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**HERITAGE IMPACT ASSESSMENT OF  
Kusa Kusa Irrigation Scheme  
Ray Nkonyeni Local Municipality, Ugu DM, KwaZulu-Natal**

Assessment and report by



**ETHEMBENI  
HERITAGE  
CULTURAL**

For  
**DELTA Built Environment Consultants**

**05 December 2016**

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## Management summary

eThembeni Cultural Heritage was appointed by Delta Built Environment Consultants (Delta BEC) to undertake a heritage impact assessment of a proposed irrigation scheme at Kusa Kusa in the Nkonyeni Local Municipality, in terms of the National Heritage Resources Act (NHRA), Act No. 25 of 1999.

The study area is situated in Mdlazi along the banks of the Mvolosi River, a tributary of the Mtamvuna. Mdlazi lies within the Vukuzithathe Traditional Authority (TA) under iNkosi Mbongeni Cele.

The topography of the general area is characterised by very steep and hilly terrain. The Mvolosi and other Mtamvuna tributary catchments' up-gradients are dominated by *Aristida* and *Sporobolus spp* sour grasslands, with greater woody and forbs elements within the incised drainage lines. Dry valley bushveld elements dominate the lower valleys. Rural homesteads, with attendant subsistence cropping with maize, vegetables and *amadumbe* (yams), are distributed either along the level crests of interfluvies or closer to the fertile alluvium in the valley bottoms. Subsistence agriculture is the primary economic activity and more traditional *imizi* have in loco cattle byres and small-stock pens.

The project entails the construction of an irrigation system to irrigate 10 ha of land. The project aims to enable emerging farmers to engage in agricultural activities and receive capacity development on the farm. The project is endorsed by the Vukuzithathe TA. The irrigation scheme requires the abstraction of water through a pipeline (1.241 km in length) from the Mtamvuna River pumping to an elevated storage tank, with a capacity of 276 m<sup>3</sup>, which then gravitates into a drainage irrigation system.

Three alternative options to be investigated entail the extraction of water through boreholes and possibly a take-off in the Mvolosi River – or both.

eThembeni staff inspected the proposed project area on 19 October 2016 in the presence of Mr Lucky Nyawose<sup>1</sup>, Chairman of the Kusakusa Agricultural Cooperative, who are the beneficiaries of the proposed project.

**We identified no heritage resources within the proposed development area.**

## CONCLUSION

We recommend that the development proceeds and have submitted this report to Amafa in fulfilment of the requirements of Section 38 the National Heritage Resources Act. The client may contact Ms Bernadet Pawandiwa at Amafa's Pietermaritzburg office in due course to enquire about the Council's decision.

If permission is granted for the development to proceed, the client is reminded that the Act requires that a developer cease all work immediately and adhere to the protocol described in Appendix A of this report should any heritage resources, as defined in the Act, be discovered during the course of development activities.

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<sup>1</sup> Mr. Lucky Nyawose. Chairman. Kusakusa Agricultural Cooperative ( Reg. No. 2010/007021/21)  
Contact No. 0782945008

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## Introduction and legislation

eThembeni Cultural Heritage was appointed by Delta Built Environment Consultants (Delta BEC) to undertake a heritage impact assessment of a proposed irrigation scheme at Kusa Kusa in the Nkonyeni Local Municipality, in terms of the National Heritage Resources Act No 25 of 1999. Section 38 (1) of the Act requires such an assessment in case of:

- (a) construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) construction of a bridge or similar structure exceeding 50 m in length; and
- (c) any development, or other activity which will change the character of an area of land, or water –
  - (i) exceeding 10 000 m<sup>2</sup> in extent;
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or
- (d) the costs of which will exceed a sum set in terms of regulations; or
- (e) any other category of development provided for in regulations.

A heritage impact assessment is not limited to archaeological artefacts, historical buildings and graves. It is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals. The NHRA defines a heritage resource as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes the following wide range of places and objects:

- (a) places, buildings, structures and equipment;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including -
  - (i) ancestral graves,
  - (ii) royal graves and graves of traditional leaders,
  - (iii) graves of victims of conflict,
  - (iv) graves of important individuals,
  - (v) historical graves and cemeteries older than 60 years, and
  - (vi) other human remains which are not covered under the Human Tissues Act, 1983 (Act No.65 of 1983 as amended);
- (h) movable objects, including -
  - (i) objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - (ii) ethnographic art and objects;
  - (iii) military objects;
  - (iv) objects of decorative art;
  - (v) objects of fine art;
  - (vi) objects of scientific or technological interest;
  - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and
  - (viii) any other prescribed categories, but excluding any object made by a living person;
- (i) battlefields;
- (j) traditional building techniques.

## Site access, description and environmental issues

The study area is situated in Mdlazi along the banks of the Mvolosi River, a tributary of the Mtamvuna. Mdlazi lies within the Vukuzithathe Traditional Authority (TA) under iNkosi Mbongeni Cele.

The topography of the general area is characterised by very steep and hilly terrain. The Mvolosi and other Mtamvuna tributary catchments' up-gradients are dominated by *Aristida* and *Sporobolus spp* sour grasslands, with greater woody and forbs elements within the incised drainage lines. Dry valley bushveld elements dominate the lower valleys. Rural homesteads, with attendant subsistence cropping with maize, vegetables and *amadumbe* (yams), are distributed either along the level crests of interfluves or closer to the fertile alluvium in the valley bottoms. Subsistence agriculture is the primary economic activity and more traditional *imizi* have in loco cattle byres and small-stock pens.

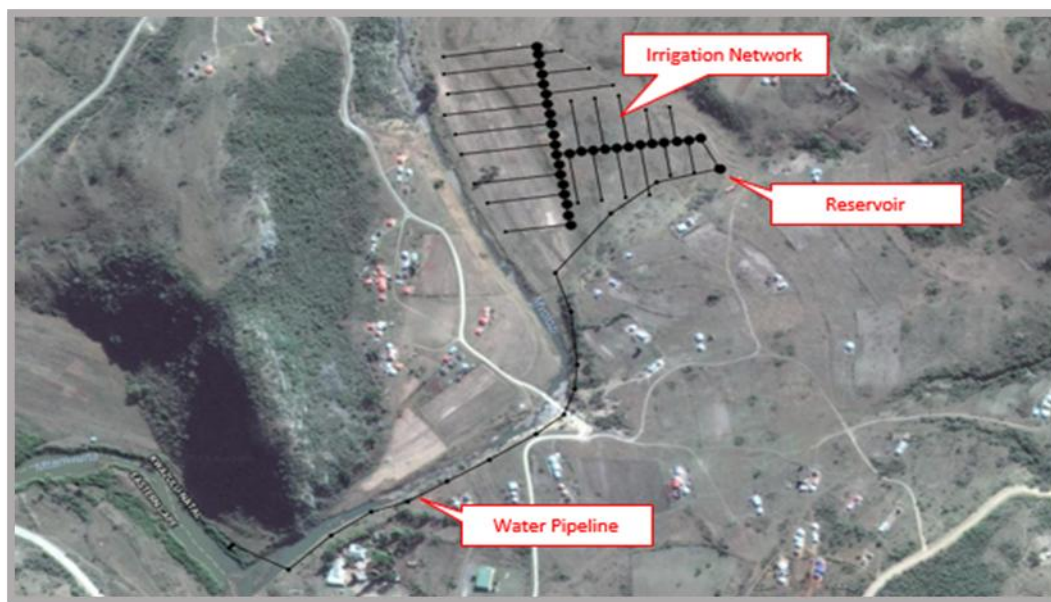
The project entails the construction of an irrigation system to irrigate 10 ha of land. The project aims to enable emerging farmers to engage in agricultural activities and receive capacity development on the farm. The project is endorsed by the Vukuzithathe TA. The irrigation scheme requires the abstraction of water through a pipeline (1.241 km in length) from the Mtamvuna River pumping to an elevated storage tank, with a capacity of 276 m<sup>3</sup>, which then gravitates into a drainage irrigation system.

The identified 10ha of land due for irrigation agriculture lies on the slip-off slope of a bend in the Mvolosi River (Centre point at 30 50.830 S; 30 04 520 E) at an elevation of some 290m amsl. Soils are deep sandy-clay colluvium resting on two palaeo-levees of the Mvolosi. The proposed areas of cultivation have previously been mechanically ploughed and ripped, although they currently lie fallow.

**Nature of proposed activities** (project information provided by DELTA BEC)

### Preferred option - extraction from the Mvolosi river

The proposed development entails the extraction of water through a pipeline (1.241 km in length) from the Mtamvuna River, pumping into an elevated storage tank with a capacity of 276 m<sup>3</sup>, which then gravitates into a drainage irrigation system. The layout plan of the preferred option is illustrated below.



**Figure 1 Preferred option for scheme layout**

### Alternative 1

This alternative option entails the extraction of water through boreholes. The number of boreholes for the required yield is currently estimated at five boreholes. A geohydrological investigation of the area shall be carried out to determine the feasibility of this option. The layout plan of alternative 1 is illustrated in the below figure.



Figure 1 Alternative 1: Boreholes

### Alternative 2 – extraction from the Mvolosi river and boreholes

This alternative option entails the extraction of water from boreholes and the Mvolosi River. The number of boreholes for the required yield is currently estimated at five boreholes. The same process of extraction using a pump will be applied. The layout plan of alternative 2 is illustrated in



figure below.

Figure 3 Alternative 2: Boreholes and Mvolosi River

## Methodology

eThembeni staff inspected the proposed project area on 19 October 2016 in the presence of Mr Lucky Nyawose<sup>2</sup>, Chairman of the Kusakusa Agricultural Cooperative, who are the beneficiaries of the proposed project.

We completed a controlled-exclusive surface survey, where 'sufficient information exists on an area to make solid and defensible assumptions and judgements about where [heritage resource] sites may and may not be' and 'an inspection of the surface of the ground, wherever this surface is visible, is made, with no substantial attempt to clear brush, turf, deadfall, leaves or other material that may cover the surface and with no attempt to look beneath the surface beyond the inspection of rodent burrows, cut banks and other exposures that are observed by accident' (King 1978).

We consulted various provincial databases, including historical, archaeological and geological sources and provide a concise summary of South Africa's pre and post-colonial history, included as Appendix A. We assessed the value and significance of heritage resources in terms the criteria contained in Appendix B. Culturally significant landscapes were assessed according to the criteria in Appendix C.

The client has provided a map of the area, loaded to SAHRIS separately. Geographic coordinates were obtained with a handheld Garmin Montana 650 global positioning unit. Photographs were taken with a Nikon Coolpix S200 digital camera. Appendix D contains a statement of independence and a summary of our ability to undertake this heritage impact assessment.

The assumptions and limitations of this heritage impact assessment are as follows:

- We have assumed that the description of the proposed project, provided by the client, is accurate.
- We have assumed that the public consultation process undertaken as part of the Environmental Impact Assessment is sufficient and adequate and does not require repetition as part of the heritage impact assessment.
- Soil surface visibility was moderate. Heritage resources might be present below the surface or in areas of dense vegetation and we remind the client that the Act requires that a developer cease all work immediately and notify Amafa should any heritage resources, as defined in the Act, be discovered during the course of development activities.
- No subsurface investigation (including excavations or sampling) were undertaken, since a permit from Amafa aKwaZulu-Natali is required to disturb a heritage resource.

## Observations and recommendations

No development activities associated with the proposed project had begun at the time of our visit, in accordance with provincial heritage legislation.

### ⇒ **Places, buildings, structures and equipment**

None were identified within the proposed development area.

### ⇒ **Places to which oral traditions are attached or which are associated with living heritage**

None were identified within the proposed development area.

### ⇒ **Historical settlements and townscapes**

None were identified within the proposed development area.

<sup>2</sup> Mr. Lucky Nyawose. Chairman. Kusakusa Agricultural Cooperative ( Reg. No. 2010/007021/21)  
Contact No. 0782945008



⇒ **Landscapes and natural features**

None were identified within the proposed development area.

⇒ **Geological sites of scientific or cultural importance**

None were identified within the proposed development area.

⇒ **Archaeological and palaeontological sites**

None were identified within the proposed development area.

⇒ **Graves and burial grounds**

None were identified within the proposed development area.

⇒ **Movable objects excluding any object made by a living person**

None were identified within the proposed development area.

⇒ **Battlefields**

None were identified within the proposed development area.

⇒ **Traditional building techniques**

None were identified within the proposed development area.

No heritage resources were identified within the proposed irrigation scheme although we are alerted to the fact that Early Iron Age (EIA) settlements have been previously reported in adjacent river basins to the south of the Mtamvuna basin<sup>3</sup> (Umzimvubu Basin and tributaries). Should EIA archaeological material have been present this would have been turned up by the disc-ploughing that has occurred.

No graves occur in the immediate vicinity of the agricultural lands. Observed graves occur within or immediately adjacent to the historically more recent homesteads and are attended by next-of-kin.

The SAHRIS Palaeosensitivity Map indicates that the area has moderate sensitivity (green). However, the study area lies on an interface of Msikaba Sandstones and Dwyka tillites that have low palaeontological potential<sup>4</sup>. The proposed agricultural activities on deep colluviums will have no impact on the underlying lithology. No further palaeontological studies are thus justified.

