to undertake an archaeological assessment of the proposed bulk services footprints on both Founders' Estate and on other parts of the Boschendal farms which lie to the north east and south east. Founders' Estate is a declared Grade 1 site while the rest of the land is not and hence different mechanisms have to be used in any heritage applications. These mechanisms are discussed below.

The location of the site is shown in Figure 1.

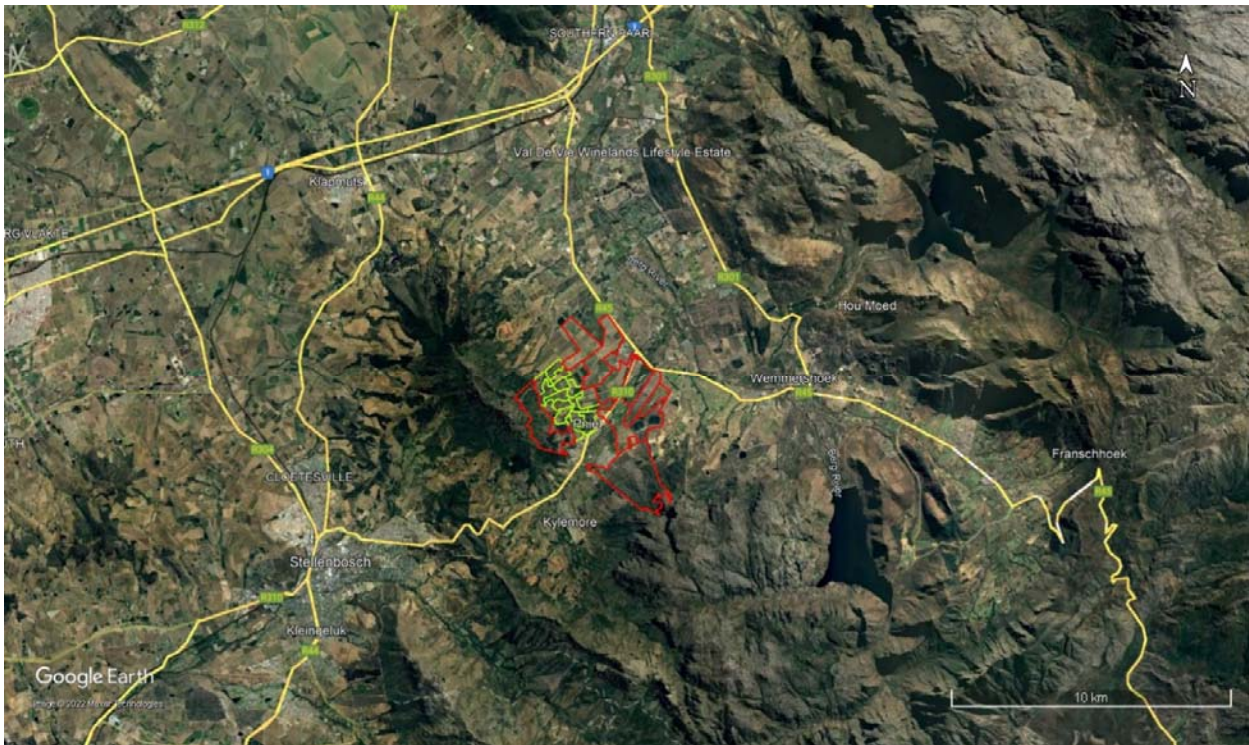


Figure 1: The location of the Boschendal land (red and green) Founders' Estate (green) in regional context.

1.2 Statement on the regulatory mechanisms

Boschendal (Pty) Ltd has acquired the rights to the subdivision and development of eighteen (18) so-called Founders' Estates. The Founders' Estates effectively comprise 18 different farms measuring between 21 and 44ha each (Figure 2). The entire area comprising all the Founders' Estates has been declared a National Heritage Site in terms of the NHRA, as a component of the Cape Winelands Cultural Landscape. From a heritage management perspective, as a National Heritage site, the Founders' Estates falls within the jurisdictional (regulatory) control of the South African Heritage Resources Agency (SAHRA), while the remainder of the Boschendal landholdings fall within the regulatory authority of HWC (Winter 2020).

The bulk services work on Founders' Estate requires a permit application in terms of S27, while the work elsewhere must follow the normal application process of HWC, commencing with a NID application.

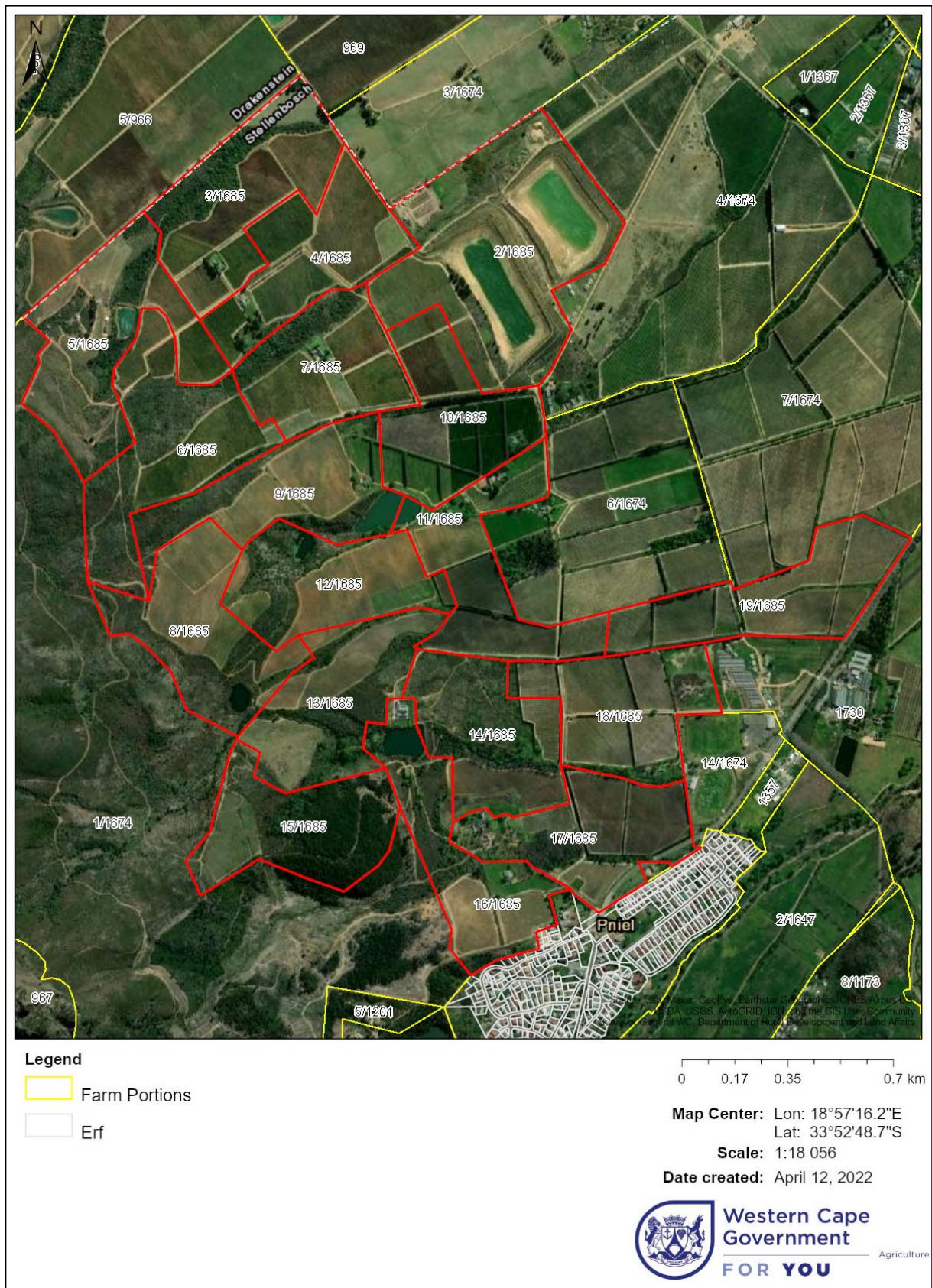


Figure 2: Cadastral map of Boschendal Founders' Estate farms (red) and some of the other farms.

1.3 The Receiving Environment

The Boschendal farms including Founders Estate is a largely transformed agricultural landscape with associated infrastructure such as roads, pipelines, dams, reservoirs etc. There are extensive vineyards (which encroach up the slopes of the Simonsberg), and orchards as well as cereals grown in certain areas. The Simonsberg lies to the south west, and from there the land slopes down towards the distant Berg River. The Keurbos stream and Dwars River cross the land running into the Berg. Only small pockets of undisturbed vegetation are present, mostly along the streams. Historical buildings associated with the old Silvermine (ore processing mill and smelt house) are found inside the south western part of the Founders Estate, with other structures and the mine itself just outside the boundary. The remains of the old VOC silvermine complex is considered to be the most important archaeological heritage site on the property.

The area contains several significant building complexes, namely the Goede Hoop homestead and werf, Rhodes's cottage as well as buildings associated with what used to be the old Nieuwedorp Farm complex. There are structures scattered across the farms, some of which are protected by the NHRA but not of major historical significance. Most of the historic settlement areas are associated with groves of oak or bluegum trees.

Typical landscape features are tree lined roads, while most of the numerous streams and springs which originate in the Simonsberg have been captured by formal leiwater (furrow) systems through the orchards and fields.

There are a number of modern dwellings on Founders Estate which are modified structures or new buildings.

2. PRE-COLONIAL BACKGROUND FOR THE REGION

2.1 Early Stone Age (ESA)

Kaplan (2005a) notes that the ESA material located during the archaeological assessment of the Boschendal lands are consistent with tools often found elsewhere in the Stellenbosch/Drakenstein area (Kaplan 1998, 1999, 2000, 2001, 2002a,b,c, 2003a,b,c, 2004a,b,c,d, 2005a,b,c, Orton et al 2005, Orton n.d., Yates & Manhire 1997). The age and context of the ESA is described further below.

ESA material that is commonly found on river terraces, has been widely reported in the Boland with finds particularly common in a belt from Somerset West through Stellenbosch and Paarl, to Malmesbury and beyond. This material is mostly in secondary context having been reworked, or washed into the terraces during flood events post-dating their formation and hence is seldom, if ever, associated with associated non-lithic material.

During the early years of archaeological research in South Africa, large quantities of ESA artefacts were noted in the vicinity of Stellenbosch, leading researchers to assign the name "Stellenbosch Culture" to the artefacts (Péringuey 1911; Péringuey & Corstophine 1900).