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<sup>3</sup> Feely, J.M. 1987. *The early farmers of Transkei, southern Africa: before A.D. 1870*. Oxford: B.A.R.  
Feely, J.M. & Bell-Cross, S.M. 2011. The distribution of Early Iron Age settlement in the Eastern Cape: some historical and ecological implications. *South African Archaeological Bulletin* **66**: 105–12.

<sup>4</sup> Dr John Almond [Palaeontologist at *Natura Viva* cc. [naturaviva@universe.co.za](mailto:naturaviva@universe.co.za)]



**Summary of findings in terms of Section 38 (3) of the NHRA:**

**(a) the identification and mapping of all heritage resources in the area affected**

None.

**(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations**

Not applicable.

**(c) an assessment of the impact of development on such heritage resources**

Not applicable.

**(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development**

Not applicable.

**(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources**

Not applicable.

**(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives**

Not applicable.

**(g) plans for mitigation of any adverse effects during and after completion of the proposed development**

If permission is granted for development to proceed, the client is reminded that the Act requires that a developer cease all work immediately and notify Amafa should any heritage resources, as defined in the Act, be discovered during the course of development activities. See Appendix A.

**Conclusion**

We recommend that the development proceed with no further heritage mitigation and have submitted this report to Amafa aKwaZulu-Natali in fulfilment of the requirements of Section 38 of the NHRA.

The client may contact Mrs Bernadet Pawandiwa at Amafa's Pietermaritzburg office in due course to enquire about the Council's Exco decision.

([Bernadetp@amafapmb.co.za](mailto:Bernadetp@amafapmb.co.za) :Telephone 033 3946 543).

## APPENDIX A

**Protocol for the Identification, Protection and Recovery of Heritage Resources during Construction and Operation**

It is possible that aboveground or sub-surface heritage resources could be encountered during the construction phase of this project. The Environmental Control Officer and all other persons responsible for site management and excavation should be aware that indicators of sub-surface sites could include:

- Ash deposits (unnaturally grey appearance of soil compared to the surrounding substrate);
- Bone concentrations, either animal or human;
- Ceramic fragments, including potsherds;
- Stone concentrations that appear to be formally arranged (may indicate the presence of an underlying burial, or represent building/structural remains); and
- Fossilised remains of fauna and flora, including trees.

In the event that such indicator(s) of heritage resources are identified, the following actions should be taken immediately:

- All construction within a radius of at least 20m of the indicator should cease. This distance should be increased at the discretion of supervisory staff if heavy machinery or explosives could cause further disturbance to the suspected heritage resource.
- This area must be marked using clearly visible means, such as barrier tape, and all personnel should be informed that it is a no-go area.
- A guard should be appointed to enforce this no-go area if there is any possibility that it could be violated, whether intentionally or inadvertently, by construction staff or members of the public.
- No measures should be taken to cover up the suspected heritage resource with soil, or to collect any remains such as bone or stone.
- If a heritage practitioner has been appointed to monitor the project, s/he should be contacted and a site inspection arranged as soon as possible.
- If no heritage practitioner has been appointed to monitor the project, the head of archaeology at Amafa's Pietermaritzburg office should be contacted; telephone 033 3946 543).
- The South African Police Services should be notified by an Amafa staff member or an independent heritage practitioner if human remains are identified. No SAPS official may disturb or exhume such remains, whether of recent origin or not.
- All parties concerned should respect the potentially sensitive and confidential nature of the heritage resources, particularly human remains, and refrain from making public statements until a mutually agreed time.
- Any extension of the project beyond its current footprint involving vegetation and/or earth clearance should be subject to prior assessment by a qualified heritage practitioner, taking into account all information gathered during this initial HIA.

## APPENDIX B

**Assessment of heritage resource value and significance**

Heritage resources are significant only to the extent that they have public value, as demonstrated by the following guidelines for determining site significance developed by Heritage Western Cape (HWC 2007) and utilised during this assessment.

**Grade I Sites (National Heritage Sites)**

Regulation 43 Government Gazette no 6820. 8 No. 24893 30 May 2003, Notice No. 694 states that:

Grade I heritage resources are heritage resources with qualities so exceptional that they are of special national significance should be applied to any heritage resource which is

- a) Of outstanding significance in terms of one or more of the criteria set out in section 3(3) of the NHRA;
- b) Authentic in terms of design, materials, workmanship or setting; and is of such universal value and symbolic importance that it can promote human understanding and contribute to nation building, and its loss would significantly diminish the national heritage.

1. Is the site of outstanding national significance?
2. Is the site the best possible representative of a national issue, event or group or person of national historical importance?
3. Does it fall within the proposed themes that are to be represented by National Heritage Sites?
4. Does the site contribute to nation building and reconciliation?
5. Does the site illustrate an issue or theme, or the side of an issue already represented by an existing National Heritage Site – or would the issue be better represented by another site?
6. Is the site authentic and intact?
7. Should the declaration be part of a serial declaration?
8. Is it appropriate that this site be managed at a national level?
9. What are the implications of not managing the site at national level?

**Grade II Sites (Provincial Heritage Sites)**

Regulation 43 Government Gazette no 6820. 8 No. 24893 30 May 2003, Notice No. 694 states that:

Grade II heritage resources are those with special qualities which make them significant in the context of a province or region and should be applied to any heritage resource which -

- a) is of great significance in terms of one or more of the criteria set out in section 3(3) of the NHRA; and
- b) enriches the understanding of cultural, historical, social and scientific development in the province or region in which it is situated, but that does not fulfil the criteria for Grade 1 status.

Grade II sites may include, but are not limited to –

- (a) places, buildings, structures and immovable equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites; and
- (g) graves and burial grounds.

The cultural significance or other special value that Grade II sites may have, could include, but are not limited to –

- (a) its importance in the community or pattern of the history of the province;
- (b) the uncommon, rare or endangered aspects that it possess reflecting the province's natural or cultural heritage
- (c) the potential that the site may yield information that will contribute to an understanding of the province's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of the province's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group in the province;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period in the development or history of the province;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; and
- (h) its strong or special association with the life or work of a person, group or organization of importance in the history of the province.

### **Grade III (Local Heritage Resources)**

Regulation 43 Government Gazette no 6820. 8 No. 24893 30 May 2003, Notice No. 694 states that:

Grade III heritage status should be applied to any heritage resource which

- (a) fulfils one or more of the criteria set out in section 3(3) of the NHRA; or
- (b) in the case of a site contributes to the environmental quality or cultural significance of a larger area which fulfils one of the above criteria, but that does not fulfill the criteria for Grade 2 status.

### **Grade IIIA**

This grading is applied to buildings and sites that have sufficient intrinsic significance to be regarded as local heritage resources; and are significant enough to warrant any alteration being regulated. The significances of these buildings and/or sites should include at least some of the following characteristics:

- Highly significant association with a
  - historic person
  - social grouping
  - historic events
  - historical activities or roles
  - public memory
- Historical and/or visual-spatial landmark within a place
- High architectural quality, well-constructed and of fine materials
- Historical fabric is mostly intact (this fabric may be layered historically and/or past damage should be easily reversible)
- Fabric dates to the early origins of a place
- Fabric clearly illustrates an historical period in the evolution of a place
- Fabric clearly illustrates the key uses and roles of a place over time
- Contributes significantly to the environmental quality of a Grade I or Grade II heritage resource or a conservation/heritage area

Such buildings and sites may be representative, being excellent examples of their kind, or may be rare: as such they should receive maximum protection at local level.

### Grade IIIB

This grading is applied to buildings and/or sites of a marginally lesser significance than grade IIIA; and such marginally lesser significance argues against the regulation of internal alterations. Such buildings and sites may have similar significances to those of a grade IIIA building or site, but to a lesser degree. Like grade IIIA buildings and sites, such buildings and sites may be representative, being excellent examples of their kind, or may be rare, but less so than grade IIIA examples: as such they should receive less stringent protection than grade IIIA buildings and sites at local level and internal alterations should not be regulated (in this context).

### Grade IIIC

This grading is applied to buildings and/or sites whose significance is, in large part, a significance that contributes to the character or significance of the environs. These buildings and sites should, as a consequence, only be protected and regulated if the significance of the environs is sufficient to warrant protective measures. In other words, these buildings and/or sites will only be protected if they are within declared conservation or heritage areas.

### Assessment of development impacts

A heritage resource impact may be defined broadly as the net change, either beneficial or adverse, between the integrity of a heritage site with and without the proposed development. Beneficial impacts occur wherever a proposed development actively protects, preserves or enhances a heritage resource, by minimising natural site erosion or facilitating non-destructive public use, for example. More commonly, development impacts are of an adverse nature and can include:

- destruction or alteration of all or part of a heritage site;
- isolation of a site from its natural setting; and / or
- introduction of physical, chemical or visual elements that are out of character with the heritage resource and its setting.

Beneficial and adverse impacts can be direct or indirect, as well as cumulative, as implied by the aforementioned examples. Although indirect impacts may be more difficult to foresee, assess and quantify, they must form part of the assessment process. The following assessment criteria have been used to assess the impacts of the proposed development on identified heritage resources:

Criteria	Rating Scales	Notes
Nature	Positive	An evaluation of the type of effect the construction, operation and management of the proposed development would have on the heritage resource.
	Negative	
	Neutral	
Extent	Low	Site-specific, affects only the development footprint.
	Medium	Local (limited to the site and its immediate surroundings, including the surrounding towns and settlements within a 10 km radius);
	High	Regional (beyond a 10 km radius) to national.
Duration	Low	0-4 years (i.e. duration of construction phase).
	Medium	5-10 years.
	High	More than 10 years to permanent.
Intensity	Low	Where the impact affects the heritage resource in such a way that its significance and value are minimally affected.
	Medium	Where the heritage resource is altered and its significance and value are measurably reduced.
	High	Where the heritage resource is altered or destroyed to the extent that its significance and value cease to exist.
Potential for impact on irreplaceable resources	Low	No irreplaceable resources will be impacted.
	Medium	Resources that will be impacted can be replaced, with effort.
	High	There is no potential for replacing a particular vulnerable resource that will be impacted.

Criteria	Rating Scales	Notes
Consequence a combination of extent, duration, intensity and the potential for impact on irreplaceable resources).	Low	A combination of any of the following: - Intensity, duration, extent and impact on irreplaceable resources are all rated low. - Intensity is low and up to two of the other criteria are rated medium. - Intensity is medium and all three other criteria are rated low.
	Medium	Intensity is medium and at least two of the other criteria are rated medium.
	High	Intensity and impact on irreplaceable resources are rated high, with any combination of extent and duration. Intensity is rated high, with all of the other criteria being rated medium or higher.
Probability (the likelihood of the impact occurring)	Low	It is highly unlikely or less than 50 % likely that an impact will occur.
	Medium	It is between 50 and 70 % certain that the impact will occur.
	High	It is more than 75 % certain that the impact will occur or it is definite that the impact will occur.
Significance (all impacts including potential cumulative impacts)	Low	Low consequence and low probability. Low consequence and medium probability. Low consequence and high probability.
	Medium	Medium consequence and low probability. Medium consequence and medium probability. Medium consequence and high probability. High consequence and low probability.
	High	High consequence and medium probability. High consequence and high probability.

## APPENDIX C

### Cultural Landscapes

The American National Parks Services sets out various criteria for the identification and management of cultural landscapes:

'Cultural landscapes are complex resources that range from large rural tracts covering several thousand acres to formal gardens of less than an acre. Natural features such as landforms, soils and vegetation are not only part of the cultural landscape, they provide the framework within which it evolves. In the broadest sense, a cultural landscape is a reflection of human adaptation and use of settlement, land use, systems of circulation and the natural resources and is often expressed in the way land is organised and divided, patterns of types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls and vegetation, and by use reflecting cultural values and traditions.

'Identifying the character-defining features in a landscape and understanding them in relation to each other and to significant historic events, trends and persons allows us to read the landscape as a cultural resource. In many cases, these features are dynamic and change over time. In many cases, too, historical significance may be ascribed to more than one period in a landscape's physical and cultural evolution.

'Cultural landscape management involves identifying the type and degree of change that can occur while maintaining the character-defining features. The identification and management of an appropriate level of change in a cultural landscape is closely related to its significance. In a landscape significant for its association with a specific style, individual, trend or event, change may diminish its integrity and needs to be carefully monitored and controlled. In a landscape significant for the pattern of use that has evolved, physical change may be essential to the continuation of the use. In the latter case, the focus should be on perpetuating the use while maintaining the general character and feeling of the historic period(s), rather than on preserving a specific appearance.

'A cultural landscape is a geographic area, including both natural and cultural resources, associated with a historic event, activity or person. The National Park Services recognises four cultural landscape categories: historic designed landscapes, historic vernacular landscapes, historic sites and ethnographic landscapes. These categories are helpful in distinguishing the values that make landscapes cultural resources and in determining how they should be treated, managed and interpreted...

'The four cultural landscape categories are not mutually exclusive. A landscape may be associated with a significant event, include designed or vernacular characteristics and be significant to a specific cultural group.'



## APPENDIX D

**A History of South Africa until 1902**

The following information was obtained from the website

<http://www.britannica.com/EBchecked/topic/555568/South-Africa/44057/Pastoralism-and-early-agriculture#tab=active~checked%2Citems~checked&title=South%20Africa%20%3A%3A%20Pastoralism%20and%20early%20agriculture%20--%20Britannica%20Online%20Encyclopedia>

The authors of this document are Colin J. Bundy, Julian R. D. Cobbing, Martin Hall and Leonard Monteath Thompson.

The prehistory and history of South Africa span nearly the entire known existence of human beings and their ancestors—some three million years or more—and include the wandering of small bands of hominins through the savanna, the inception of herding and farming as ways of life, and the construction of large urban centres. Through this diversity of human experience, several trends can be identified: technological and economic change, shifting systems of belief, and, in the earlier phases of humanity, the interplay between physical evolution and learned behaviour, or culture. Over much of this time frame, South Africa's past is also that of a far wider area, and only in the last few centuries has this southernmost country of Africa had a history of its own. This article focuses on the country of South Africa.

**The Stone Age**

The earliest creatures that can be identified as ancestors of modern humans are classified as australopithecines (literally “southern apes”). The first specimen of these hominins to be found (in 1924) was the skull of a child from a quarry site at Taung in what is now the North-West province. Subsequently more australopithecine fossils were discovered in limestone caves farther northeast at Sterkfontein, Swartkrans, and Kromdraai (collectively designated a World Heritage site in 1999), where they had originally been deposited by predators and scavengers.

South Africa's prehistory has been divided into a series of phases based on broad patterns of technology. The primary distinction is between a reliance on chipped and flaked stone implements (the Stone Age) and the ability to work iron (the Iron Age). Spanning a large proportion of human history, the Stone Age in Southern Africa is further divided into the Early Stone Age, or Paleolithic Period (about 2,500,000–150,000 years ago), the Middle Stone Age, or Mesolithic Period (about 150,000–30,000 years ago), and the Late Stone Age, or Neolithic Period (about 30,000–2,000 years ago). The simple stone tools found with australopithecine fossil bones fall into the earliest part of the Early Stone Age.

- The Early Stone Age

Most Early Stone Age sites in South Africa can probably be connected with the hominin species known as *Homo erectus*. Simply modified stones, hand axes, scraping tools, and other bifacial artifacts had a wide variety of purposes, including butchering animal carcasses, scraping hides, and digging for plant foods. Most South African archaeological sites from this period are the remains of open camps, often by the sides of rivers and lakes, although some are rock shelters, such as Montagu Cave in the Cape region.

Change occurred slowly in the Early Stone Age; for more than a million years and over a wide geographic area, only slight differences existed in the forms of stone tools. The slow alterations in hominins' physical appearance that took place over the same time period, however, have allowed physical anthropologists to recognize new species in the genus *Homo*. An archaic form of *H. sapiens* appeared about 500,000 years ago; important specimens belonging to this physical type have been found at Hopefield in Western Cape province and at the Cave of Hearths in Mpumalanga province.

- The Middle Stone Age

The long episode of cultural and physical evolution gave way to a period of more rapid change about 200,000 years ago. Hand axes and large bifacial stone tools were replaced by stone flakes and blades that

were fashioned into scrapers, spear points, and parts for hafted, composite implements. This technological stage, now known as the Middle Stone Age, is represented by numerous sites in South Africa.

Open camps and rock overhangs were used for shelter. Day-to-day debris has survived to provide some evidence of early ways of life, although plant foods have rarely been preserved. Middle Stone Age bands hunted medium-sized and large prey, including antelope and zebra, although they tended to avoid the largest and most dangerous animals, such as the elephant and the rhinoceros. They also ate seabirds and marine mammals that could be found along the shore and sometimes collected tortoises and ostrich eggs in large quantities. The rich archaeological deposits of Klasies River Mouth on the Cape coast west of Port Elizabeth have preserved the first known instance of shellfish being used as a food source.

Klasies River Mouth has also provided important evidence for the emergence of anatomically modern humans. Some of the human skeletons from the lower levels of this site, possibly 115,000 years old, are decidedly modern in form. Fossils of comparable age have been excavated at Border Cave, in the mountainous region between KwaZulu-Natal province and Swaziland.

- The Late Stone Age

Basic toolmaking techniques began to undergo additional change about 40,000 years ago. Small finely worked stone implements known as microliths became more common, while the heavier scrapers and points of the Middle Stone Age appeared less frequently. Archaeologists refer to this technological stage as the Late Stone Age. The numerous collections of stone tools from South African archaeological sites show a great degree of variation through time and across the subcontinent.

The remains of plant foods have been well preserved at such sites as Melkhoutboom Cave, De Hangen, and Diepkloof in the Cape region. Animals were trapped and hunted with spears and arrows on which were mounted well-crafted stone blades. Bands moved with the seasons as they followed game into higher lands in the spring and early summer months, when plant foods could also be found. When available, rock overhangs became shelters; otherwise, windbreaks were built. Shellfish, crayfish, seals, and seabirds were also important sources of food, as were fish caught on lines, with spears, in traps, and possibly with nets.

Dating from this period are numerous engravings on rock surfaces, mostly on the interior plateau, and paintings on the walls of rock shelters in the mountainous regions, such as the Drakensberg and Cederberg ranges. The images were made over a period of at least 25,000 years. Although scholars originally saw the South African rock art as the work of exotic foreigners such as Minoans or Phoenicians or as the product of primitive minds, they now believe that the paintings were closely associated with the work of medicine men, shamans who were involved in the well-being of the band and often worked in a state of trance. Specific representations include depictions of trance dances, metaphors for trance such as death and flight, rainmaking, and control of the movement of antelope herds.

- Pastoralism and early agriculture

New ways of living came to South Africa about 2,000 years ago. Until that time, human communities had survived by gathering plant foods and by hunting, trapping, and scavenging for meat, but with the introduction of agriculture—arguably the single most important event in world history—people began to make use of domesticated animals and plants. This in turn led to a slow but steady rise in population and to more complex political and religious organizations, among other things. Crops could be grown and cattle, sheep, and goats herded near permanent villages and towns in the east, where rainfall was adequate. In the more arid west, domestic livestock were kept by nomadic pastoralists, who moved over wide territories with their flocks and herds.

Although the origin of nomadic pastoralism in South Africa is still obscure, linguistic evidence points to northern Botswana as a probable source. The linguistic evidence is supported by finds of sheep bones and pottery from Bambata Cave in southwestern Zimbabwe that have been dated to about 150 BCE. Whether new communities moved into South Africa with their flocks and herds or whether established hunter-gatherer bands took up completely new ways of living remains unclear. In any case, the results of archaeological

excavations have shown that sheep were being herded fairly extensively by the first few centuries ACE in eastern and western parts of the Cape and probably in the northern Cape as well.

While traces of ancient herding camps tend to be extremely rare, one of the best-preserved finds is at Kasteelberg, on the southwest coast near St. Helena Bay. Pastoralists there kept sheep, hunted seals and other wild animals, and gathered shellfish, repeatedly returning to the same site for some 1,500 years. Such communities were directly ancestral to the Khoekhoe (also spelled Khoikhoi) herders who encountered European settlers at the Cape of Good Hope in the mid-17th century.

The archaeological traces of farmers in the eastern regions of South Africa are more substantial. The earliest sites date to the 3rd century ACE, although farming was probably already well established by this time. Scatters of potsherds with distinctive incised decoration mark early village locations in Mpumalanga and parts of KwaZulu-Natal.

## The Iron Age

Because the first farmers had knowledge of ironworking, their archaeological sites are characterized as Iron Age (c. ACE 200). New groups of people arriving in South Africa at that time had strong connections to East Africa. They were directly ancestral to the Bantu-speaking peoples who form the majority of South Africa's population today.

- Iron Age sites

Early Iron Age farmers grew crops, cutting back the vegetation with iron hoes and axes, and herded cattle and sheep. They heavily supplemented farming by gathering wild plant foods, engaging in some hunting, and collecting shellfish if they lived near enough to the coast. Where conditions for agriculture were favourable, such as in the uThukela River valley in the east, villages grew to house several hundred people. Some trade existed between groups of farmers—evidence for specialization in salt making has been found in the northeast—and with the hunter-gatherer bands that continued to occupy most parts of South Africa. Finely made life-size ceramic heads found near the city of Lydenburg (now Mashishing) in eastern South Africa and dated to the 7th century ACE are all that remains of the people who once inhabited this region.

Early Iron Age villages were built in low-lying areas, such as river valleys and the coastal plain, where forests and savannas facilitated shifting (slash-and-burn) agriculture. From the 11th century, however, in the period conventionally known as the Late Iron Age, farming communities began to settle the higher-lying grasslands. It has not been established whether these new communities were inhabited by invaders or reflected the diffusion of new knowledge to existing populations. In many areas the new communities started making different forms of pottery and built villages out of stone. Most probably these and other changes in patterns of behaviour reflect the increasing importance of cattle in economic life.

- First urban centres

Other changes came in the north. Arab traders established small settlements on the Tanzanian and Mozambican coasts in their search for ivory, animal skins, and other exotica. The trade beads they offered in return began to reach villages in the interior, the first indications that the more complex economic and social structures associated with long-distance trade were developing. The arid Limpopo River valley, avoided by the earliest farmers, developed as a trade route. Sites such as Pont Drift (c. 800–1100) and Schroda (dated to the 9th century) show that their occupants were wealthy in both livestock and trade beads.

The Limpopo River valley was also the setting in which Bambandyanalo and Mapungubwe developed as South Africa's first urban centres during the 11th century. Starting as a large village like Schroda and Pont Drift, Mapungubwe rapidly developed into a town of approximately 10,000 people. Differences in status were clearly demarcated: the elite lived and were buried at the top of the stark sandstone hill at the town's centre, while the rest of the population lived in the valley below. Hilltop graves contained lavish burial goods, including a carefully crafted gold rhinoceros and evidence of specialized crafts such as bone and ivory working. Bambandyanalo and Mapungubwe were abandoned after the 13th century after having been

occupied for several hundred years. The trade connections that the Limpopo valley offered were taken over by Great Zimbabwe, farther to the north.

- Europeans in South Africa

The first Portuguese ships rounded the Cape of Good Hope in 1488, their occupants intent on gaining a share of the lucrative Arab trade with the East. Over the following century, numerous vessels made their way around the South African coast, but the only direct African contacts came with the bands of shipwreck survivors who either set up camp in the hope of rescue or tried to make their way northward to Portuguese settlements in present-day Mozambique. Both the British and the Dutch challenged the Portuguese control of the Cape sea route from the early 17th century. The British founded a short-lived settlement at Table Bay in 1620, and in 1652 the Dutch East India Company set up a small garrison under the slopes of Table Mountain for provisioning their fleets.

### **Settlement of the Cape Colony**

The Dutch East India Company, always mindful of unnecessary expense, did not intend to establish more than a minimal presence at the southernmost part of Africa. Because farming beyond the shores of Table Bay proved necessary, however, nine men were released from their contracts with the company and granted land along the Liesbeek River in 1657. The company made it clear that the Khoekhoe were not to be enslaved, so, beginning in that same year, slaves arrived in the Cape from West and East Africa, India, and the Malay Peninsula. By the end of the century, the imprint of Dutch colonialism in South Africa was clear, with settlers, aided by increasing numbers of slaves, growing wheat, tending vineyards, and grazing their sheep and cattle from the Cape peninsula to the Hottentots Holland Mountains some 30 miles (50 km) away. A 1707 census of the Dutch at the Cape listed 1,779 settlers owning 1,107 slaves.

In the initial years of Dutch settlement at the Cape, pastoralists had readily traded with the Dutch. However, as the garrison's demand for cattle and sheep continued to increase, the Khoekhoe became more wary. The Dutch offered tobacco, alcohol, and trinkets for livestock. Numerous conflicts followed, and, beginning in 1713, many Khoekhoe communities were ravaged by smallpox. At the same time, colonial pastoralists—the Boers, also called trekboers—began to move inland beyond the Hottentots Holland Mountains with their own herds. The Khoekhoe chiefdoms were largely decimated by the end of the 18th century, their people either dead or reduced to conditions close to serfdom on colonial farms. The San—small bands of hunter-gatherers—fared no better. Pushed back into marginal areas, they were forced to live by cattle raiding, justifying in colonial eyes their systematic eradication. The men were slaughtered, and the women and children were taken into servitude.

The trekboers constantly sought new land, and they and their families spread northeast as well as north, into the grasslands that long had been occupied by African farmers. For many generations these farmers had lived in settlements concentrated along the low ridges that break the monotony of the interior plateau. While it is difficult to make population estimates, it is thought that some of the larger villages could have housed several hundred people. Cattle were held in elaborately built stone enclosures, the ruins of which survive today across a large part of Free State province and in the higher areas north of the Vaal River. Extensive exchange networks brought iron for hoes and spears from specialized manufacturing centres in the Mpumalanga Lowveld and the deep river gorges of KwaZulu-Natal.