The ESA is divided into two main industries known as the 'Oldowan' and the 'Acheulean'. The latter includes the "Stellenbosch Culture", and in fact all western Cape ESA occurrences are likely to fall within the latter period dating between ~1.4 million and ~200,000 years (Asfaw *et al.* 1992; Kuman & Clarke 2000; Szabo & Butzer 1979). Typical Acheulean artefacts include hand-axes and cleavers, but a variety of cores, flakes and chunks are also found (Mitchell 2002). Goodwin ascribed ESA material from the western edge of the Cape Fold Belt and locations across South Africa to the "Stellenbosch Culture" (Goodwin & Van Riet Lowe 1929) and he noted two common methods used for the manufacture of handaxes i.e. on large flakes or fashioned directly from river cobbles.

2.2 Middle Stone Age (MSA) and Later Stone Age (LSA):

Younger Middle Stone Age (MSA) and more recent Later Stone Age (LSA) remains are found less frequently during impact assessments in the Franschhoek/Paarl area, but LSA sites known to occur

(Orton et al 2005, Orton n.d.). LSA material must have been widespread in the area, but as sites of that type would likely have overlapped places favourable for settlement and agriculture in more recent times, are difficult to identify now due to disturbance.

The Middle Stone Age (MSA) probably started ~200,000 years ago but a more precise date of transition to the Later Stone Age (LSA) is still uncertain, but probably occurred between ~30,000 and 20,000 years ago (Thackeray 1992:400). In general, many larger flakes, such as those from the earlier parts of the MSA, could easily be confused with ESA artefacts, while later while in some cases, overlap in flake size occurs with the LSA. Certain types of MSA are easily recognised i.e. triangular flakes, long quadrilateral blades and those with faceted platforms, and are very characteristic of the period.

The Later Stone Age spans the period from ~20,000 years up to and overlapping the arrival of European colonists. Few LSA sites are described in assessment reports though other aspects such as rock paintings, which are also from the period, occur in the Wemmershoek area and on the farm Môrelië (Kaplan 2003b).

One notable LSA site was located by Orton et al (2005) at Solms Delta wine farm ~3.5 km to the north east of Founders Estate. The site was found during a series of trial excavations on the old werf and a small controlled excavation in the area produced a significant number of artefacts that were later analysed and described (Orton n.d.). Three retouched stone tool types i.e. segments, backed bladelets and backed scrapers are common in the assemblage most probably date the site to the period between 3600 BC and 1200 BC when compared to dated sites with these artefacts from the west coast. The presence of indigenous pottery indicates that at least some part of the occupation occurred after 2000 years ago when this technology first appeared in south-western Africa.

3. PREVIOUS ARCHAEOLOGICAL ASSESSMENTS OF BOSCHENDAL

The original archaeological surveys of Boschendal were done as two separate projects. Kaplan (2005a) undertook an archaeological assessment of precolonial archaeological sites of significance on the affected Boschendal farms while Hart (2005) was tasked with assessing the impacts of development on the farms, with particular reference to the area known as the Founders Estate. Kaplan's assessment was of a much broader area than is currently being assessed for the bulk services, but there are several overlaps.

3.1 Pre-colonial material

During his survey on the broader area, Kaplan located relatively large numbers of Early Stone Age (ESA) artefacts, including large flakes, flaked/split cobbles, large chunks, worked and pitted river cobbles, large irregular and prepared cores, as well as several incomplete and complete handaxes, cleavers, and choppers. Artefacts were made on large flakes from quartzite river cobbles. These were found in a variety of highly disturbed and degraded contexts such as old agricultural fields, vineyards, and orchards close to the Cannery Houses, the Jam Factory and south of the proposed Retirement Village. Artefacts were also found in the piles of rocks alongside cleared fields or packed in rows in the vineyards. Artefacts were also noted in orchards on the banks and floodplain of the Dwars River. ESA artefacts were found in old fields near Lanquedoc village, near the sewerage works and in orchards alongside the Dwars River. and near Wily Dam and in highly disturbed lands and a large dam under excavation above York Piggery. ESA and some Middle Stone Age artefacts were also located on the steep gravel slopes of the Old Bethlehem Conservation area, and Groot Drakenstein Eco Precinct, particularly in the wide gravel roads and vineyards on the steep slopes.

On Founders' Estate, ESA artefacts were located in orchards, vineyards and fields surrounding the Rhodes Cottage Homestead, and alongside some of the nearby gravel roads, and among piles of river cobbles and rocks cleared from fields, and near several dams in this area. Several ESA artefacts were noted on the higher gravel slopes of the Simonsberg Mountains and in land north and east of, and near an old gravel quarry above the Goede Hoop farm.

Kaplan notes that ESA material was also found during earlier archaeological surveys of Boschendal-owned land. These studies included the proposed Lanquedoc social housing development (Kaplan 1998) and proposed Bulkwater Supply Infrastructure Planning project for the City of Cape Town on farmlands alongside the R44 (Kaplan 2004c).

Kaplan concluded that due to the transformed context in which the ESA material was found on Boschendal, that it was considered to have low local significance and no mitigation was required.

3.2 Historical archaeological remains

Other specialist background studies on the built environment and history were extremely useful in isolating areas of potential historical significance. The previous studies by Lucas (2004) were invaluable resources for aspects of the site such as the Silvermine and its associated structures, and the Goede Hoop homestead especially since in 2005, thick regrowth of alien black wattle growth on the slopes of the Simonsberg, subsequent to the fire that provided a cleared site for Lucas, meant that many of the Silvermine remains on the south western slopes of the farms were inaccessible.

Lucas (2004) conducted a series of surveys and excavations in the valley between 1998-2001, the results of which was published in his book, "An archaeology of Colonial Identity". His archaeological research covered the history of the VOC mining operation, the Goede Hoop werf and the village of Pniel itself. The publication explores the archaeological signatures of historical settlement at these various sites and comments on the identity of the communities who lived and worked in the area. The publication has added enormous value and significance to the study area through the process of discovery and the linkages it illustrates with not only neighbouring communities, but also the context of the sites within the VOC hegemony, and on the later British Colonial period.

Hennie Vos of Stellenbosch Museum also produced a number of unpublished reports on the historic farms and recently, a conservation commentary on the Silvermine complex.

In essence the archaeological significance of the study area is well established.

Given this, it is not within the scope of this report to furnish new knowledge but rather to frame what is known within the context of heritage impact assessment and further conservation.

3.3 The 2005 Hart assessment

Since built structures were separately addressed in other specialist reports, Hart 2005 noted that his report focussed on historical archaeological material (as defined by the NHRA to be the remains of human settlement and activity which is more than 100 years of age) and therefore included artefact scatters, activity areas, ruins etc. Fieldwork on Founders' Estate was done by Archaeologists Tim Hart and Liesbet Schietecatte from the ACO.

3.4 Areas of historical archaeological sensitivity on the Founders' Estate.

Refer to Figure 3 for the locations of the areas discussed below.

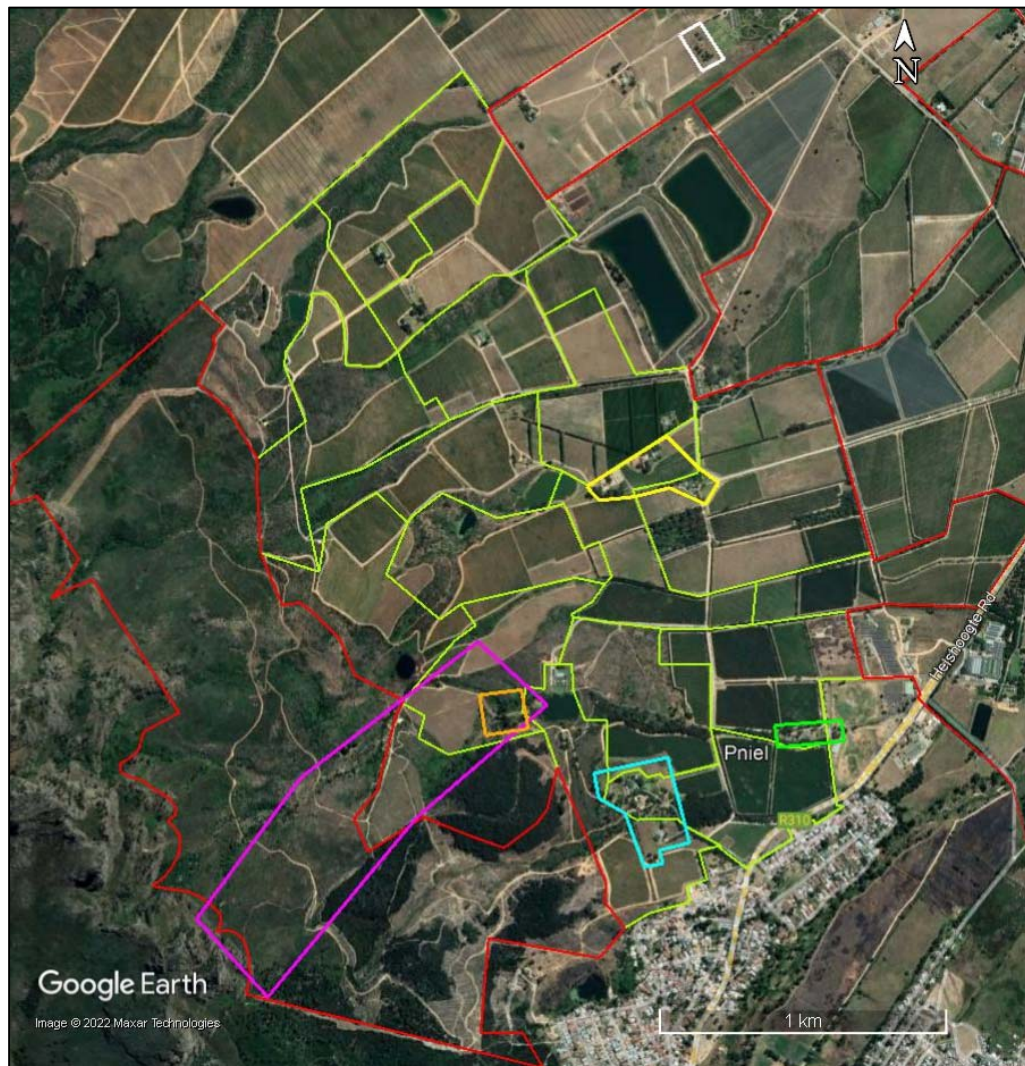


Figure 3: Areas of historical archaeological sensitivity on the Founders' Estate (after Hart 2005). Nieuwedorp (yellow), Goede Hoop (blue), mining landscape (purple), old workers housing (green). Some old walls (white) lie on the broader Boschendal farm area

3.4.1 Nieuwedorp

3.4.1.1 Rhodes Cottage and surrounds

It has been hypothesized that the original Nieuwedorp homestead was built here in the early 19th century but was demolished when Sir Herbert Baker built Rhodes' Cottage in 1902. However, there are no visible traces of archaeological material on the surface in the immediate vicinity of the cottage today. While Hart mentions a survey diagram of the 19th century that suggests that a structure existed roughly immediately behind or on the site of Rhodes Cottage, this was not included in the report. The possible structure is a likely candidate for the original Nieuwedorp homestead and werf. There are no immediate surface indications of the structure, but it is quite probable that foundations exist below surface.