Thus, by the closing decades of the 18th century, South Africa had fallen into two broad regions: west and east. Colonial settlement dominated the west, including the winter rainfall region around the Cape of Good Hope, the coastal hinterland northward toward the present-day border with Namibia, and the dry lands of the interior. Trekboers took increasingly more land from the Khoekhoe and from remnant hunter-gatherer communities, who were killed, were forced into marginal areas, or became labourers tied to the farms of their new overlords. Indigenous farmers controlled both the coastal and valley lowlands and the Highveld of the interior in the east, where summer rainfall and good grazing made mixed farming economies possible.

Cape Town was developing into South Africa's major urban centre, although it took many years for it to equal the size that Mapungubwe had attained some five centuries earlier. The initial grid of streets had been expanded and linked the company's garden to the new fortress that overlooked Table Bay. Houses featuring flat roofs, ornate pediments, and symmetrical facades sheltered officials, merchants, and visitors en route between Europe and the East. A governor and council administered the town and colony. While the economy was in principle directed by the interests of the Dutch East India Company, in practice corruption and illegal trading were dominant forces. Both the town and the colony existed in large part because of slaves, who by now outnumbered their owners.

### **Growth of the colonial economy**

From 1770 to 1870 the region became more fully integrated into the world capitalist economy. Trekboers, who were weakly controlled by the Dutch East India Company, advanced across the semidesert Karoo of the central Cape and collided with African agricultural peoples along a line running from the lower Vaal and middle Orange river valleys to the sea around the Gamtoos River (west of modern Port Elizabeth). These agriculture-based African societies proved resilient but, even at their height in the 1860s, were unable to unite completely enough to expel the Europeans.

The decisive moment for the colony occurred in 1806 when Britain seized Cape Colony during the Napoleonic Wars. Initially the colony's importance was related to its function as a strategic base to protect Britain's developing empire in India. In the next few years, however, it also served as a market, a source of raw materials, and an outlet for emigration from Britain.

African societies after the 1760s were increasingly affected by ivory and slave traders operating from Delagoa Bay, Inhambane, and the lower Zambezi River in the northeast as well as by traders and raiders based in the Cape to the south. In response to these invasions, the farming communities created a number of sister states different in structure, scale, and military capacity from anything that had existed before. The Pedi and Swazi in the eastern Highveld, the Zulu south of the Pongola River, the Sotho to the east of the Caledon River valley, the Gaza along the lower Limpopo, and the Ndebele in present-day southwestern Zimbabwe proved to be the most successful.

The areas of the western Cape with the longest history of settlement by Europeans had evolved an agricultural economy based on wheat farming and viticulture, worked by imported slave labour. Slaves were treated harshly, and punishments for slaves who assaulted Europeans were brutal—one of the most heinous being death by impalement. Escaped slaves formed groups called Maroons—small self-sufficient communities—or fled into the interior. Because slave birth rates were low and settler numbers were increasing, in the 1780s the Dutch stepped up the enslavement of surviving Khoe (also spelled Khoi; pejoratively called Hottentots) to help run their farms. Those Khoe who could escape Dutch subjugation joined Xhosa groups in a major counteroffensive against colonialism in 1799–1801, and there were slave rebellions in the outskirts of Cape Town in 1808 and 1825.

The Dutch refusal to grant citizenship and land rights to the "Coloured" offspring of unions between Europeans and Khoe or slaves produced an aggrieved class of people, known as Bastards (or Bastards), who were Christian, spoke Dutch, and had an excellent knowledge of horses and firearms. Many fled north toward and over the Orange River in search of land and trading opportunities. After merging with independent Khoe groups, such as the Kora, they formed commando states under warlords, three of the more successful being the Bloem, Kok, and Barends families, who were persuaded by missionaries in the early 19th century to change their name to Griqua. By the 1790s they were trading with and raiding local African communities such as the Rolong, Tlhaping, Hurutshe, and Ngwaketse. For self-defense some of these African communities formed larger groupings that competed against each other in their quest to control trade routes going south to the Cape and east to present-day Mozambique.

The Portuguese and also some British, French, Americans, and Arabs traded beads, brass, cloth, alcohol, and firearms along the southeast coast in return for ivory, slaves, cattle, gold, wax, and skins. During the late

18th century, large volumes of ivory were exported annually from Delagoa Bay, and slaves were taken from the Komati and Usutu (a major tributary of the Maputo) river regions and sent to the Mascarene Islands in the Indian Ocean and to Brazil to work on sugarcane and coffee plantations. By 1800 trade routes linked Delagoa Bay and coastal trade routes with the central interior.

European trade precipitated structural transformation within societies inland of Delagoa Bay. Warlords reorganized military institutions to hunt elephants and slaves. Profits from this trade enhanced the warlords' ability to disperse patronage, attract followers, and raise military potential and, in turn, their capacity to dominate land, people, and cattle. Near the bay, Tembe and Maputo were already powerful states by the 1790s. To the west of the coastal lowlands emerged the Maroteng of Thulare, the Dlamini of Ndvungunye, and the Hlubi of Bhungane. Between the Pongola and Tugela rivers evolved the Mthethwa of Dingiswayo south of Lake St. Lucia, the Ndwandwe of Zwide, the Qwabe of Phakatwayo, the Chunu of Macingwane, and, south of the Tugela, the Cele and Thuli. Several groups—for example, the Mthethwa, Ndwandwe, and Qwabe—later merged with the Zulu. These groups competed to dominate trade and became more militarized the closer they were to the Portuguese base.

The Cape Colony had spawned the subcolonies of Natal, the Orange Free State, and the Transvaal by the 1860s. European settlement advanced to the edges of the Kalahari region in the west, the Drakensberg and Natal coast in the east, and the tsetse-fly- and mosquito-ridden Lowveld along the Limpopo River valley in the northeast. Armed clashes erupted over land and cattle, such as those between the Boers and various Xhosa groups in the southeast beginning in the 1780s, and Africans lost most of their land and were henceforth forced to work for the settlers. The population of European settlers increased from some 20,000 in the 1780s to about 300,000 in the late 1860s. Although it is difficult to accurately estimate the African population, it probably numbered somewhere between two and four million.

### **Increased European presence (c. 1810-35)**

#### ○ British occupation of the Cape

When Great Britain went to war with France in 1793, both countries tried to capture the Cape so as to control the important sea route to the East. The British occupied the Cape in 1795, ending the Dutch East India Company's role in the region. Although the British relinquished the colony to the Dutch in the Treaty of Amiens (1802), they reannexed it in 1806 after the start of the Napoleonic Wars. The Cape became a vital base for Britain prior to the opening of the Suez Canal in 1869, and the Cape's economy was meshed with that of Britain. To protect the developing economy there, Cape wines were given preferential access to the British market until the mid-1820s. Merino sheep were introduced, and intensive sheep farming was initiated in order to supply wool to British textile mills.

The infrastructure of the colony began to change: English replaced Dutch as the language of administration; the British pound sterling replaced the Dutch rix-dollar; and newspaper publishing began in Cape Town in 1824. After Britain began appointing colonial governors, an advisory council for the governor was established in 1825, which was upgraded to a legislative council in 1834 with a few "unofficial" settler representatives. A virtual freehold system of landownership gradually replaced the existing Dutch tenant system, under which European colonists had paid a small annual fee to the government but had not acquired land ownership.

A large group of British settlers arrived in 1820; this, together with a high European birth rate and wasteful land usage, produced an acute land shortage, which was alleviated only when the British acquired more land through massive military intervention against Africans on the eastern frontier. Until the 1840s the British vision of the colony did not include African citizens (referred to pejoratively by the British as "Kaffirs"), so, as Africans lost their land, they were expelled across the Great Fish River, the unilaterally proclaimed eastern border of the colony.

The first step in this process included attacks in 1811–12 by the British army on the Xhosa groups, the Gqunukhwebe and Ndlambe. An attack by the Rharhabe-Xhosa on Graham's Town (Grahamstown) in 1819 provided the pretext for the annexation of more African territory, to the Keiskamma River. Various Rharhabe-

Xhosa groups were driven from their lands throughout the early 1830s. They counterattacked in December 1834, and Governor Benjamin D'Urban ordered a major invasion the following year, during which thousands of Rharhabe-Xhosa died. The British crossed the Great Kei River and ravaged territory of the Gcaleka-Xhosa as well; the Gcaleka chief, Hintsu, invited to hold discussions with British military officials, was held hostage and died trying to escape. The British colonial secretary, Lord Glenelg, who disapproved of D'Urban's policy, halted the seizure of all African land east of the Great Kei. D'Urban's initial attempt to rule conquered Africans with European magistrates and soldiers was overturned by Glenelg; instead, for a time, Africans east of the Keiskamma retained their autonomy and dealt with the colony through diplomatic agents.

The British had chronic difficulties procuring enough labour to build towns and develop new farms. Indeed, though Britain abolished its slave trade in 1807 and pressured other countries to do the same, the British in Southern Africa continued to import some slaves into the Cape after that date, but in numbers insufficient to alleviate the labour problem. A ban in 1809 on Africans crossing into the Cape aggravated the labour shortage, and so the British, like the Dutch before them, made the Khoer serfs through the Caledon (1809) and Cradock (1812) codes.

Anglo-Boer commandos provided another source of African labour by illegally capturing San women and children (many of the men were killed) as well as Africans from across the eastern frontier. Griqua raiding states led by Andries Waterboer, Adam Kok, and Barend Barends captured more Africans from among people such as the Hurutshe, Rolong, and Kwena. Other people, such as those known as the Mantatees, were forced to become farmworkers, mainly in the eastern Cape. European farmers also raided for labour north of the Orange River.

Cape authorities overhauled their policy in 1828 in order to facilitate labour distribution and to align the region with the growing imperial antislavery ethos. Ordinance 49 permitted black labourers from east of the Keiskamma to go into the colony for work if they possessed the proper contracts and passes, which were issued by soldiers and missionaries. This was the beginning of the pass laws that would become so notorious in the 20th century. Ordinance 50 briefly ended the restrictions placed on the Khoer, including removing the requirement for passes, and allowed them to choose their employers, own land, and move more freely. Because an insufficient labour force still existed, Anglo-Boer armies (supported by Khoer, Tembu, Gcaleka, and Mpondo auxiliaries) acquired their own workers by attacking the Ngwane east of the Great Kei at Mbolompo in August 1828. The formal abolition of slavery took place in 1834–38, and control of African labourers became stricter through the Masters and Servants Ordinance (1841), which imposed criminal penalties for breach of contract and desertion of the workplace and increased the legal powers of settler employers.

- The Delagoa Bay slave trade

While events were unfolding at the Cape, the slave trade at Delagoa Bay had been expanding since about 1810 in response to demands for labour from plantations in Brazil and on the Mascarene Islands. During the late 1820s, slave exports from the Delagoa Bay area reached several thousand a year, in advance of what proved to be an ineffective attempt to abolish the Brazilian trade in 1830. After a dip in the early 1830s, the Bay slave trade peaked in the late 1840s.

The impact of the slave trade was increasing destabilization of hinterland societies as populations were forcibly removed. The Gaza, Ngoni, and other groups became surrogate slavers and joined the Portuguese soldiers in inland raiding. Along the Limpopo and Vaal river networks, Delagoa Bay slavers competed with Griqua slavers in supplying the Cape. After slavers burned crops and famines became common, many groups—including the Ngwane, Ndebele, and some Hlubi—fled westward into the Highveld mountains during the 1810s and '20s. The Kololo, on the other hand, moved east out of Transorangia, where they ran into Bay slavers, and migrated west into Botswana. In 1826 they were attacked by an alliance of Ngwaketse and European mercenaries and ended up in Zambia in the 1850s exporting slaves themselves to the Arabs and Portuguese.



- Emergence of the eastern states

Four main defensive African state clusters had emerged in eastern South Africa by the 1820s: the Pedi (led by Sekwati) in the Steelpoort valley, the Ngwane (led by Sobhuza) in the eastern Transvaal, the Mokoteli (led by Moshoeshe) in the Caledon River region, and the Zulu (led by Shaka) south of the Swart-Mfolozi River. The Pedi received refugees from the Limpopo and coastal plains, and the Mokoteli absorbed eastern Transorangian refugees, which enabled them to defeat the Griqua and Korana raiders by the mid-1830s. By 1825 Shaka had welded the Chunu, Mthethwa, Qwabe, Mkhize, Cele, and other groups into a large militarized state with fortified settlements called amakhanda. Zulu amabutho (age sets or regiments) defended against raiders, provided protection for refugees, and, apparently, began to trade in ivory and slaves themselves.

From 1824 the Zulu began to clash with Cape colonists who came to Port Natal (renamed Durban in 1835) and organized mercenary armies. These groups were comparable to the Portuguese prazero armies along the Zambezi and to the warlord state set up by the Portuguese trader João Albasini in the eastern Transvaal in the 1840s, but they operated on a smaller scale. During the 1820s European raiders joined Zulu amabutho in attacking areas north of the Swart-Mfolozi River and south of the Mzimkulu River, where in the mid-1820s French ships exported slaves. Francis Farewell's raiders, in alliance with Zulu groups, seized women and children in the same area in 1828.

Conflicts split the Zulu elite into rival factions and led to Shaka's assassination in 1828. Shaka's half brother Dingane became the Zulu leader, but his succession was accompanied by civil wars and by increasing interference in the Delagoa Bay trading alliances. By the mid-1830s a coalition of Cape merchants had begun planning for the formal colonization of Natal, with its superb agricultural soils and temperate climate. The British left the less-desirable malaria-ridden Delagoa Bay region to the Portuguese, who traded slaves out of Lourenço Marques (now Maputo, Mozam.) for another half century.

### **The expansion of European colonialism (c. 1835–70)**

- The Great Trek

A few Boer settlers had moved north of the Orange River before 1834, but after that the number increased significantly, a migration later known as the Great Trek. The common view that this was a bid to escape the policies of the British—i.e., the freeing of slaves—is difficult to sustain, as most of the former slave owners did not migrate (most trekkers came from the poorer east Cape), and the earlier labour shortage had been alleviated by 1835. Instead, the trek was more of an explosive culmination of a long sequence of colonial labour raids, land seizures, punitive commando raids, and commercial expansions. Europeans, who possessed technologically advanced weaponry, also had instructive examples of how small groups of raiders in Natal and Transorangia could cause disruption over large areas. Thus, the trekkers should not be seen as backward feudalists escaping the modern world, as some historians have maintained, but as energized people extending their frontier.

Several thousand Boers migrated with their families, livestock, retainers, wagons, and firearms into a region already destabilized and partially depopulated by Griqua and coastal raiders. They did encounter some Africans (such as the Ndebele), who in the early 1830s had moved from the southeastern to the western Transvaal. The Boers and their Rolong, Taung, and Griqua allies, however, crushed the Ndebele during 1837, taking their land and many cattle, women, and children. The remaining Ndebele fled north, where they resettled in southern Zimbabwe.

The trekkers had penetrated much of the Transvaal by the early 1840s. A grouping of commando states emerged based at Potchefstroom, Pretoria, and, from 1845, Ohrigstad-Lydenburg in the eastern Transvaal. Andries Hendrik Potgieter, Andries Pretorius, Jan Mocke, and others competed for followers, attacked weaker African chiefdoms, hunted elephants and slaves, and forged trading links with the Portuguese. Other Boers turned east into Natal and allied themselves with the resident British settlers. Farms developed slowly and, as had been the case in the Cape prior to the 1830s, depended on forced labour. Until the 1860s the

Pedi and Swazi in the east and even the Kwena and Hurutshe in the west were strong enough to avoid being conscripted as labour and thus limited the labour supply.

- The British in Natal

The appearance of thousands of British settlers in Natal in the 1840s and '50s meant that for the first time Africans and European settlers lived together—however uneasily—on the same land. The Boers began to carve out farms in Natal as they had done along the eastern frontier, but further slave and cattle raids on the Bhaca south of the Mzimkulu provided the pretext for British annexation of Natal in 1843. Theophilus Shepstone received an appointment in 1845 as a diplomatic agent (later secretary for native affairs), and his position served as a prototype for later native commissioners. The Harding Commission (1852) set aside reserves for Africans, and missionaries and pliant chiefs were brought in to persuade Africans to work. After 1849 Africans became subject to a hut tax intended to raise revenue and drive them into labour. Roads were built, using forced labour, and Africans were obliged to pay rent on state land and European farms. To meet these burdens some African cultivators grew surplus crops to sell to the growing towns of Pietermaritzburg and Durban.

The British were reluctant, though, to annex the Transorangian interior, where no strategic interests existed. Boer trade links with Delagoa Bay posed little threat because Portugal was virtually a client state of Britain. To the Boers fell the tasks of eroding African resistance and developing the land, although the policy never received clear enunciation or much financial backing. Britain halfheartedly attempted to protect some of its African client states, such as that of the Griqua and the Sotho state led by Moshoeshoe. However, after further fighting with the Rharhabe-Xhosa on the eastern frontier in 1846, Governor Colonel Harry Smith finally annexed, over the next two years, not only the region between the Great Fish and the Great Kei rivers (establishing British Kaffraria) but also a large area between the Orange and Vaal rivers, thus establishing the Orange River Sovereignty. These moves provoked further warfare in 1851–53 with the Xhosa (joined once more by many Khoe), with a few British politicians ineffectively trying to influence events.

A striking feature of this period was the capacity of the Sotho people to fend off military conquest by the British and Boers. After defeating and absorbing the rival Tlokwa in 1853–54, Moshoeshoe became the most powerful African leader south of the Vaal-Pongolo rivers. His soldiers utilized firearms and, in the cold Highveld, horses—which proved to be the keys to political and military survival there.

- Attempts at Boer consolidation

Faced with these unprofitable conflicts, the British temporarily withdrew from the southern African interior, and the Transvaal and Orange Free State Boers gained independence through the Sand River and Bloemfontein conventions (1852 and 1854, respectively). Both Boer groups wrote constitutions and established Volksraade (parliaments), although their attempts at unification failed. For more than a decade, civil wars and the struggle with the environment hampered consolidation among the Boers. Nevertheless, the Orange Free State's economy grew rapidly, and by the 1860s the Boers were exporting significant amounts of wool via Cape ports.

- The Cape economy

Capitalist infrastructure came earlier to the Cape than to the Boer regions because of its older colonial history and its seacoast links to the British Empire. Banks, insurance companies, and limited-liability companies arose in the 1840s and '50s, and a class of prosperous colonial shopkeepers, financiers, traders, and farmers emerged as Cape Town grew to more than 30,000 people in the 1850s. Port Elizabeth, established in 1820, also became an important trading centre and harbour. The British government granted the Cape settlers what was termed "representative government" in March 1853 (the Legislative Assembly had elected members, with an executive appointed from London) and "responsible government" in 1872 (the assembly appointed the executive). Franchise qualifications were relatively low, and even some Africans could vote, although their small number had no political impact. These nominal rights were reduced later in the century and abolished outright in 1936.

Between 1811 and 1858 colonial aggression deprived Africans of most of their land between the Sundays and Great Kei rivers and produced poverty and despair. From the mid-1850s British magistrates held political power in British Kaffraria, destroying the power of the Xhosa chiefs. Following a severe lung sickness epidemic among their cattle in 1854–56, the Xhosa killed many of their remaining cattle and in 1857–58 grew few crops in response to a millenarian prophecy that this would cause their ancestors to rise from the dead and destroy the whites. Many thousands of Xhosa starved to death, and large numbers of survivors were driven into the Cape Colony to work. British Kaffraria fused with the Cape Colony in 1865, and thousands of Africans newly defined as Fingo resettled east of the Great Kei, thereby creating Fingoland. The Transkei, as this region came to be known, consisted of the hilly country between the Cape and Natal. It became a large African reserve and grew in size when those parts that were still independent were annexed in the 1880s and '90s (Pondoland lost its independence in 1894).

European missionaries and their African catechists worked unremittingly from the 1820s to Christianize indigenous communities and to introduce them to European manufactured goods they had previously done well without. Whatever intentions the missionaries may have had, their efforts undermined African worldviews and contributed to the destruction of traditional African communities throughout South Africa. For a time nevertheless, a small number of African peasant farmers used plows, paid rents and taxes, produced for the market, and sold surplus grain to the towns in competition with colonial farmers. The difficulty they encountered obtaining capital, however, as well as the legal and political discrimination they faced, drove most of them out of business in the decades following the South African War of 1899–1902.

The Cape economy, narrowly based on wine and wool, was not particularly prosperous. Wool exports, though soaring to some 6,000 tons in 1855, lagged far behind those of Australia and remained susceptible to drought and market slumps. African labour built roads, but only a few miles of railway were constructed before 1870. Various alternatives that would broaden the economic base were explored. Accumulations of guano (droppings of gannets and cormorants used as fertilizer) were exploited on off-coast islands; copper mining began in the southwestern party of the country; hunters operating as far north as the Zambezi sent back large quantities of ivory; and traders, hunters, missionaries, and full-time prospectors surveyed and sampled the rocks. The most potentially rewarding commodities were diamonds discovered in the Vaal valley and gold found in the Tati valley and in the northern and eastern Transvaal between 1866 and 1871.

- Disputes in the north and east

To the north, colonial communities and African states alternately cooperated and competed with each other, with the advantage slowly moving to the colonists. The Swazi and Gaza supplied slaves both to the Transvaal Boers and to the Portuguese. During the 1850s the Swazi overran much of the Lowveld, where they absorbed many groups and exchanged captured children for firearms and horses with the Transvaal settlers. After the death of Soshangane (leader of the Gaza state) in 1856, a Gaza civil war broke out that also involved the Swazi, Boers, and Portuguese. After the Swazi gained control of land almost to Maputo in 1864, the Gaza (under the victorious Mzila) migrated northward into the Buzi River area of present-day eastern Zimbabwe.

Farther south the Zulu competed with the Swazi and the Boers to dominate the Pongolo and Ngwavuma valleys and with the Boers to control the Buffalo (Mziniathi) River area. The colonial administrator, Theophilus Shepstone, interfered not only in Zulu politics but also in Ndebele succession dispute (1869–72), attempting to oust the eventual leader (Lobengula) in favour of a pretender. Marthinus Pretorius, the Transvaal leader, annexed huge areas, at least on paper. To the irritation of settler farmers and plantation owners, few Zulu went south to work in Natal. Instead, a supply of Mozambican indentured labourers (some of them forced) entered the region. This eventually evolved into a steady flow of migrant workers in the following decades, but, because not enough labour appeared initially in the early 1860s, indentured labourers from India were brought in to work on the new sugar plantations.

The Sotho continued their tenacious hold on their lands along the Caledon River and for a time supplied the Boers of the Orange Free State with grain and cattle. The Sotho mobilized a force of 10,000 and defeated the Boers in 1858. The Boers, however, coveted the fertile Caledon valley and defeated the Sotho eight

years later after the Boers regained their unity. The Sotho were forced to sign the Treaty of Thaba Bosiu (1866), and only British annexation of Sotho territory in 1868 prevented their complete collapse.

- The Zulu after Shaka

The Zulu, although initially successful at repelling the Europeans, were, like the Ndebele, eventually overpowered by them in clashes such as the Battle of Blood (Ncome) River in 1838. Boer attacks on the Zulu between 1838 and 1839 precipitated a Zulu civil war between Dingane and Mpande. The latter allied himself with the Boer invaders and so split the kingdom. Between 1839 and 1840 the Boers seized large parts of the Zulu kingdom, including the area between the Tugela and the Swart-iMfolozi. When the British in turn evicted the Boers and annexed Natal in 1843, the southern region to the Tugela was restored to the Zulu. Mpande (reigned 1840–72), a formidable ruler, controlled territory between the Tugela in the south and, roughly, the Pongolo in the north, boundaries that were not seriously disturbed until 1879.

In 1856 the primary conflict in the Zulu civil war (the Battle of Ndongakasuka on the lower uThukela River, close to the sea) elevated Mpande's younger son, Cetshwayo, over Mpande's older son, Mbuyazi. Although Cetshwayo formally became ruler of Zululand only upon his father's death in 1872, he had in fact effectively ruled the kingdom since the early 1860s.

By the late 1870s, colonial officials had identified the Zulu kingdom as a major obstacle to confederation, and in January 1879 British and colonial troops invaded Zululand (see Zulu War). During his rule Mpande had expanded Zulu military capacity, and Cetshwayo used this effectively against the British invaders at Isandlwana in 1879. The annihilation of a large British force at Isandlwana slowed the invasion, but imperial firepower ultimately prevailed. For the Zulu, political dismemberment followed military defeat. British divide-and-rule policies precipitated another civil war in 1883, and Zululand was annexed in 1887.

- The decline of the African states

As the 1860s came to an end, the great African states began to weaken. Not only did many important African leaders die during this period (Soshangane in 1858, Sekwati of the Pedi in 1861, Mswati in 1865, Mzilikazi in 1868, Moshoeshe in 1870, and Mpande in 1872), but, increasingly, Europeans were determined to exploit Africans as a source of labour and to acquire the last large fertile areas controlled by them.

Colonial troops tipped the balance decisively against societies that had previously withstood attempts to bring them under the settlers' control. A century of military conflict on the Cape frontier ended with the Cape-Xhosa war of 1877–78 (see Cape Frontier Wars). Between 1878 and 1881 the Cape Colony defeated rebellions in Griqualand West, the Transkei, and Basutoland. Sir Bartle Frere, governor of the Cape and high commissioner for southern Africa from March 1877, rapidly decided that independent African kingdoms had to be tamed in order to facilitate political and economic integration of the region.

Governor George Grey had already proposed a federated South Africa in 1858, and in the late 1860s the discovery of gold and diamonds reactivated this idea. The annexation of Basutoland in 1868 began a series of movements toward consolidation that included the British seizure of the diamond fields from the competing Griqua, Tlaping, and Boers in 1871 (the Keate Award), Colonial Secretary Lord Carnarvon's more determined federation plan of 1875, Shepstone's invasion of the Transvaal in 1877, and the British invasions of Zululand and Pediland in 1879. British troops also took part in an 1879 campaign that crushed Pedi military power in the northern Transvaal. With the collapse of Zulu resistance in the 1880s, the invasions of the Gaza and Ndebele kingdoms in 1893–96, and the crushing of Venda resistance in 1898, by 1900 no autonomous African societies remained in the region.