3.2.2 Rhodes Cottage Annex

This small separate cottage contains early elements. It is said to have been a mill that was once associated with the Nieuwedorp farmstead. A nearby *leiwater* may once have fed a mill race, although there is no immediate evidence of this. If it were ever deemed necessary, a closer examination of the Annex building that involves excavation and fabric analysis may be able to verify if the structure was in fact a mill in the past.

3.2.3 Barn

The area around the Nieuwedorp Barn appears to contain old building rubble and evidence of earlier construction in the general vicinity. there is the possibility that original architectural details exist below the floor surface inside the barn. Archaeological excavation and fabric analysis may be able shed light on the early phases of the structure and reveal its uses.

3.4.1.2 Area of sensitivity

Given the possibility of finding the remains of demolished structures pre-dating Rhodes Cottage, and possible remains of a mill race, the area encapsulated within the yellow polygon (Figure 3) is considered to be potentially sensitive to development activities. Hart recommended that development activities within the demarcated zone should be monitored, and if any archaeological remains found, they should be explored to identify possible age and use.

3.4.2 Goede Hoop

The Goede Hoop werf and associated structures as a complex (Figure 4) is considered by Lucas and Vos to be of high archaeological sensitivity as it has been demonstrated to contain a more or less complete archaeological sequence from the earliest period of the farms existence until the present day. Lucas located what he believed to be the buried remains of one of the earliest structures located between the Slave Lodge and the 1821 homestead. Furthermore artefactual material is plentiful both within and outside the existing werf wall. As yet, little is known about the developmental sequence of various individual structures such as the main house, annex, stables and mill building – all of which have high archaeological potential.

On a site such as Goede Hoop impacts to heritage material can occur as result of even minor interventions: for example replacing plasterwork within any of the structures may result in damage to possible hidden wall paintings. The addition of a new bathroom may cause damage to sub-surface archaeological deposits through injudicious placing of service pipes. This site is considered so sensitive that Hart recommended that a Heritage Conservation Plan be drawn up to articulate the significance of the site, vulnerabilities and to determine acceptable limits of change.



Figure 4: The Goede Hoop werf (1. Main house, 2. Wine cellar, 3. Slave lodge, 4. Stables, 5. Mill, 6. Cemetery, 7. Second house)

3.4.3 Silvermine complex

The silver mine complex is an early industrial landscape which according to Vos (2004) must surely be one of the earliest colonial period mines in South Africa. The background history of the mine was researched in some detail by Lucas (2004, n.d.). The “discovery” of precious metals in the Simonsberg Mountains by Frans Diederick Muller led to him motivating the development of a mining association involving many prominent members of the local VOC who funded the operation which commenced in about 1743 employing up to 20 VOC employees and 19 slaves.

Despite sinking two complexes of mine shafts on the upper and lower slopes of the Simonsberg (Figure 5) and substantial investment of funds by senior politicians, no metals of any value were ever found. Muller was exposed as a fraud, and was deported to Batavia without his possessions in 1750.

The mining operation, albeit relatively short lived, left a substantial footprint on the landscape including mine shafts, a number of buildings, roads and an ore processing mill and smelting facility. The archaeological footprints of a number of these have survived, while others not found previously, may still lie hidden in the dense thickets of the Simonsberg. The ruin of Muller’s house and other mining associated structures have been partially excavated by Lucas. The ruins and shafts, though very well known to the Pniel community who visit regularly and identify closely with the sites as local heritage, have not been formally documented .

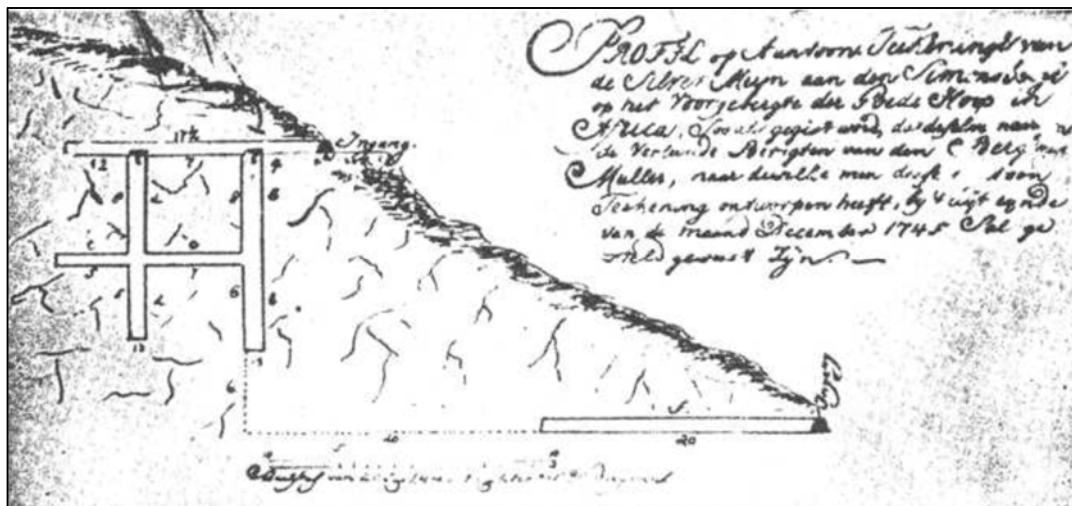


Figure 5: Contemporary drawing of the upper silver mine works from 1743. (Source: South African Library MSB 974/2 in Lucas 2004:45)

3.4.3.1 Ore processing mill and smelt house

The substantial ruin of the ‘mill’ is located alongside a stream on Founders’ Estate and Lucas has suggested that this was a water operated crushing plant where “ore” from the mine was brought for processing (Figure 6). Vos however is not convinced by this hypothesis and argues that the mining operation and the mill may not be contemporary.

Built from stone and calcrete mortar, the building once contained three levels, the lowest of which contains several large stone built ‘mountings’ of an industrial nature. The numerous openings are arched and finished with well fired brick. No woodwork or joinery has survived though beam rests and sockets are visible in the masonry and attest to the use of wood. Dense plant growth has severely impacted the structure through root movement and at least one fallen tree has collapsed a large section of walling in the past. Large trees continue to grow in close proximity and threaten sections of the walls. Immediately to the south is a second structure which has been identified as the smelt house.

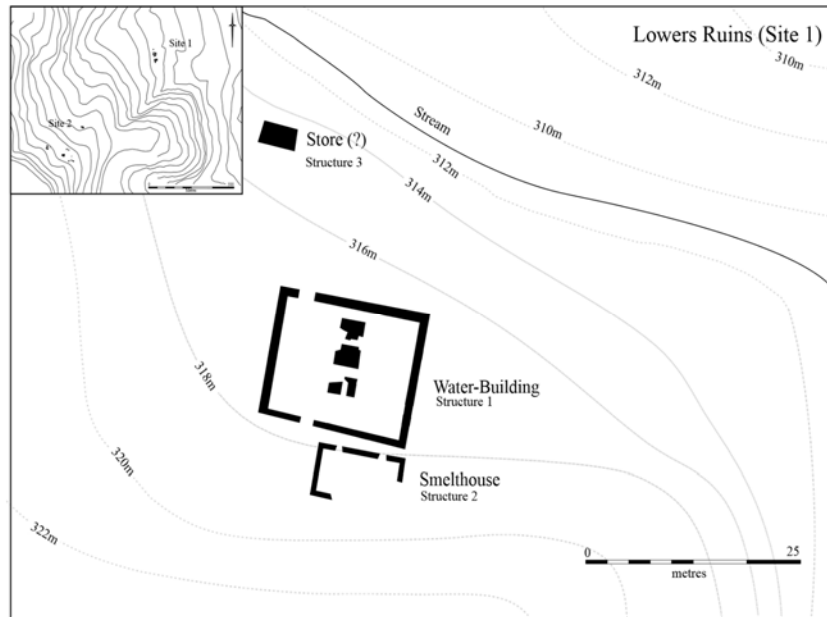


Figure 6: The lower industrial complex and mill has been mapped by Lucas (undated) and was reproduced in Hart 2020 with his permission.

Although not shown on the drawing, there is another less substantial structure ~20m upslope to the south, on the other side of a farm service road. There appear to be a few rooms visible, and it may been some form of dwelling? Another structure located downslope is believed to have been a store?

In reality the significance of this and associated structures is not very well understood. It is clear that its construction method contrasts to the comparatively rudimentary building methods used for Muller's own house, but a lot more work is needed to explain the age, function and purpose of this enigmatic structure and those associated.

If indeed they are associated with the mine, then we must assign to the group, a high degree of significance as the only surviving mine of its kind in South Africa. The site begs substantial archaeological investigation and conservation.

3.4.4 Proposed Founders' Estate residential development sites

Although not specifically described in Hart's 2005 report, his findings with respect to the eighteen small development sites were described in his archaeological residues conservation management plan (2020). The proposed site locations provided in 2022 are mostly consistent with those assessed by Hart, with four being in different locations. These four sites were investigated during the 2022 fieldwork to assess the bulk services. Hart's observations have in some instances been updated to reflect current ground conditions. The development sites are shown on Figure 7?

Table 1: Findings with respect to Founders' Estates

Hart 2005	Description	Position	Finding	Halkett 2022	Finding
FE2	The development footprint is at the corner of a large farm dam lies mostly in an existing vineyard.	Consistent with 2022	Monitoring not required	n/a	n/a
FE3	The development footprint includes a 20th century house, landscaped surrounds and a portion of vineyards. The land around the house has been substantially transformed.	Consistent with 2022	Monitoring not required	n/a	n/a

FE4	The development footprint is located on the edge of a vineyard. The aerial map suggests that this portion of land was deliberately excised from the vineyard, which may imply an earlier history for this land. The land contains a clump of large oak trees suggesting a possible earlier settlement. The land contains a corrugated tin and wire "chicken coop", a modern brick lined well, evidence of modern red bricks dumped on the site as well as recent dumping of old vineyard stumps.	Consistent with 2022	Monitoring not required	There were at least 3 small cottages on the site in the 1973 aerial photo, which explains why the vineyard did not encapsulate that area, but nothing was on the site in the 1938 photo.	n/a
FE5	Old vineyard/fields	Consistent with 2022	Monitoring not required	There are large piles of rocks on the north west edge – bulldozed out of the field.	n/a
FE6	this site has moved ~100 m south east	changed		New location is almost entirely of transformed agricultural land	Monitoring not required
FE7	This development footprint contains a modern 20th century house and swimming pool. There are several large trees and shrubs in the garden, and the kikuyu lawn has covered the soil surface. This piece of land has been completely transformed.	Consistent with 2022	Monitoring not required	n/a	n/a
FE8 (new)				Located almost entirely in a steep sloped vineyard	Monitoring not required
FE9	The development footprint includes a small modern cottage and associated outbuildings, which do not appear to be older than 60 years. The area around the cottage has been completely transformed and is a mixture of kikuyu grass and gravel farmyard.	Consistent with 2022	Monitoring not required	n/a	n/a
FE10	the site has moved ~100m to the nw	changed		Located almost entirely in transformed agricultural land with a stream running through the north part	Monitoring not required
FE11	The development footprint is occupied by the Rhodes Cottage and Barn. possibly the site of the historic (since demolished) Nieuwedorp farm werf. it is possible that sub-surface foundations and remains of the early farm house and werf may still exist.	Consistent with 2022	Monitor landscaping and earth disturbance	n/a	n/a
FE12	the site has moved ~500 meters to the east to avoid a stream and heritage features	changed		Located almost entirely in transformed agricultural land with a stream running through the south part	Monitoring not required
FE13	The development footprint is located on undeveloped land with a stream? running along one margin. The vegetation is very thick, making a survey of the surface difficult. No indications of heritage resources though.	Consistent with 2022	Monitoring not required	n/a	n/a

FE14	the site has moved ~120 meters to the east	changed		The site straddles a pine windbreak and vineyards on the east while the west is probably transformed and heavily grassed, Some oaks present.	Monitoring not required
FE15 (old FE8)	Development footprint is located predominantly on fallow lands, which may have been a vineyard in the past. There is a farm road and a small stream running to the west	Consistent with 2022 but now FE15	Monitoring not required	The north of the site lies in transformed agricultural land while the south appears not have been used. A cycle track crosses the site and a small borrow pit is located on the west. Nothing to suggest any structures relating to the Silver mine	n/a
FE16 (now 16A)	This development footprint is situated next to a small dam which has been constructed on a small stream. There are several large boulders and rocky outcrops on this plot. Two test holes have been excavated into the soil and it is apparent that there are many sandstone cobbles beneath the surface.	Consistent with 2022	Monitoring not required	The site is now developed and was not visited 2022	n/a
FE17 (now 16B)	This comprises the original Goede Hoop farmhouse and associated farm buildings.	changed		The original development site was for the whole werf but now is only for one existing building to the south, now labelled 16B. As this lies in the sensitive area of the Goede Hoop werf, any work around the site is to be monitored	Monitoring required
FE18	The development footprint is situated in a fallow field with some indigenous vegetation along the west.	Consistent with 2022	Monitoring not required	n/a	n/a
FE19	This development footprint is located entirely with an orchard on transformed land.	Consistent with 2022	Monitoring not required	n/a	n/a

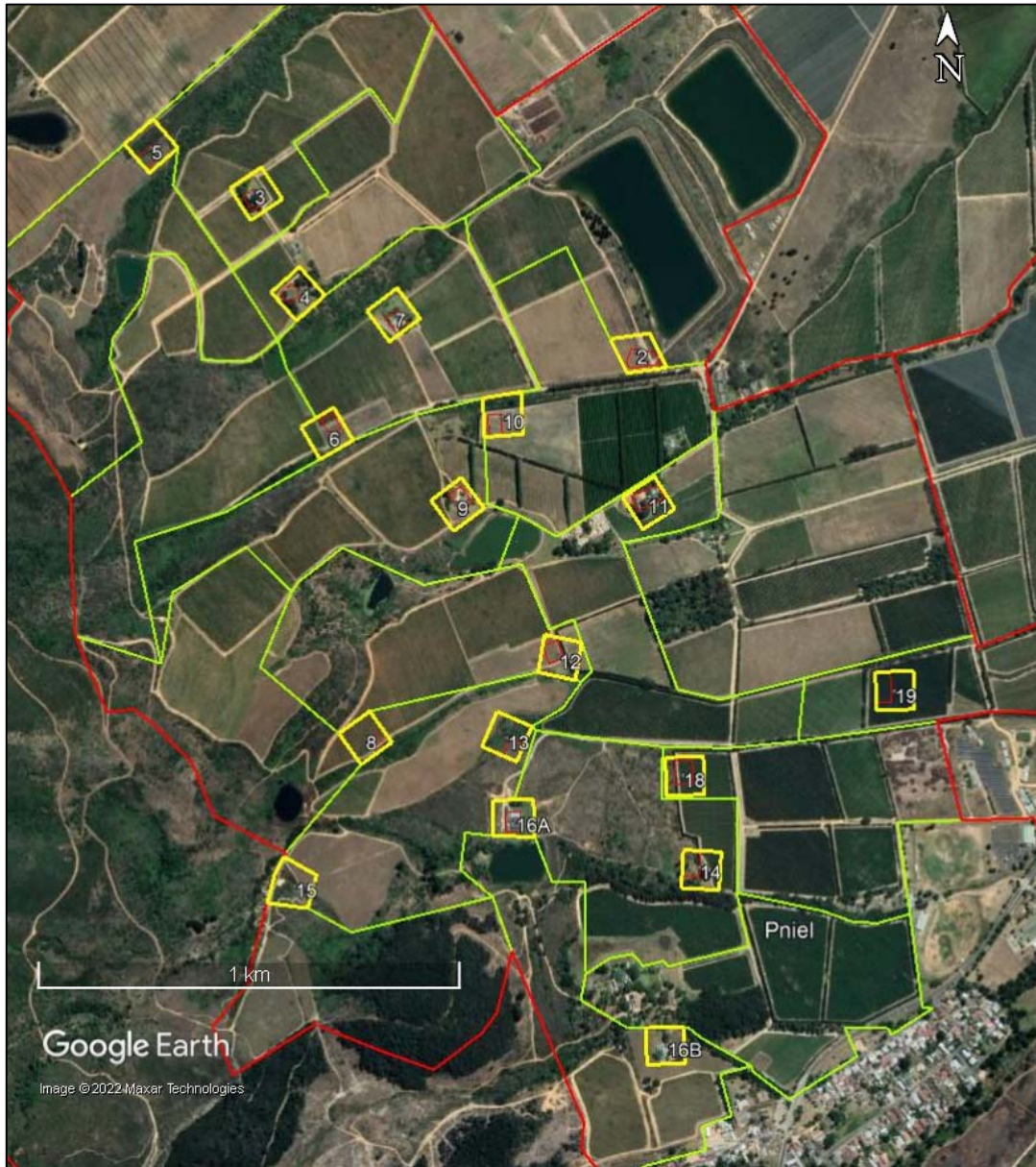


Figure 7: The eighteen Founders' Estates footprints (yellow) with house locations indicated by smaller red rectangles as per 2022 plans.

3.4.5 Aspects of the mining site on land outside Founders' Estate

The mining settlement is located ~600 m upslope to the south west and the layout is indicated in Figure 8.

3.4.5.1 Muller's house and associated ruins

Muller's house has been excavated by Lucas who succeeded in collecting a significant amount of artefactual material and exposing the ruins themselves. The ruins consists of stone and mud walls and brick paving. Eradication of alien vegetation has opened the site and meant that root movement in the foundations of the structure has been reduced. Other structures include a kraal and an oven, stores and labourers cottages. Lucas also documented wagon tracks associated with the mining operations

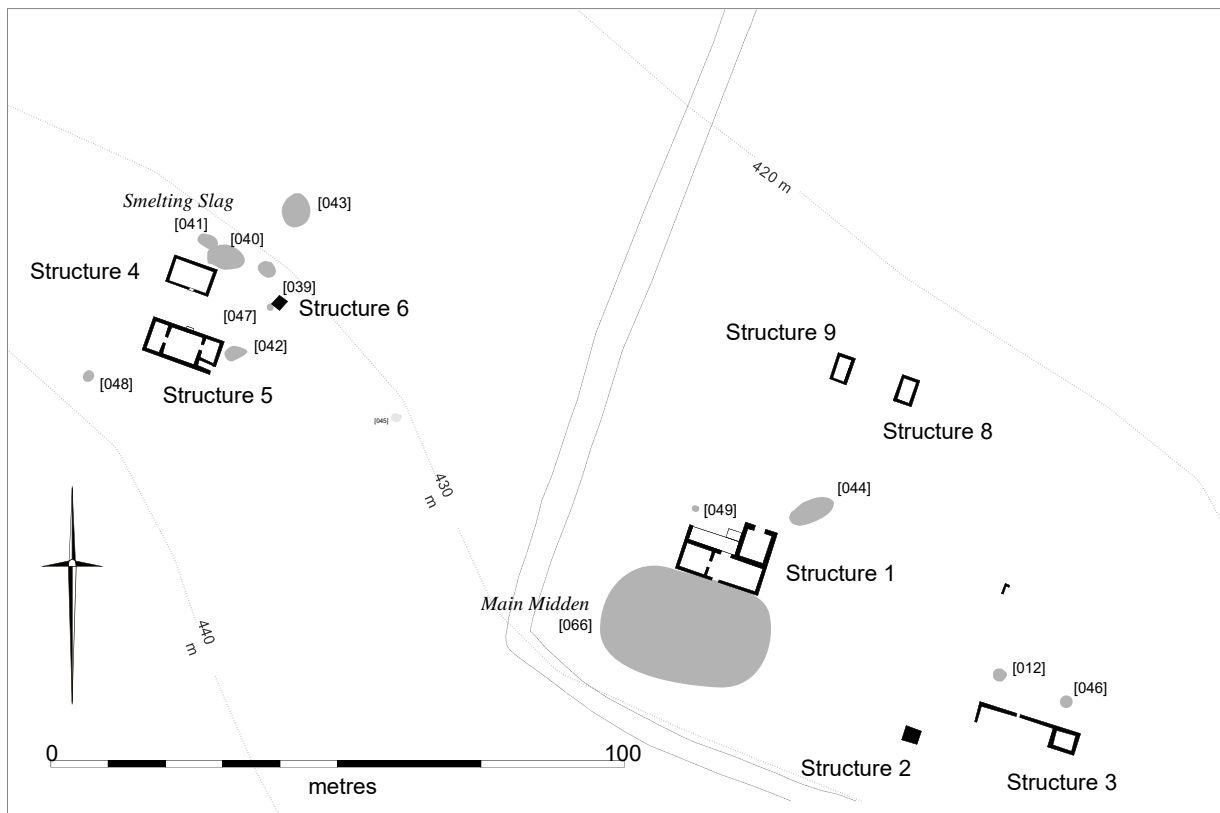


Figure 8: Detailed map of the mining settlement complex (site 2) midway between the Mine shafts and the ore processing precinct, shows the foundations of structures as well as the slag and domestic middens associated with the buildings. Structure 1 is Muller's House. (After Lucas undated)

3.4.5.2 Mine shafts

Although Lucas included a section drawing of the mine layout (Lucas 2004:45; see Figure 5) the mine shafts themselves have never been mapped in detail in recent times. The shafts have been inspected by Vos and Lucas and more recently by Gribble who compiled a basic description of the visible layout and condition (in Hart 2020). Vos mentions issues of safety in that there are vertical shafts in excess of 20 m. This is clearly a hazard that will need to be managed once the land is under formal control as this is a source of risk to the visitor and liability to whoever manages the land.