### **Diamonds, gold, and imperialist intervention (1870–1902)**

South Africa experienced a transformation between 1870, when the diamond rush to Kimberley began, and 1902, when the South African War ended. Midway between these dates, in 1886, the world's largest goldfields were discovered on the Witwatersrand. As the predominantly agrarian societies of European South Africa began to urbanize and industrialize, the region evolved into a major supplier of precious

minerals to the world economy; gold especially was urgently needed to back national currencies and ensure the continued flow of expanding international trade. British colonies, Boer republics, and African kingdoms all came under British control. These dramatic changes were propelled by two linked forces: the development of a capitalist mining industry and a sequence of imperialist interventions by Britain.

- Diamonds and confederation

A chance find in 1867 had drawn several thousand fortune seekers to alluvial diamond diggings along the Orange, Vaal, and Harts rivers. Richer finds in “dry diggings” in 1870 led to a large-scale rush. By the end of 1871 nearly 50,000 people lived in a sprawling polyglot mining camp that was later named Kimberley.

Initially, individual diggers, black and white, worked small claims by hand. As production rapidly centralized and mechanized, however, ownership and labour patterns were divided more starkly along racial lines. A new class of mining capitalists oversaw the transition from diamond digging to mining industry as joint-stock companies bought out diggers. The industry became a monopoly by 1889 when De Beers Consolidated Mines (controlled by Cecil Rhodes) became the sole producer. Although some white diggers continued to work as overseers or skilled labourers, from the mid-1880s the workforce consisted mainly of black migrant workers housed in closed compounds by the companies (a method that had previously been used in Brazil).

The diamond zone was simultaneously claimed by the Orange Free State, the South African Republic, the western Griqua under Nicolaas Waterboer, and southern Tswana chiefs. At a special hearing in October 1871, Robert W. Keate (then lieutenant governor of Natal) found in favour of Waterboer, but the British persuaded him to request protection against his Boer rivals, and the area was annexed as Griqualand West.

The annexation of the diamond fields signaled a more progressive British policy under a Liberal ministry but fell short of the ambitious confederation policy pursued by Lord Carnarvon, the colonial secretary in Benjamin Disraeli’s 1874 Conservative government; he sought to unite the republics and colonies into a self-governing federation in the British Empire, a concept inspired by Theophilus Shepstone, who, as secretary for native affairs in Natal, urged a coherent regional policy with regard to African labour and administration.

Carnarvon concentrated at first on persuading the Cape and the Free State to accept federation, but a conference in London in August 1876 revealed how unreceptive these parties were to the proposal. With his southern gambit frustrated, Carnarvon embarked on a northern strategy. The South African Republic (Transvaal), virtually bankrupt, had suffered military humiliation at the hands of the Pedi, and support for President Thomas F. Burgers had declined because of this. Carnarvon commissioned Shepstone to annex the Transvaal, and, after encountering only token resistance at the beginning of 1877, he proclaimed it a British colony a few months later.

The new possession proved difficult to administer as empty coffers and insensitivity to Afrikaner resentments led to a clash over tax payments, and, under a triumvirate of Paul Kruger, Piet Joubert, and Marthinus Wessel Pretorius, the Transvaal Boers opted to fight for independence. British defeats, especially at Majuba in 1881, ended British insistence on the concept of confederation. By the London Convention of 1884, republican self-government was restored, subject to an imprecise British “suzerainty” over external relations.

- Afrikaner and African politics in the Cape

The white population in the Cape numbered 240,000 by the mid-1870s and constituted about one-third of the colony’s population. Cape revenues accounted for three-fourths of the total income in the region’s four settler states in 1870, as the diamond discoveries created more revenue that could be used to build railways and public works. Although by this time some two-thirds of the settler population spoke Dutch or Afrikaans, political power rested largely with an English-speaking elite of merchants, lawyers, and landholders.

The conflict between Afrikaners and English speakers led to the establishment of the Afrikaner Bond in 1879. The Bond initially represented poorer farmers and espoused an anti-British Pan-Afrikanerism in the Cape and beyond, but, after its reorganization a few years later under Jan Hendrik Hofmeyr, the group began to champion the Cape’s commercial interests and acquired a new base of support—mainly wealthier farmers

and urban professionals. When Hofmeyr threw his support behind Cecil Rhodes in 1890, he enabled Rhodes to become prime minister of the Cape; their alliance stemmed from a mutual desire for northward economic expansion. A major cleavage, however, opened up between Bond politicians and the English-speaking voters loosely defined as Cape liberals. The latter, particularly those in constituencies in the eastern Cape that had a significant percentage of black male voters, were tactically friendly to the small enfranchised stratum of fairly prosperous black peasants, whereas the Bond and most English-speaking white voters were hostile toward the black farmers growing cash crops and pursued more-restrictive franchise qualifications.

The number of blacks in the colony greatly increased between 1872 and 1894 as heretofore independent territories were annexed to the Cape. As black farmers became more prosperous and as more blacks became literate clerks and teachers, many individuals qualified to vote. The rise of the Afrikaner Bond and new laws affecting franchise qualifications and taxes also stimulated more-vigorous black participation in electoral politics after 1884. New political and educational bodies came into existence in the eastern Cape, as did the first black newspapers and black-controlled churches. The period also witnessed the first political organizations among Coloureds in the Cape and Indians in Natal and the Transvaal.

- Gold mining

Prospectors established in 1886 the existence of a belt of gold-bearing reefs 40 miles (60 km) wide centred on present-day Johannesburg. The rapid growth of the gold-mining industry intensified processes started by the diamond boom: immigration, urbanization, capital investment, and labour migrancy. By 1899 the gold industry attracted investment worth £75 million, produced almost three-tenths of the world's gold, and employed more than 100,000 people (the overwhelming majority of them black migrant workers).

The world's richest goldfield was also the most difficult to work. Although the gold ore was abundant, the layers of it ran extremely deep, and the ore contained little gold. To be profitable, gold mining had to be intensive and deep-level, requiring large inputs of capital and technology. A group system, whereby more than 100 companies had been arranged into nine holding companies, or "groups," facilitated collusion between companies to reduce competition over labour and keep costs down. The gold mines rapidly established a pattern of labour recruitment, remuneration, and accommodation that left its stamp on subsequent social and economic relations in the country. White immigrant miners, because of their skills, scarcity, and political power, won relatively high wages. In contrast, the more numerous unskilled black migrants from throughout Southern Africa, especially from present-day Mozambique, earned low pay (at century's end about one-ninth the wage of white miners). Migrant miners were housed in compounds, which facilitated their control and reduced overhead costs.

- The road to war

Even before the discovery of gold, the South African interior was an arena of tension and competition. Germany annexed South West Africa in 1884. The Transvaal claimed territory to its west; Britain countered by designating the territory the Bechuanaland protectorate and then annexed it as the crown colony of British Bechuanaland. Rhodes secured concessionary rights to land north of the Limpopo River, founded the British South Africa Company, and in 1890 dispatched a pioneer column to occupy what became known as Rhodesia.

While these forces jostled for position in the region at large, the domestic politics of the Transvaal became unsettled. Paul Kruger's government made strenuous efforts to accommodate the mining industry, but it was soon at loggerheads with Britain, the mine magnates, and the British and other non-Afrikaner Uitlander ("Outlander") immigrants. British policy makers expressed concern about the Transvaal's potential as an independent actor, and deep-level-mine owners chafed at mine bosses' corruption and inefficiency. The grievances of the Uitlanders, largely excluded from the vote, provided both cause and cover for a conspiracy between British officials and mining capitalists. An Uitlander uprising in Johannesburg was to be supported by an armed invasion from Bechuanaland, headed by Leander Starr Jameson, Rhodes's lieutenant, who would intervene to "restore order."

The plot was botched. The Uitlander rising did not take place, but Jameson went ahead with his incursion in December 1895, and within days he and his force had been rounded up. While Rhodes had to resign as prime minister of the Cape, British Colonial Secretary Joseph Chamberlain managed to conceal his complicity. The Jameson Raid polarized Anglo-Boer sentiment in South Africa, simultaneously exacerbating republican suspicions, Uitlander agitation, and imperial anxieties.

In February 1898 Kruger was elected to a fourth term as president of the Transvaal. He entered a series of negotiations with Sir Alfred Milner (who became high commissioner and governor of the Cape in 1897) over the issue of the Uitlander franchise. Milner declared in private early in 1898 that “war has got to come” and adopted intransigent positions. The Cape government, headed by William P. Schreiner, attempted to mediate, as did Marthinus Steyn, the president of Free State, even while he attached his cause to Kruger’s. In September 1899 the two Boer republics gave an ultimatum to Britain, and, when it expired on October 11, Boer forces invaded Natal.

- The South African War (1899–1902)

While the government of Lord Salisbury in Britain went to war to secure its hegemony in Southern Africa, the Boer republics did so to preserve their independence. The expensive and brutal colonial war lasted two and a half years and pitted almost 500,000 imperial troops against 87,000 republican burghers, Cape “rebels,” and foreign volunteers. The numerical weakness of the Boers was offset by their familiarity with the terrain, support from the Afrikaner populace, and the poor leadership and dated tactics of the British command. Although often styled a “white man’s war,” both sides used blacks extensively as labour, and at least 10,000 blacks fought for the British.

In the first phase of the war, Boer armies took the offensive and punished British forces at Colenso, Stormberg, and Magersfontein in December 1899 (“Black Week”). During 1900 Britain rushed reinforcements to the front, relieved sieges at Ladysmith, Kimberley, and Mafeking, and took Bloemfontein, Johannesburg, and Pretoria. In the third phase, Boer commandos avoided conventional engagements in favour of guerrilla warfare. The British commander, Lord Kitchener, devised a scorched-earth policy against the commandos and the rural population supporting them, in which he destroyed arms, blockaded the countryside, and placed the civilian population in concentration camps. Some 25,000 Afrikaner women and children died of disease and malnutrition in these camps, while 14,000 blacks died in separate camps. In Britain the Liberal opposition vehemently objected to the government’s methods for winning the war.

Boer forces, which at the end consisted of about 20,000 exhausted and demoralized troops, sued for peace in May 1902. The Treaty of Vereeniging reflected the conclusive military victory of British power but made a crucial concession. It promised that the “question of granting the franchise to natives [blacks]” would be addressed only after self-government had been restored to the former Boer republics. The treaty thus allowed the white minority to decide the political fate of the black majority.

## **Additional Reading**

### **General**

Broad coverage of South Africa’s history is provided in Monica Wilson and Leonard Thompson (eds.), *The Oxford History of South Africa*, 2 vol. (1969–71), the only general reference work to make a serious attempt to record the history of all the peoples of the country; Leonard Monteath Thompson, *A History of South Africa*, rev. ed. (1995), a fluent and elegantly written account; T.R.H. Davenport and Christopher Saunders, *South Africa: A Modern History*, 5th ed. (2000); Dougie Oakes (ed.), *Reader’s Digest Illustrated History of South Africa* (1989); Robert Ross, *A Concise History of South Africa* (1999); Frank Welsh, *South Africa: A Narrative History* (1999); and J.D. Omer-Cooper, *History of Southern Africa*, 2nd ed. (1994). Christopher Saunders and Nicholas Southey, *Historical Dictionary of South Africa*, 2nd ed. (2000), presents useful information on historical topics. Cheryl Walker (ed.), *Women and Gender in Southern Africa to 1945* (1990), discusses the changing status of women in the past 100 years.



### Prehistory to 1870

Early history is explored in Richard Elphick, *Kraal and Castle* (1977; also published as *Khoikhoi and the Founding of White South Africa*, 1985), a detailed study of the interactions between the Dutch at the Cape of Good Hope and the Khoekhoe chiefdoms of the region; and Richard Elphick and Hermann Giliomee (eds.), *The Shaping of South African Society, 1652–1840*, 2nd ed. (1989), essays that review the history comprehensively from the first years of Dutch settlement. David Lewis-Williams and Thomas Dowson, *Images of Power: Understanding Bushman Rock Art* (1989), is an introduction to the rock paintings of southern Africa.

There is still no good published overview account of the period 1770–1870 in South African history, and there are enormous gaps in knowledge. Nevertheless, the following titles are useful: Clifton C. Crais, *White Supremacy and Black Resistance in Pre-Industrial South Africa: The Making of the Colonial Order in the Eastern Cape, 1770–1865* (1992); Ben Maclennan, *A Proper Degree of Terror: John Graham and the Cape's Eastern Frontier* (1986), a study of the colonial invasion of the Zuurveld in 1811–12; Robert Ross, *Cape of Torments: Slavery and Resistance in South Africa* (1983); Nigel Worden, *Slavery in Dutch South Africa* (1985); Noël Mostert, *Frontiers: The Epic of South Africa's Creation and the Tragedy of the Xhosa People* (1992); Julian Cobbing, "The Mfecane as Alibi: Thoughts on Dithakong and Mbolombo," *Journal of African History*, 29(3):487–519 (1988), which argues that the Mfecane is largely a creation of early 20th-century South African historians; Carolyn Hamilton (ed.), *The Mfecane Aftermath: Reconstructive Debates in Southern African History* (1995), which attempts to put the debate on the Mfecane in perspective; J.B. Peires, *The House of Phalo: A History of the Xhosa People in the Days of Their Independence* (1981), up to the 1840s, and *The Dead Will Arise: Nongqawuse and the Great Xhosa Cattle-Killing Movement of 1856–7* (1989); Colin Bundy, *The Rise and Fall of the South African Peasantry*, 2nd ed. (1988), on the emergence of the African peasants after the 1840s; Jeff Guy, *The Destruction of the Zulu Kingdom: The Civil War in Zululand, 1879–1884* (1979, reissued 1994), mainly on the British invasion of 1879 and its aftermath; and Shula Marks and Anthony Atmore (eds.), *Economy and Society in Pre-Industrial South Africa* (1980), essays on the pre-1900 period. Bill Freund, *The Making of Contemporary Africa: The Development of African Society Since 1800*, 2nd ed. (1998), examines economic and social conditions in Africa during the 19th and 20th centuries.