3.5 Harts' conclusions with respect to Founders' Estate

Hart's overall conclusion was that the development of Founders' Estate would have limited direct impacts to historical archaeological material. Possible impacts were mostly controllable through appropriate mitigation measures and good conservation practice. What is of concern are indirect impacts that can result from the way in which those portions of the site that contain historical resources are managed and utilised in the future. Particular reference was made to maintenance of the ore processing mill ruins. He stressed the importance of maintaining the linkages between all the elements of this early industrial landscape as the land is developed.

Goede Hoop is a site of established archaeological significance. Any intervention, in or near the Goede Hoop werf has the potential to impact archaeological material. Services would need to be laid under a permit issued by SAHRA for excavation on an archaeological site.

Rhodes cottage and the Nieuwedorp barn area may be elements of a related historical site. Major interventions in this area must be preceded by a focused archaeological investigation to check for buried deposits.

4. RECENT 2022 ARCHAEOLOGICAL OBSERVATIONS IN RELATION TO BULK SERVICES

The proposed footprints of various bulk services to the Founders' Estates and other areas (Figure 9) were provided to ACO Associates cc for assessment. These were uploaded to handheld GPS units, and inspected on 8th April 2022 by Mr D Halkett and Mr J Gribble. On the 3rd March 2022, prior to the main field assessment, a site meeting was held between representatives of Boschendal and Mr Gribble of ACO, to examine a section of the route of the 'rising main' pipe where it passed through the ore processing mill precinct, to determine if the route was viable, or if a new route would have to be proposed. The initially proposed route was found to be viable with conditions, as indicated in section 4.2.2.1.1. The rising main is one of the bulk services examined in full on the 8th April.

Other services include water pipes, electrical cabling, foul sewers, fibre optic cabling, irrigation connections, rising main, a small number of roads. Some services are located outside the Estate, and were assessed for inclusion in a separate NID application.

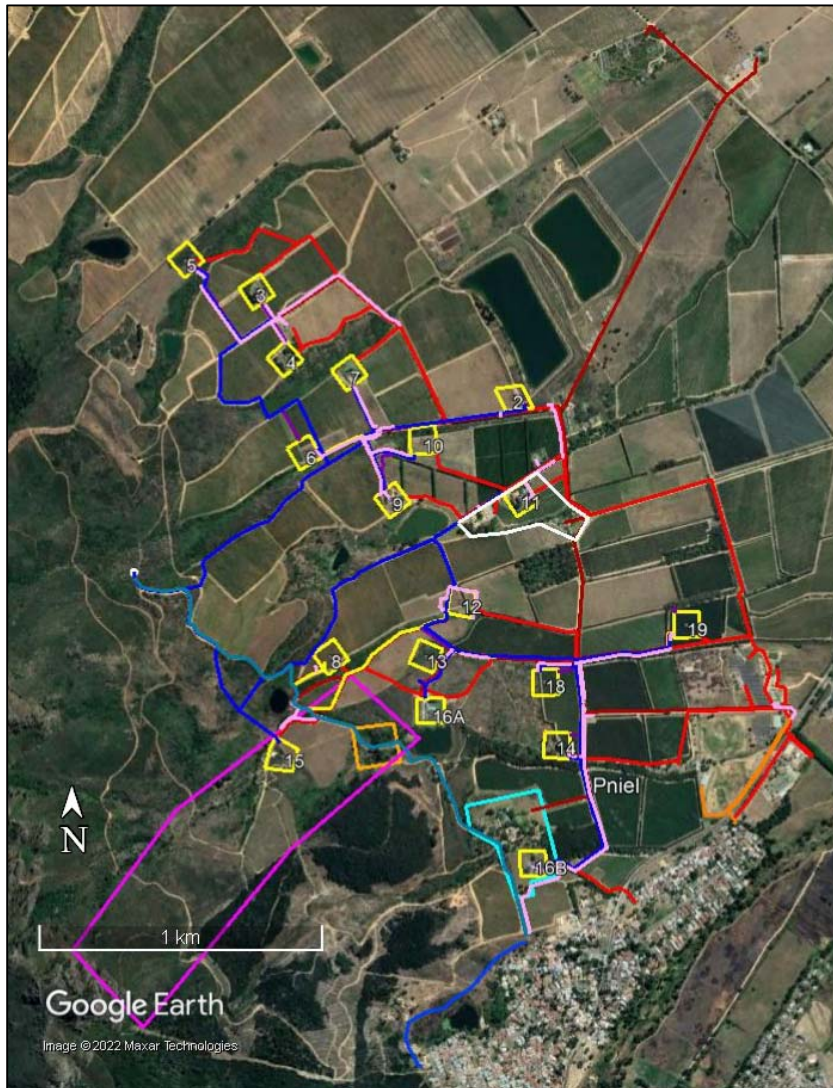


Figure 9: Bulk services footprints in relation to Founders Estates (yellow squares). Sensitive archaeological areas as per Hart 2005 (Nieuwedorp – white, Goede Hoop – turquoise, mining landscape – purple, ore processing mill – orange). Services: Dark blue – water, rising main – light blue, electrical – pink, foul sewers – red, fibre optic – dark red, road sections – yellow lines, irrigation connections - dark purple, external services – extreme south, blue – water, red sewers, orange – electrical?)

4.1 Method

Using the information stored on the GPS units, the services footprints were examined on foot and from the vehicle. Most services are in or at the edge of existing farm roads, but some sections cross land where no access exists, and those were examined on foot unless in land that was already disturbed by agriculture or other activities. As it had been several years since Harts' assessment, some development sites were re-examined to determine if changes to the land may have occurred and the results of his assessment and the 2022 assessment are shown in section 3.4.4., Table 1. At the same time, search tracks were recorded on the GPS units, and the positions of heritage resources were geo-referenced, and described in note books. Resources were photographed in some cases.

4.2 Findings and recommendations

4.2.1 Pre-colonial archaeology

In general, we observed few pre-colonial archaeological resources in the bulk services footprints which are for the most part in disturbed areas. A few isolated ESA artefacts were found in disturbed agricultural areas. No LSA or MSA material was observed.

4.2.2 Historic remains

Visible historic resources were limited in the bulk services footprints on Founders' Estate, and since no new resources were identified beyond those described by Hart, his earlier recommendations will continue to apply, i.e. that all earthmoving in the sensitive precincts such as Nieuwedorp, Goede Hoop, and in the Silvermine precinct (specifically the ore processing mill sub-precinct) must be monitored to determine if traces of previous structures may be present in those sites.

Trenching for bulk services outside those areas may proceed without monitoring or mitigation.

We did not identify any significant archaeology on any of the eighteen development sites.

4.2.2.1 Specific conditions

4.2.2.1.1 The ore processing mill sub-precinct

In terms of the site meeting of 3rd March 2022 and subsequent discussions, the options for the installation of the rising water main pipeline within the road close to the ore processing mill were discussed and the following constraints were noted and approach agreed:

- Any trenching along the approximately 50 m trench section of the road in the vicinity of the two historical structures identified at the meeting will need full-time monitoring by a professional archaeologist for the duration of the works;
- An archaeological monitoring programme between the archaeologist and the contractor must be agreed to well in advance of the commencement of any excavation activities in this area;
- The trenching should be done initially by hand but and if deemed safe to do by the archaeologist say can then proceed with a mini trench digger;
- In the event that archaeological material is uncovered it may be necessary to stop work until the recording and safeguarding of archaeological material is undertaken;
- In order to avoid delays in the overall project programme it is advisable to first commence work on this section of the pipeline; and
- The Section 27 permit application to SAHRA should make provision for an archaeological excavations in the event of archaeological material being uncovered.

4.2.2.1.2 Goede Hoop

All trenching in the precinct is to be monitored. Few new services are indicated to be provided in the old core of the precinct but services will be provided to the development area known as Site FE16B (originally Harts' FE17). While electrical and water services, pass by the cemetery, these are several

meters distant. We do not anticipate burials outside the walled cemetery, but this area will be monitored and if any remains are encountered, services will be relocated.

- An archaeological monitoring program between the archaeologist and the contractor must be agreed to well in advance of the commencement of any excavation activities in this area.

4.2.2.1.3 Nieuwedorp

All bulk services trenches in the sensitive precinct to be monitored. Particularly those to the site known as FE11 (Nieuwedorp Cottage and Barn).

- An archaeological monitoring program between the archaeologist and the contractor must be agreed to well in advance of the commencement of any excavation activities in this area.

5. REFERENCES

Asfaw, B., Berhane, Y., Suwa, G., Walter, R.C., White, T.D., WoldeGabriel, G. and Yemane, T. 1992. The earliest Acheulean from Konso-Gardula. *Nature* 360: 732-734.

Goodwin, A.J.H. & Van Riet Lowe, C. 1929. The Stone Age cultures of South Africa. *Annals of the South African Museum* 27: 1-289.

Hart, T, 2005. Archaeological impact Assessment of the proposed Founders Estate, Boschendal. Unpublished report prepared for Baumann and Winter Heritage Consultants. Archaeology Contracts Office, UCT.

Hart, T, 2020. Draft archaeological residues conservation management plan for the Founders' Estate, Boschendal. Unpublished report prepared for Boschendal Pty Ltd. ACO Associates cc.

Hart, T, Webley, L. 2013. Archaeological / heritage residues management plan (Founders' Estates). Unpublished report prepared for Boschendal Estates. Archaeology Contracts Office.

Kaplan, J. 2005a. Phase 1 Archaeological Impact Assessment Proposed development of Boschendal Lands, Dwars River Valley. Unpublished report prepared for Doug Jeffery Environmental Consultants. Agency for Cultural Resource Management.

Kaplan, J. 2005b. Phase 1 Archaeological Impact Assessment, proposed Normandy Estate, Franschoek. Unpublished report prepared for Urban Dynamics Western Cape. Agency for Cultural Resource Management.

Kaplan, J. 2005c. Archaeological Impact Assessment proposed development of Erven 484, 585 and 592 Paarl. Unpublished report prepared for Honeydew Trust. Agency for Cultural Resource Management.

Kaplan, J. 2004a. Phase 1 Archaeological Impact Assessment Pearly Valley Stage II Development Drakenstein Valley. Unpublished report prepared for Novelway Investments (Pty) Ltd. Agency for Cultural Resource Management.

Kaplan, J. 2004b. Phase 1 Archaeological Impact Assessment Portion 4 of the Farm Deltameer, Paarl. Unpublished report prepared for Saturn Trust. Agency for Cultural Resource Management.

Kaplan, J. 2004c. Archaeological scoping of proposed bulkwater supply infrastructure planning for the City of Cape Town. Unpublished report prepared for Orrie Welby-Solomon BKS (Pty) Ltd Joint Venture. Agency for Cultural Resource Management.

Kaplan, J. 2004d. Phase 1 Archaeological Impact Assessment Pearl Valley Stage II Development Drakenstein Valley. Unpublished report prepared for Anneke de Kock Environmental Consultant. Agency for Cultural Resource Management.

- Kaplan, J. 2003a. Phase 1 Archaeological Impact Assessment Phase 1 Berg Water Project Supplementary Scheme, Franschhoek. Unpublished report prepared for Arup. Agency for Cultural Resource Management.
- Kaplan, J. 2003b. Phase 1 Archaeological Impact Assessment Proposed development Meerust Estate, Franschhoek. Unpublished report prepared for Aikman Heritage Consultants. Agency for Cultural Resource Management.
- Kaplan, J. 2003c. Archaeological Assessment, Môrelië Farm, Wemmershoek. Unpublished report prepared for W.D. Bourbon-Leftley. Agency for Cultural Resource Management.
- Kaplan, J. 2002a, Phase 1 Archaeological Impact Assessment Proposed subdivision of Erf 1536 Franschhoek. Unpublished report prepared for Doug Jeffery Environmental Consultants. Agency for Cultural Resource Management.
- Kaplan, J. 2002b. Phase 1 Archaeological Impact Assessment Erf 1680 & Erf 1692 Franschhoek. Unpublished report prepared for Aikman Heritage Consultants. Agency for Cultural Resource Management.
- Kaplan, J. 2002c. Phase 1 Archaeological Impact Assessment proposed subdivision of Erf 1536 Franschhoek. Unpublished report prepared for Doug Jeffery Environmental Consultants. Agency for Cultural Resource Management.
- Kaplan, J. 2001. Archaeological study, Bloekombosch Group Housing Project, Franschhoek. Unpublished report prepared for Dennis Moss Partnership. Agency for Cultural Resource Management.
- Kaplan, J. 2000. Archaeological study, Erf 951 Franschhoek. Unpublished report prepared for Steenkamp and Associates. Agency for Cultural Resource Management.
- Kaplan, J. 1999. Archaeological and historical study, proposed Franschhoek Golf Estate. Unpublished report prepared for SRK Consulting Engineers and Scientists. Agency for Cultural Resource Management.
- Kaplan, J. 1998. Phase 1 Archaeological Impact Assessment: Lanquedoc Social Housing Project, Franschhoek. Unpublished report prepared for Doug Jeffery Environmental Consultants. Agency for Cultural Resource Management.
- Kuman, K.A. & Clarke, R.J. 2000. Stratigraphy, artefact industries and hominid associations for Sterkfontein Member 5. *Journal of Human Evolution* 38: 827-847.
- Lucas, G, De Villiers J, Abott, M & Hall, A. n.d. 'Goede Verwachting: An Eighteenth century Silver Mine at the Cape. Unpublished report. Fornleifastofnun Íslands, Barugata 3, 101 Reykjavík, Iceland
- Lucas, G. 2004. An archaeology of colonial identity. Power and material culture in the Dwars Valley, South Africa. London: Kluwer Academic.
- Mitchell, P. 2002. The archaeology of southern Africa. Cambridge: Cambridge University Press.
- Orton, J., Halkett, D. & Hart, T. 2005. A Program of test excavations at Delta (Farm 944), Franschhoek. Unpublished report prepared for Professor Mark Solms. Archaeology Contracts Office, UCT.
- Orton, J. n.d. The stone age at Delta: the evidence of artefacts. Unpublished manuscript.
- Péringuey, L. 1911. The Stone Age of South Africa. *Annals of the South African Museum* 8: 1-218.

Péringuey, L. & Corstophine, G.S. 1900. Stone implements from Bosman's Crossing, Stellenbosch. *Memoirs of the Proceedings of the South African Philosophical Society* 11: xxiv.

Szabo, B.J. & Butzer, K.W. 1979. Uranium-series dating of lacustrine limestones from pan deposits with Final Acheulean assemblages from Rooidam, Kimberley district, South Africa. *Quaternary Research* 11: 257-260.

Thackeray, A. I. (1992). The Middle Stone Age south of the Limpopo River. *Journal of World Prehistory* 6, 385–431.

Vos, H. 2004. Zilvermijn at Simonsberg. Unpublished report.

Winter, S. 2020. Unpublished SAHRA information package.

DECLARATION OF THE SPECIALIST

I, **David Halkett**, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.



Signature of the Specialist:

2 Nov 2022

Date:


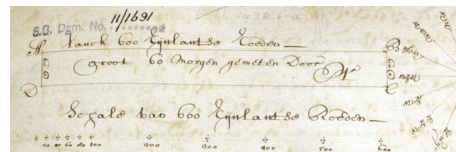

ACO Associates cc

Name of company (if applicable):

B.1. Historical timeline compiled by Sally Titlestad

International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
15 th C	Age of exploration	700 000 ya	Stone age hunter gathers & pastoralists occupied the Western Cape.		During the pre-colonial period, the area was occupied by hunter-gathers and pastoralists. Archaeological remains dating to the Early Stone Age, Middle Stone Age and Later Stone Age periods have been recorded in the area. Stone hand axes found in the soils overlaying the gravel terraces of the Valley indicate that stone age hunter gatherers may have been in occupation from as early as 700 000 years ago (Kantor, Todeschini & Pistorius, 2005).
		2000 ya	Hunter gatherers and Khoekhoen		From about 2000 ya the area was part of the transhumance pattern of Khoekhoen pastoralists, who followed regular paths with their cattle. Recently, important archaeological remains dating to the Later Stone Age and Colonial Contact periods were discovered in the vicinity of the historical werf on the nearby Solms Delta farm.
		1486	Portuguese explorers landed on the Cape Coast near (now) Mossel Bay. In 1503 and 1510 Portuguese sailors landed in Table Bay (TANAP).		
1598	Edict of Nantes granted French Calvinist protestants rights of religious freedom, ending the French wars of religion.	1647	A Dutch ship ran ashore in Table Bay, giving rise to serious considerations of using the Cape as a refreshment station (TANAP).	17 th C	In the 17 th century the Drakenstein Valley was used by at least two major Khoekhoen groups, the Goringhaiqua and the Gorachouqua, who moved from the Malmesbury district to Table Bay, arriving in November, heading for Stellenbosch in January and thence, via Wellington, back to Malmesbury. The broad cattle patterns and clearings made by the Khoekhoen were likely the routes followed as well as being the areas first farmed by European settlers, forming the underlying foundation of the present day settlement pattern. Examples include the old route from Stellenbosch through Idas Valley to Franschhoek (The original "Helshoogte pass") and the locations of the 17 th C land grants and homesteads on the Valley floor.
		1652	The Dutch East India Company (VOC) established a refreshment station at the Cape. The VOC initially forbade colonial settlement, but unable to produce sufficient food at its location at the fort, soon began to grant land and freedom to those willing to undertake the project. The Company held rigid control over produce, marketing and contact with indigenous people. The indigenous inhabitants were officially excluded and segregated from colonists, but it is clear from historical accounts that they began to be useful to colonists from the earliest period, becoming somewhat integrated – while remaining deeply mistrusted and denigrated. Three 'Khoi' wars in the second half of the century, the first in 1659, ensured their subordination and dependence on settlers.		The Drakenstein Valley including Paarl and Franschhoek were "discovered" by European settlers while on expeditions to barter for cattle with the Khoekhoen. Figure (right) portion of map showing 'kraals on the outskirts of settlement (CA M1/1162)
1685	Revocation of the Edict of Nantes (by the Edict of Fontainebleau), destruction of protestant churches and closure of schools,	1679	Stellenbosch was established by Governor van der Stel.	Late 17 th C	Dutch, German and Huguenot settlers and freed blacks were granted freehold land along the banks of the Berg and Dwars Rivers. Typically 60 morgen in thin rectangular plots of land. Title Deeds were issued once cultivation was underway. Title Deeds were issued:
		1687	Records of land transactions began to be kept.	1689	Nieuwedorp was granted in 5 parts, chronologically to Arnoldus Basson, Jacobus van As, Erasmus van Lier, Willem Basson and Pierre Meyer. Arnoldus Basson was married to Anselma of Bengal, who had been van Riebeeck's slave, was manumitted by him, and was the
		1688	Huguenot refugees arrived at the Cape. Governor Simon van der Stel named the valley Drakenstein in honour of visiting High		



International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
	coupled with increased persecution of protestants in France caused massive numbers of Huguenots to flee France for countries where Protestantism could be practiced.		Commissioner H.A van Reede tot Drakenstein. VOC mapping of the settlement customarily locates Khoekhoen kraals on the margins and outside of areas occupied by European settlement. Incidents like the murder of a farm owner by a 'Hottentot' in an argument over a watermelon, and complaints by the settlers that Hottentot cattle were trampling their vineyards indicate that there was an alternate viewpoint of land use. (Figure below: portion of CA M1/273)		mother of Anna de Koning and Jacobus van As. Willem was the son of the Ansela and Arnoldus. In 1701 the farm was a consolidation of 5 properties owned by Jacobus van As, who had become a wealthy farmer. After his death in 1713 (probably of smallpox) his estate was sold off – most of it to Jacob de Villiers, son of Jacque De Villiers, owner of Boschendal in 1724. The De Villiers now owned half of the Valley and remained the controlling family through the 18 th and 19 th C. Meererust and Eenzaamheid were granted 1690 Boschendal was granted in 2 parts, the first to Huguenot Nicolaas de la Noi/Noij in 1690, the second to Jean de Long in 1713, transferred to Abraham de Villiers in 1715. Remained in de Villiers family until 1879. One of 3 brothers who collectively became one the controlling families of the Valley. Present house completed in 1812. Remains of mid 18 th C house evident as foundations to present house. 1691 Languedoc (right) granted to Pierre Benezet. Was purchased in 1700 by the owner of Rhone, and was thereafter referred to as 'Rhone and Languedoc'. 1691 Rhone granted to Huguenot Jean Garde. In 1700 he acquired the adjacent farm Lanquedoc to be farmed as a single unit. The farms were acquired by Claudine Lombard in 1727 – an example of how women could become important landowners in the early Cape and how property could be transferred through the female line. The farms were owned by two women (Claudine Lombard and later her daughter Magdalena) for almost a century. Oldest building is the wine tasting centre, perhaps the original homestead. Present homestead completed in the 1760s during the ownership of Pieter and Magdalena Joubert, nee Lombard. The farms acquired by Haupt famly in the 19 th C. 1696 Bethlehem granted to Petrus Simond, the Minister who accompanied the Huguenot refugees to the Cape in 1688. Being in the employ of the VOC, the company built him a house on the farm. In the mid 19 th C the farm was transferred to the Haupts, owners of Rhone, Lanquedoc and Goede Hoop. Ruins of original house south-west of the present one. Present house, barn and cellar are mid 19 th C.
					