### 1870 to 1930

Useful works on this period include William H. Worger, *South Africa's City of Diamonds: Mine Workers and Monopoly Capitalism in Kimberley, 1867–1895* (1987), a history of diamond mining, paying particular attention to questions of labour recruitment and the rise of De Beers Consolidated Mines; Shula Marks and Richard Rathbone, *Industrialisation and Social Change in South Africa: African Class Formation, Culture, and Consciousness, 1870–1930* (1982), a collection of essays exploring some of the consequences of an industrial revolution for the country's African population; Frederick A. Johnstone, *Class, Race, and Gold* (1976, reprinted 1987), an influential Marxist study of how racial discrimination was institutionalized in the gold-mining industry; T.R.H. Davenport, *The Afrikaner Bond: The History of a South African Political Party, 1880–1911* (1966); Thomas Pakenham, *The Boer War* (1979), a highly readable, well-researched popular history; Shula Marks and Stanley Trapido, "Lord Milner and the South African State," *History Workshop*, 8:50–80 (Autumn 1979), an important article that led to the reevaluation of Milner's role in South Africa; David Yudelman, *The Emergence of Modern South Africa: State, Capital, and the Incorporation of Organized Labor on the South African Gold Fields, 1902–1939* (1983); Peter Walshe, *The Rise of African Nationalism in South Africa: The African National Congress, 1912–1952* (1971, reissued 1987); Helen Bradford, *A Taste of Freedom: The ICU in Rural South Africa, 1924–1930* (1987); Gail M. Gerhart, *Black Power in South Africa: The Evolution of an Ideology* (1978); and Ken Luckhardt and Brenda Wall, *Organize or Starve!: The History of the South African Congress of Trade Unions* (1980).

### Since 1930

Numerous books have appeared that chronicle South Africa's most recent history. Useful works include William Beinart, *Twentieth-Century South Africa* (1994); and Nigel Worden, *The Making of Modern South Africa: Conquest, Segregation, and Apartheid*, 2nd ed. (1995). Jonathan Crush, Alan Jeeves, and David Yudelman, *South Africa's Labor Empire: A History of Black Migrancy to the Gold Mines* (1991), deals with the ways in which the history of the region has been connected through labour migrancy. Francis Wilson,

Labour in the South African Gold Mines, 1911–1969 (1972), describes the dependence of South Africa's premier industry on African migrant workers and details how the mining groups held down miners' wages so that they were lower in 1969 than in 1911. Randall M. Packard, *White Plague, Black Labour: Tuberculosis and the Political Economy of Health and Disease in South Africa* (1989), discusses the interaction between disease and oppressive labour conditions in 20th-century South Africa.

T. Dunbar Moodie, *The Rise of Afrikanerdom: Power, Apartheid, and the Afrikaner Civil Religion* (1975, reprinted 1980), shows how an Afrikaner civil religion, with antecedents dating to the 19th century, contributed to the political victory of the Afrikaner National Party in 1948. Leonard Monteath Thompson, *The Political Mythology of Apartheid* (1985), examines how the mythology of the Afrikaner nationalist movement originated as a myth about liberation from British colonialism but later was used to legitimate the oppression of the black people of South Africa. Dan O'Meara, *Volkskapitalisme: Class, Capital, and Ideology in the Development of Afrikaner Nationalism, 1934–1948* (1983), provides a useful account of a crucial period. George M. Fredrickson, *White Supremacy: A Comparative Study in American and South African History* (1981), is an illuminating comparison of these two countries. The essays in Hermann Giliomee and Lawrence Schlemmer (eds.), *Up Against the Fences: Poverty, Passes, and Privilege in South Africa* (1985), describe the forces that led to the massive migration of Africans from the reserves to the cities and show that the government was failing to stop it. David Pallister, Sarah Stewart, and Ian Lepper, *South Africa Inc.: The Oppenheimer Empire*, rev. and updated ed. (1988), describes the global reach of the great industrial and financial conglomerate centred in the Anglo American Corporation and the De Beers diamond cartel. Joseph Hanlon, *Beggar Your Neighbours: Apartheid Power in Southern Africa* (1986), details how South African economic, political, and military power was used during the 1980s to destabilize other countries in Southern Africa. William Minter, *King Solomon's Mines Revisited: Western Interests and the Burdened History of Southern Africa* (1986), offers a radical critique of the involvement of Britain, the United States, and other Western powers and financial interests in the exploitation of the black people of Southern Africa.

Tom Lodge, *Black Politics in South Africa Since 1945* (1983), is the basic history of black protest movements since World War II, with detailed examinations of specific campaigns and episodes. Sebastian Mallaby, *After Apartheid: The Future of South Africa* (1992), explores the options. David Ottaway, *Chained Together: Mandela, De Klerk, and the Struggle to Remake South Africa* (1993), traces the common commitment of the white and black leaders to the transformation of South Africa. Jacklyn Cock, *Colonels & Cadres: War & Gender in South Africa* (1991; also published as *Women and War in South Africa*, 1993), explores the link between war and gender in South Africa in the final apartheid years. Heribert Adam and Kogila Moodley, *The Opening of the Apartheid Mind: Options for the New South Africa* (1993), provides a cogent analysis of the complex forces that operate in the new South Africa.

The post-1994 years are covered in T.R.H. Davenport, *The Transfer of Power in South Africa* (1998); Tom Lodge, *South African Politics Since 1994* (1999); and Stephen Ellis, "The New Frontiers of Crime in South Africa," in Jean-Francois Bayart, Stephen Ellis, and Beatrice Hibou, *The Criminalization of the State in Africa* (1999; originally published in French, 1997). Antjie Krog, *Country of My Skull* (1998), is a moving account of the deliberations of the Truth and Reconciliation Commission.

## APPENDIX E

**DECLARATION OF INDEPENDENCE**

I, Leonard van Schalkwyk, declare that –

- I act as the independent specialist in this application.
- I will perform the work relating to the application in an objective manner even if this results in views and findings that are not favourable to the applicant.
- I declare that there are no circumstances that may compromise my objectivity in performing such work.
- I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority.
- All the particulars furnished by me in this form are true and correct.

Signed



December 2016

**Curriculum Vitae**

**Name:** Leonard Outram van Schalkwyk  
**Position:** Director / Heritage Consultant  
**Name of Firm:** eThembeni Cultural Heritage Management  
**Profession:** Archaeologist; Heritage Practitioner  
**Date of birth:** 7 July 1959  
**Position in firm:** Director  
**Years with Firm:** 15  
**Professional Membership and Association:** Association of Professional Heritage Practitioners – Accredited Member: 2016  
 South African Association of Archaeologists: 1984 – 1998.  
 Association of Southern African Professional Archaeologists (ASAPA):  
 1998 – present.  
 ASAPA Council Member - Cultural Resources Management Portfolio (CRM):  
 2011 – 2017.  
 ASAPA CRM Section - listed as Principal Investigator since 1998.  
 Amafa aKwaZulu-Natali accredited heritage practitioner since 2001.  
 SAHRA Archaeological Permit Advisory Committee (2004/5).  
 South African member of International Scientific Committee for Archaeological Management, elected by ICOMOS-SA Executive (1999 - 2000).  
 Provincial Representative: South African World Heritage Convention Committee (1998 - 2000).  
 Southern African Museums Association (1984 -1999).  
**Specialisation :** CRM Accreditation: Principal Investigator: Later Stone Age and Iron Age archaeology; Ancestral Graves Management.  
**Academic qualifications :** BA Hons. Archaeology(Stell) 1982; MA Archaeology (UCT) 1992

**Specified Skills:** Cultural Heritage Impact Assessment.\*

**\* [as required by the National Environmental Management Act 107 of 1998 as amended (NEMA), in compliance with Section 38 of the National Heritage Resources Act 25 of 1999 as amended (NHRA), other relevant SADEC national heritage legislations and UNESCO/ICOMOS IMF/WB/IFC standards and guidelines for international best practice.]**

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### Key Qualifications and Relevant Experience

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I have 30 years of professional experience as a practising archaeologist and heritage resource practitioner in South Africa, Lesotho, Namibia, Botswana and Mozambique. My research interests have focussed on the Iron Age of southern Africa, while my management specialisations are heritage impact assessments, community liaison and ancestral grave management. I have successfully run a heritage management consultancy as a going business concern for the past 15 years. My key heritage management, tourist guide training and research initiatives include:

- Principal Investigator - survey and excavation of heritage resources in Richards Bay Minerals' concession areas, KwaZulu-Natal, including oral history recording programme with traditional wisdom keepers to ensure appropriate mitigation. Procedures regarding discovery, retrieval and re-interment of human remains were satisfactorily negotiated.
- Member of the Ministerial Monuments Task Group committee to formulate the KwaZulu-Natal Heritage Act No 10 of 1997.
- Implementation of the cultural resources management plan for the uKhahlamba Drakensberg Park (CURE), focussing on rock art management.
- ICOMOS (SA) observer for uKhahlamba Drakensberg Park World Heritage Site assessment.
- Maloti / Drakensberg Transfrontier Conservation and Development Area project feasibility assessment for the Global Environment Facility of the World Bank (GEF). Worked both in Lesotho and South Africa.
- Mnweni Valley cultural landscape management, northern uKhahlamba / Drakensberg - cultural tourist guide training, development of integrated land use and cultural heritage management plan, co-ordination of displays for interpretive centre.
- Reichenau Mission, southern uKhahlamba/Drakensberg - cultural tourist guide training; permaculture design workshop, compilation of infrastructural development plan with local community, including establishment of a community Trust, upgrade of access roads, building restoration, skills training and empowerment. SA Catholic Bishops Conference.
  - Specialist report on coastal zone management of KwaZulu-Natal for Environmental Evaluation Unit of the University of Cape Town.
- Lead consultant - cultural resources assessment of uThukela Water Scheme for Department of Water Affairs and Forestry and Institute of Natural Resources.
- Fencing and stabilisation of excavated deposits at Border Cave, Ingwavuma district, KZN.
- Excavation of middens at King Shaka's KwaBulawayo iKhanda in collaboration with Gavin Whitelaw (Natal Museum).
- Co-Director, Isandlwana Archaeological Project, with Glasgow University Archaeology Research Division
- Cultural heritage management of greater Chobe Conservation area in Botswana – Department of Parks and Wildlife. Production of policy document for submission to World Wildlife Fund.
- Archaeological Impact Assessment Riversdale Coal, Tete, Mozambique for Golder and Associates.
- Heritage Practitioner – DAC Legacy Project - Oliver Tambo Homestead and Memorial Site development at Inkantolo, and
  - Khananda Hill Memorial Site, Bizana, Eastern Cape – for the Independent Development Trust and National Department of Arts and Culture
  - DAC Legacy Project – JL Dube Homestead and Ohlange Institute Heritage Site development - for the Independent Development Trust and National Department of Arts and Culture.

I have completed more than 1000 heritage impact assessments and specialist studies throughout southern Africa including the Republic, Lesotho, Namibia, Botswana and Mozambique. My most current heritage management projects are all listed on SAHRIS (<http://www.sahra.org.za>).