		Early 18th century In early Cape slavery, slaves were sometimes granted their freedom in gratitude for service by the last will and testament of their owners. Slave women were also freed when they married settlers, a relatively common practice. Freed slaves and their families could become important landowners and farmers. 1710 Slave shortage resulted in requests to apprentice children of free Khoi women and		1700 By 1700, 80 slaves were recorded in the Valley, 70 men, 6 women and 4 boys (CA A2250), and by 1710 drawings of the settlement including a church and houses were being undertaken by travellers. Figure (right) Drawing of the settlement in c1710 by Valentijn (Boschendal Private Collection) 1708 Goede Hoop granted to Susanna de Vos (widow of Nicolaas de la Noi). It may have been occupied for some time before the grant. In 1735 De Villiers bought by Abraham de Villiers, youngest son of Jacque de Villiers of Boschendal Remained in the	

International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
18 th century	VOC mandated to exploit the minerals of their far reaching outposts		slave fathers (Clift, 1985)		de Villiers family throughout 18 th and 19 th C. Present homestead built in 1821. Foundations of original house in backyard of present homestead. 18 th C fabric is embedded within werf e.g. stables and annex. Strong 19 th layering, most notably the homestead, cellar and werf layout. Boschendal B granted to Jean de Long. Transferred in 1715.
		1713	Smallpox epidemic with slave and Khoi populations experiencing high death rates.	1713	
		1717	After this time no further freehold grants of land were made. The quitrent system of land grant was introduced a century later.	1743-1748	Precious metals were "discovered" in the Simonsberg by Frans Diedreik Muller. A group of wealthy and influential VOC officials at the Cape set up a mining company called the <i>Octrooijeerde Society der Mynwerken aan de Simonsberg</i> and the mine was called <i>Goede Verwachting</i> or Great Expectations. Work began in 1743. Muller was appointed as <i>bergmeester</i> (mining master). Labour fell to VOC soldiers, sailors and some slaves, the number of which grew as conditions worsened. By 1747 the mine housed about 40 people. Long tunnels were dug into the hillside along with connecting shafts of up to 100 feet. Muller sent continual updates describing the riches that lay in the hills and demands for more money and labour. He built himself and his wife a grand house on the mountain slope. The compound he was in charge of grew over the years but there were constant desertions, since work was hard and dangerous and Muller had a reputation of being harsh. He eventually failed to convince his investors, and the support was withdrawn. In 1748 he was branded a fraudster and banished to Batavia. Ruins of Mullers House, a wash house, smelting works, coal store and labourers dwellings still exist.
		1721-1775	Use of Khoi labour increased, culminating in the 1775 indenture system, where children of Khoi mothers and slave fathers could be indentured from 18 months to 25 years of age.		
		1755	Smallpox epidemic with 2072 reported fatalities in the settlement.		
1792 by 1795	War broke out between France and Britain VOC was bankrupt with far-reaching consequences for its settlements, and Britain annexed the Cape.	1767	Outbreak of smallpox, with slaves and freeblacks severely affected, fewer fatalities than previously.		
		1783	There were 4.2 million vines in Drakenstein.		
		1795	The British East India Company took over administration of the affairs of the bankrupt VOC.		
					Figure (right) 1776 Schumacher Painting of the "Simonsberg where the Silvermine was (Stellenbosch: 3 Centuries) 18 th ruins of a huge stone structure described in the mining records as a water mill or water muragie, situated on the farm named Papiermolen or Paper Mill. No viable water source is available but the main structure comprises two solid central piers which suggest that it carried heavy machinery like wheels or cogs.
				1749	Inventory listing of 'Rhône and Languedoc' after the death of the owner's wife described a T shaped house, separate cellar, mill house and wagon house, and lists 6 slaves and 650 sheep, among many other belongings (CA MOOC8/17.16b).
				1777	Bethlehem is inventoried, and goods listed are one (unnamed) slave and some equipment. There is no description of dwelling. (CA MOOC8/17.16a)





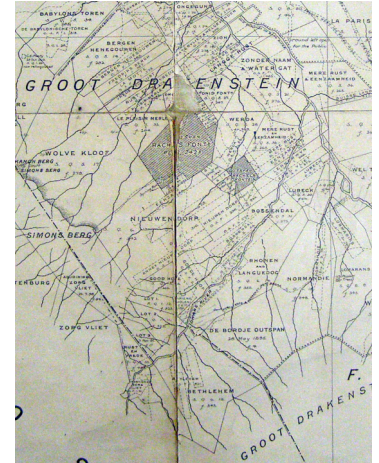
International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
1802	Treaty of Amiens	1803	Batavian government took over management of the Colony	Early 19 th century	Many of the architectural set pieces of the Valley established during economic boom including the homesteads of Boschendal, Rhone, Goede Hoop & Bethlehem. Separate accommodation quarters for slaves began to be built on the wealthier farms, thus housing the expanded slave population.
1807	British abolition of oceanic Slave Trade.	1804	Freedom of religion granted by de Mist.		
1814	Anglo-Dutch Treaty. Britain declared the Cape of Good Hope a British Colony.	Early 19 th century	Period of agricultural prosperity in the wine industry at the Cape through preferential tariffs in export. Trade with England created a huge market for wines.		
1832	Great Reform Act (UK). Number of people eligible to vote increased.	1812	Amendment of the 'Hottentot Proclamation' allowed Khoekhoen children to be indentured from age 8 for ten years.	1808	Thibault Military survey (right) of the Valley and surrounds is an exceptional depiction of topographical features (roads, paths and rivers) and the occupants of farms (CA M3/405). It visually illustrates the Dutch manner of 'setting out places' where roads travel between people, as compared to the later British manner where roads travel in relatively straight lines between places.
1834	Abolition of slavery in British Colonies.	1816	Registration of ownership of slaves became mandatory, and births, deaths and transfers were recorded.	1810	There were 16.9 million vines.
		1823	Wine producers returns were recorded, along with the numbers of slaves and Hottentots working on farms. Wine prices started dropping in c1821 and continued to do so, creating economic hardship for wine farmers.	1817	Beginning of quitrent grants, which substantially enlarged landholdings across the Valley and effectively removed common arable and grazing land between farm holdings, rendering all but the outspans to private land ownership.
		1828	Ordinance 50 granted freedom to the Khoekhoen and entrenched religious freedom. Post of Surveyor General created to ensure cadastral control of land.	Figure (right) c1830 D'Oyly drawing of the Simonsberg from the outspan at the end of Drakenstein (next to Bethlehem) (Private Collection)	
		1833	Between 1833 and 1841 some 700 British children were brought to the Cape and indentured to local employers.	1843	Farm land from Papiermolen and Goede Hoop was donated towards the establishment of a mission station for freed Christian slaves (Pniel). Each family was given a plot to build a house and allocated arable land to grow vegetables. The primary objective of the Church mission was religious instruction and baptism into Christianity, but it also provided the opportunity for social stability within the labour force upon which the farmers were dependent. Under the patriarchal and strict tuition of Minister Stegman, (who remained at Pniel until his death in 1910), the community was preached self sufficiency, independent identity and taught skills seen as empowering freedom from the ethos of slavery. Many of Pniel's residents can trace their family histories to the founding of the village. A close knit
		1834	Slaves emancipated to apprenticeship and freed in 1838.		
		1836	Slave compensation payouts began to take effect, with owners being paid for the loss of their property. The capital injection into the Cape through payouts was equal to the gross domestic product of the time (Meltzer).		
		1840s	Period of economic hardship, sometimes claimed to be linked to emancipation. Severe economic depression from the 1860s.		
		1849	Protests against the importation of convicts into the Colony		






International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
				1850	community with strong familial links has developed. Pniel has strong connections to RFF, with successive generations of families having worked for Rhodes Fruit Farms/Amfarms. Survey of proposed change of old road in order to shorten the distance between Stellenbosch and Franschhoek, new Helshoogte pass and R310 followed the completion of a new hardened road from Klappmuts to Cape Town and facilitating slightly easier transportation of produce.
1860 Britain abolished preferential tariffs for Cape wines, which were unable to compete with European wines for quality.		1860s Discovery of diamonds		1870s	Outspans began to be purchased by private landholders, incorporated into farms.
1860s Scramble for Africa		1860s Drop in Cape export wine trade.			Image (right) Boschendal late 19 th century, with its threshing floor in the foreground and historic werf in the background (Boschendal Private Collection)
1872 Responsible government granted to the Cape.		1880s Discovery of gold.			(below right) Survey Drawing of a portion of the Consolidated Rhodes Fruit Farms, showing the Founders Estates portion of the land at c1920 (Boschendal Private Collection)
		1882 Disastrous outbreak of smallpox, catalysing the introduction of cemetery closure and the 1886 cemetery riots.			
		1880s-1890s Consolidation of British Colonial interests in Cape Colony; development of harbour and railway to Beaufort West and Kimberley.			
		Late 19 th century Period of economic decline at the Cape		Late 19 th C	Many of the homesteads of the Valley fell into serious disrepair following little maintenance. Corrugated iron replaced thatch as a cheaper and more durable roof option, e.g. Bethlehem homestead.
		1886 Outbreak of phylloxera destroyed virtually all Cape vineyards, leaving many farmers bankrupt and the Cape economy in ruin.		1897	Beginning in 1897 Cecil John Rhodes and his agent, Michell, advised by Harry Pickstone, bought 26 farms and consolidated them into Rhodes Fruit Farms . Rhodes instructed his agents to give preference to those farms with examples of Cape Dutch homes, and he set aside substantial sums for their maintenance. The historical homesteads became the manager's houses. Extensive orchards were planted and fruit became the primary produce of the Valley. Rhodes died before his vision of a Cape fruit industry was fully realised but Pickstone, whose technological advances and international expertise influenced fruit production in South Africa, implemented his vision.
		1892 Franchise and Ballot Act excluded many African men from the vote.			Farms consolidated into Rhodes Fruit Farms included Boschendal, Rhone, Lanquedoc, Goede Hoop, Nieuwedorp, Champagne, Weltevreden, Lubeck, Werde, Watergat, Zondernaam and Bien Donne.
		1895 The Jameson Raid sparked massive controversy in the Boer Republics and eventually led to the Outbreak of War between the British and the Boers.		c1897	Johannesdal established when 8 farmers from Pniel obtained small holdings along the southern boundary. Kylemore was established around the turn of the century.
				1900	Herbert Baker's extensive architectural intervention in the Valley began at Rhodes' request.



International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
1914- 1918	First World War	1899-1902	The South African War (Previously referred to as the Anglo-Boer War or the Great War).		Baker designed a cottage for Rhodes that was constructed on or adjacent to the site of the ruined Nieuwedorp homestead. It combined Cape cottage features with the Arts and Craft movement, and Rhodes died before it was complete. Rhodes Cottage became a guesthouse for use of the company's executives and international political and business personalities. It contains items of furniture and memorabilia important to RFF, and was renovated in the early 1990s.
		1901	Outbreak of the Plague in Cape Town	1900	The village of Lanquedoc was designed by Baker and built for RFF farm workers. It consisted of 140 cottages, each with a garden and included a church and a school. The village design was intended to attract good labour away from the mines. Unique example of planned labourers' housing.
				1900	The Champagne homestead was completed. Designed by the architectural firm of Baker, Kendall, Massey & Earl, it was situated on a farm adjacent to Boschendal.
		1902	Rhodes died at his house in Muizenberg	1904	Drakenstein's role in water supply to Cape Town consolidated. Railway to the Valley made transport of deciduous fruit to Docks easier.
		1904	Cape Town Waterworks planned a pipeline from Drakenstein to Cape Town on the French Hoek Water Scheme. The South African War (Previously referred to as the Anglo-Boer War or the Great War).	1914	Rhodes Fruit Farms acquired a portion of land that contains the old mining shafts. The title deed includes reservation of the rights to all precious metals on this land.
		1910	Union of SA		
		1913	Natives Land Act limited ownership of land by Black South Africans to the 'reserves', and was the beginning of increasingly restrictive legislation.	1900	(Right) Brink series map of the Drakenstein Valley and surrounds, depicting cadastral and topographical features.
				Below (left) Alys Fane Trotter drawings of Boschendal stoep, Goede Hoop and Rhone homesteads	
				Below (right) Pemberton Drawing of the Simonsberg looking up the entrance axis to Nieuwedorp (c1900, Boschendal Private Collection)	
				 	

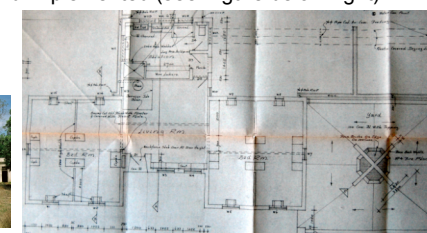


International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
1926	Balfour Declaration	1918-1919	Outbreak of Influenza caused many deaths and subsequent hardship.	1925	De Beers took over RFF and appointed an international expert in the fruit industry, Alfred Appleyard, as Managing Director with the aim of efficient consolidation and restructuring of the business operation. A jam factory and cannery were established and planned use of water resources was part of the medium term implementation for the consolidated operation.
1931	Statute of Westminster			Image (right) Appleyard at one of the new RFF dams constructed during his management (MSSA BC860) Image (below left) Oblique aerial of portion of the RFF lands taken during 1929 (MSSA BC 860) (below right) RFF Offices and Cannery at Drakenstein, and a view across Rhodes Cottage and Nieuwedorp (MSSA BC860)	
1936-1945	Second World War				
1960	South African Republic; Increasing isolation and international sanctions				
		1948	National Party came to power and a bank of legislation entrenching segregation and apartheid ensued with overwhelming consequences for South Africa and the labour and social structure of the Western Cape.		
		1950	Population Registration Act required racial classification of all South Africans.		
		1954	Group Areas Act of 1954		

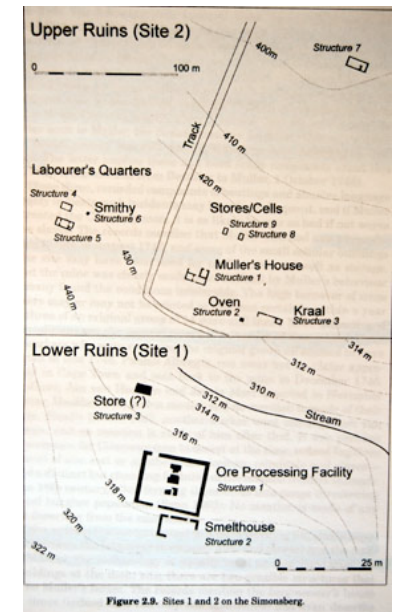






International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
		1961	Sharpsville uprisings resulted in multiple deaths.		packaged large scale export crops.
		1966	The Berg River water articulation Project began.	1960s	Johannesdal, Lanquedoc, Pniel and Kylemore declared 'Coloured' areas in terms of the Group Areas Act, illustrated in a site plan showing liquor restrictions concomitant with the declarations.
		1970s	Increase in political awareness and resistance to apartheid across the country, coupled by popularisation of the Black Consciousness movement and student protests to being taught in Afrikaans.	1968	Anglo American with De Beers purchased RFF, became Amfarms for the next 31 years. Development of cottage cluster housing typologies for farm workers, built over the next 20 years, began in 1963 (see images right).
		1976	Massive resistance to 'gutter education' culminated in the Soweto riots and country-wide political activism, and sparked extensive arrests and security police clamp-downs to quell the resistance and return the country to apartheid status quo.	1970s	Amfarms re-established the wine industry in the Valley under the Boschendal brand. Gawie and Gwen Fagan restored the Boschendal homestead and gardens to their 19 th century appearance. Original entrance to the front of Boschendal made redundant by the current access to the rear. Homestead was declared a National Monument and established as a museum open to the public, modelled on the grand European country establishments. It was period furnished to the early 19 th C with many pieces being loaned or donated to the Rhodes National Heritage Trust. Restaurant opened in 1978 in the old wine cellar, beginning the custom of Winelands restaurants serving traditional Cape cuisine, now popular with local and international visitors. Many generations of the Valley's families have been involved in the restaurant, which provided opportunities for skills training. Thembaletu 'Bantu Dormitories' plans drawn and implemented.
				1974	Municipal upgrade to all roads included the re-alignment of the road through Pniel and Boschendal and the removal of Oak trees in Pniel.
				1976	Thembaletu 'Bantu Dormitories' plans drawn and implemented (see Figure below right). Plans for the restoration of Rhone drawn by the Fagans, implemented c1979. 1978 extensions to existing 'Coloured' school.
		1980	Declaration of a State of Emergency		
		1983	Institution of Tricameral Parliament		
		1990	ANC unbanned; Nelson Mandela released	1980s	Building additions and alterations on a number of RFF sites. Expansion of restaurant tourism catering to the new demand for informal visitor experience resulted in establishment of Le Pique Nique at Boschendal. In the mid 1990s the old slave quarters were converted into a second restaurant.



International events		Local events		Drakenstein and Dwars River Valleys	
Date	Events	Date	Events	Date	Events
			from prison and date announced for first democratic elections		
		1994	First democratic elections; Nelson Mandela first democratically elected president.	1990s	State of the art red wine cellar built at Rhone to improve red wine quality and major improvements undertaken to the vineyards giving rise to wines that would win many awards e.g. the coveted SA Wine Grower of the Year award at the International Wine and Spirits Competition in the UK in 2004. Many generations of the Valley's families have worked in the wine industry in the cellar and vineyards.
		1995	Repeal of racially based legislation and introduction of legislation aimed at social and economic upliftment and justice including land reform, housing and infrastructure provision, e.g. Establishment of Security of Tenure Act (Act 62 No 62 of 1997 ESTA)	1994	Land owned by the church until 1994 was transferred to residents.
				1997	Mountain lands above Nieuwedorp and Bethlehem were conceptually delineated from the farming operations and declared nature reserves – The Simonsberg and Drakenstein Nature Reserves.
				2000	(right) Lucas' team of archaeologists surveyed the upper and lower ruins associated with the Silvermine (Lucas, 2004)
				2001	Extensions to Lanquedoc village were completed and ownership of the new and existing houses transferred to existing and retired workers of Boschendal Farmlands funded by Anglo American and the Land Affairs as part of a land reform project.
				2002	Archaeological research on the silvermine ruins and Goede Hoop homestead carried out by a team led by Dr Gavin Lucas of the Cambridge Archaeological Contracts Office.
				2003	Anglo American sells its historical landholdings in the Valley to Boschendal Ltd and Two Rivers Development Company. Conditions of sales stipulated various requirements for social and economic upliftment and conservation. This cumulated in the formulation of the Sustainable Development Initiative (SDI).



REFERENCES

- Baumann & Winter. 2005. Boschendal Heritage Impact Assessment for the Founders Estates. Unpublished Report for SAHRA.
- Da Costa, Y. & Davids, A. 1994. *Pages from Cape Muslim History*. Pietermaritzburg: Shuter & Shooter.
- Guelke, L. 1989. Freehold farmers and frontier settlers, 1657-1780. In: Elphick, R. & Giliomee, H. (eds) *The shaping of South African society 1652-1840*. Cape Town: Maskew Miller Longman.
- Kantor, P., Todeschini, F., Pistorius, P. 2005. Cape Winelands Cultural Landscape: IDAS VALLEY, Stellenbosch. Unpublished Draft 2 Conservation Plan for Public Comment prepared for the Idas Valley Heritage and Environmental Association.
- Vos, H. 2004. De Goede Hoop Farm, Dwars River Valley, Drakenstein: Historical Survey of the Owners. Unpublished Report for Boschendal Estates.
- Worden, N, van Heyningen, E. & Bickford-Smith, V. 1998. *Cape Town: the making of a city*. Cape Town: David Philip.
- Worden, N. & Crais, C. (eds.) 1994. *Breaking the Chains*. Johannesburg: Witwatersrand University Press.