<b>Dams, Water and Sewerage Supply Projects</b>	
Kingsburgh Sewer	Environmental Planning and Design
Vernoy/Jacaranda Road Sewer	WSP Environment & Planning
Ozwatini Bulk Water Supply	Ibhongo Consulting cc
Richmond Water Pipeline, Pure Water Rising Main from Mtubatuba Water Treatment Works to Mtubatuba Heights Reservoir. Construction of New Water Mains on the Western Shores and a Water Reservoir near St Lucia, Eastern Shores, Isimangaliso Wetland Park, KZN	ACER (Africa)
Pholela Dam, Himeville, KZN	Pholela Irrigation Board
Sikoto Dam, Appelsbosch / Noodsberg, KZN	Alletson Ecologicals
King Williamstown Bulk Regional Sewage Scheme: Phases 2 - 7, and Ugie dam sites, Eastern Cape	Terreco (Pty) Ltd
Assagay Trunk Water Pipeline and Umdloti Waste Water Pipeline, La Mercy, KZN and Mount Ayliff - Ntsizwa Weirs Water Supply Scheme, Eastern Cape	Arcus GIBB
Eshowe Bulk Water Supply Project, KZN	WSP Environment & Energy
Mvutshane Dam, Mapumulo, KZN. Exhumation and reinterment of 54 graves within FSL. 2013-2014. Amafa approved.	Umgeni Water
River sand mining on a Portion 10 of the Farm Rensburg No 797, Estcourt; Street Spirit Trading 54 (Pty) Ltd Colliery, Glencoe, KZN and DR08473, DR08111 and Ntinga borrow pit upgrades, Mbizana, Eastern Cape	Terratest (Pty) Ltd
River sand mining, Portion of Inanda Location No 4675, Pinetown Magisterial District, KZN	Inhlabathi Quarrying and Trading cc
Ludeke Dam, Bizana, Eastern Cape. Exhumation and reinterment of 24 graves within FSL. 2012–2014. SAHRA approved.	Umgeni Water.
Transnet pipeline river crossing, uMvoti River, KZN	BKS (Pty) Ltd
Thukela Hydro Electric Power Scheme, KZN	ACER (Africa)
Ludeke Dam borrow pit and ancestral graves exhumation (n=24), Bizana, Eastern Cape	MBB Consulting Engineers for Umgeni Water
Mvutshane Dam – HIA and ancestral graves management	Umgeni Water
Mzimvubu Water Project EIA: Proposed dams on the Tsintsa River, Eastern Cape	Iliso Consulting (Pty) Ltd for DWAF
Communities affected by Paris Dam: negotiation of appropriate mitigation for exhumation and reinterment of 48 ancestral graves.	DWAF/Polela Water Board
<b>Residential, commercial and mixed-use projects</b>	
Expansion of Alumeric Facility, Pietermaritzburg	WSP Environment & Energy
Amber Lakes housing development	Terratest (Pty) Ltd
Felixton petrol filling station	SiVEST Environmental Division
Umgeni Business Park	Guy Nicolson Consulting cc
Gates residential development, Hilton Estate, KZN	Environmental Planning and Design
Umlazi Uganda housing development, KZN	EThekweni Metropolitan Municipality
Tulele housing development, Shakaskraal, KZN	Indiflora cc
Glenwood North-East Sector Phase 2 housing development, Pietermaritzburg, KZN	JEC Environmental Services
Hull Valley housing development, Craigieburn; Ekwandeni housing development, Hammarsdale; Emapheleni housing development, Clermont, KZN	NDG-Africa
Msunduzi Waterfront Development, Pietermaritzburg, KZN	Ocean Spray Investments (Pty) Ltd
Izinga Phase 3 residential development and Lungisisa Indlela Village, Umhlanga; and Zimbali Lakes residential development, Ballito, KZN	SiVEST Environmental Division
Mpola Phase 3 housing development, Pinetown, KZN	SRK Consulting
Driefontein Gardens Estate development, Shakas Rock, KZN	Dewanig Investments cc
Groutville Priority 1 Phase 2 and Chris Hani residential developments, Darnall, KZN	KwaDukuza Municipality
Bhanoyi Country Estate, Rietvlei, KZN	Bhanoyi Property Holdings (Pty) Ltd

Amaotana housing development, Verulam, KZN	2G Environmental Management
Housing, commercial and industrial development, Ixopo, KZN	The Craigie Burn Land Trust
Ashburton housing development, Pietermaritzburg, KZN	Oro Management cc
Compensation Flats Industrial and Business Park Development, Compensation; Inyaninga Mixed Use Development, Tongaat; and uShukela Highway Business and Office Park Development.	Tongaat Hulett Developments
<b>Roads and bridges</b>	
Mkhambathi road upgrade, Eastern Cape	Arcus GIBB
N3TC Route Location Initiative: Warden to Keersfontein – De Beers Pass Section, Free State Province	Cave Klapwijk and Associates for SANRAL
N2 Pondoland Toll Route	CCA Environmental Consultants for SANRAL
Proposed N2–Mvezo Village link road and bridge, Eastern Cape	SSI for Chris Hani DM
National Road 2 Section 26 from Mt Edgecombe Interchange to Tongaat Toll Plaza; Improvements to Umgeni Road Interchange on National Route 2, Section 25, KZN	Terratest (Pty) Ltd for SANRAL
Road Upgrade and Borrow Pits, Rehabilitation of N2 between Ngcweni River and Brookes Nek, Umzimvubu Local Municipality, Eastern Cape	Terreco (Pty) Ltd for SANRAL
Construction and Upgrading of Ingquza Hill to Mangwanini; Mpophomeni; and Matheko River to Msikaba AA Access Roads; Vialiti road upgrades, Mthatha, Eastern Cape	WSP Environment & Energy for Alfred Nzo DM
Mnini (Bonnyrigg) Interchange on National Route 2 Section 24 (Km 1.8), Ethekeeni Metropolitan Municipality, KZN	Afzelia Environmental Consultants
Trade Zone Watson Highway Link Road, La Mercy, KZN	Arcus GIBB for eThekweni Municipality
<b>Power lines and substations</b>	
Patensie-Kareedouw, Idutywa-Gatyana, Mafini-Tombo, Melkspruit-Riebeeck, Ruigtevallei-Dreunberg 132kV transmission infrastructure, Eastern Cape	Arcus GIBB for Eskom Transmission
Rosedale-Libode 132kV infrastructure	Indwe Environmental Consulting
Mbongolwane-Sitilo 132kV Line, Kranskop-Sitilo 132kV Line Loop Loop Out at Madungela Substation and Madungela Substation 132kV & Sitilo Substation 132kV Line Bay Establishment. Pomeroy-Ezakheni 132kV Kingbird Line	iSineke Developments for Eskom Reticulation
Grassridge(Coega)-Victoria West 765kV Transmission Line	ACER (Africa) for Eskom
Majuba-Nhlazatshe-Richards Bay 400kV Transmission Line	Iliso Consulting (Pty) Ltd for Eskom
Majuba-Nhlazatshe-Richards Bay 400kV Transmission Line	Stemele Bosch Africa (Pty) Ltd for Eskom
Majuba-Ingula-Venus 400kV Transmission Line	Cave Klapwijk and Associates for Eskom
Msinga Pomeroy 132kV Power line and Substation, KZN	Stemele Bosch Africa (Pty) Ltd for Eskom
Venus-Sigma-Hector-(Ariadne) 765kV Transmission Isundu S/S	ACER (Africa) for Eskom Transmission
<b>Mining and Borrow Pits</b>	
Aggregate mining on unregistered state land, AA 17 (Goso), Ngcobo Local Municipality, Eastern Cape	JP Mbete and Sons Trading and Projects cc
River sand mining on a Portion 10 of the Farm Rensburg No 797, Estcourt; Street Spirit Trading 54 (Pty) Ltd Colliery, Glencoe, KZN and DR08473, DR08111 and Ntinga borrow pit upgrades, Mbizana, Eastern Cape	Terratest (Pty) Ltd
River sand mining, Portion of Inanda Location No 4675, Pinetown Magisterial District, KZN	Inhlabathi Quarrying and Trading cc
Two borrow pits, Ugie, Eastern Cape	Terreco (Pty) Ltd
Zonderwater Coal Mine – heritage baseline studies	EcolInfo for Exxaro Mining
Ludeke Dam borrow pit and ancestral graves exhumation (n=24), Bizana, Eastern Cape	MBB Consulting Engineers for Umgeni Water
<b>Residential, commercial and mixed-use projects</b>	
Expansion of Alumicor Facility, Pietermaritzburg	WSP Environment & Energy
Amber Lakes housing development	Terratest (Pty) Ltd
Felixton petrol filling station	SIVEST Environmental Division
Umgeni Business Park	Guy Nicolson Consulting cc
Gates residential development, Hilton Estate, KZN	Environmental Planning and Design

Umlazi Uganda housing development, KZN	EThekweni Metropolitan Municipality
Tulele housing development, Shakaskraal, KZN	Indiflora cc
Glenwood North-East Sector Phase 2 housing development, Pietermaritzburg, KZN	JEC Environmental Services
Hull Valley housing development, Craigieburn; Ekwandeni housing development, Hammarsdale; Emapheleni housing development, Clermont, KZN	NDG-Africa
Msunduzi Waterfront Development, Pietermaritzburg, KZN	Ocean Spray Investments (Pty) Ltd
Izinga Phase 3 residential development and Lungisisa Indlela Village, Umhlanga; and Zimbali Lakes residential development, Ballito, KZN	SiVEST Environmental Division
Mpola Phase 3 housing development, Pinetown, KZN	SRK Consulting
Driefontein Gardens Estate development, Shakas Rock, KZN	Dewanig Investments cc
Groutville Priority 1 Phase 2 and Chris Hani residential developments, Darnall, KZN	KwaDukuza Municipality
Bhanoyi Country Estate, Rietvlei, KZN	Bhanoyi Property Holdings (Pty) Ltd
Amaatana housing development, Verulam, KZN	2G Environmental Management
Housing, commercial and industrial development, Ixopo, KZN	The Craigie Burn Land Trust
Ashburton housing development, Pietermaritzburg, KZN	Oro Management cc
Compensation Flats Industrial and Business Park Development, Compensation; Inyaninga Mixed Use Development, Tongaat; and uShukela Highway Business and Office Park Development.	Tongaat Hulett Developments
<b>Other</b>	
Heritage resource monitoring, Zulti South Mineral Lease Area	Richards Bay Mining
Richmond Cemetery Site	Arcus GIBB
Edendale Private Hospital, Pietermaritzburg, KZN	Edenvision Medical Holdings (Pty) Ltd
Estcourt and Nkandla Correctional Facilities, KZN	Vuka Planning Africa Inc
Rocky Brae broiler farm, Baynesfield, KZN	Ludloko Developments cc
SAPS shooting range, Ulundi, KZN	NDG-Africa
Makhathini Sugar Cane Project, KZN	Phatisa Equity (Pty) Ltd
Long-Haul Fibre Infrastructure Network, Gauteng, Mpumalanga, Free State and KZN	Netronix
Forensic science laboratory, Pinetown, KZN	SiVEST Environmental Division
Raymond's Airfield, Darnall, KZN	Robanting Services cc
Amajuba District Municipality cemetery sites; and Public cemetery, Newcastle, KZN	Udidi Project Development Company
Maphumulo Prison, KZN	Department of Public Works Pretoria
<b>Strategic Environmental Assessments (SEA's) and Local Development Plans (LDP's)</b>	
Newcastle SEA	Izibuko se Afrika
Ilembe DM EMF	SSI
Ugu EMF	Mott MacDonald International
Regional Cultural Tourism Route Identification R66/R68, KZN	COGTA, KZN
Transfrontier SEA Thermal Coal Mines – Botswana/RSA	Mott MacDonald International
Mkhambati Nature Reserve and local communities LDP	Eastern Cape Parks
Sodwana Bay Tourism Node and Beach Rehabilitation LDP	Acer(Africa) and Isimangaliso Wetland Park Authority
St Lucia town precinct, boardwalks and beach access LDP	Acer(Africa) and Isimangaliso Wetland Park Authority

### Ancestral graves management

- Communities affected by Paris Dam – DWAF/Polela Water Board: negotiation of appropriate mitigation for exhumation and reinterment of 48 ancestral graves. 1996-7.
- Inyaninga Hindu Cemetery. Dube Trade Port. Institute of Natural Resources (UKZN) for ACCSA. 2010.
- Graves and Burial Grounds Policy for Tongaat Hulett Developments, KZN. 2012.
- Embo Community Trust - Cotswold Downs Grave Mediation for Keith Wakefield / Luke Bales Developments. 2010-2014. LRDA.
- Grave Mediation Process: Eagles Eyre Estate, Camperdown, KZN for Intense Heat Investments (Pty) Ltd. 2011-2012. Amafa approved.
- Kwandengezi residential development. Aurecon for eThekweni Municipality. 2012–2013.
- Mbonambi family graves - negotiation of appropriate mitigation for exhumation and reinterment of two ancestral graves at Dlambula School, Umgababa/Mnini. Department of Public Works and Ithala Bank. 2014.
- Identification of 550 graves in Zulti South Mineral Lease Area and community negotiations for graves



- management. Richards Bay Mining (Rio Tinto). 2011-2016. Amafa approved. Ongoing.
- Ludeke Dam, Bizana, Eastern Cape for Umgeni Water. Exhumation and reinterment of 24 graves within FSL. 2012–2014. SAHRA approved.
- Mvutshane Dam, Mapumulo, KZN for Umgeni Water. Exhumation and reinterment of 54 graves within FSL. 2013-2014. Amafa approved. Completed. December 2014.
- Proposed Fuleni Coal Mine for Jacana Environmental / Ibutho Coal. Terminated due to community resistance. 2014.
- Grave mediation. Mlaba Traditional Authority. Ukhuko Mine. For Zululand Anthracite Collieries. 2015.

### Community liaison

- Nxamalala and Bhengu Traditional Authorities - investigated declaration of archaeological conservancy in lower uThukela River Basin.
- Mpungose Traditional Authority - negotiated extended boundaries of Ondini Historical Reserve.
- Mngomezulu Traditional Authority - negotiated management of Border Cave archaeological site.
- Bhekeshowe Traditional Authority - investigated feasibility of developing King Shaka's KwaBulawayo site as a tourist destination.
- Mangwebuthanani Traditional Authority - negotiated establishment of Isandlwana Historical Reserve.
- Mbonambi and Sokhulu communities - negotiated mitigation and future practice regarding exposure of human remains by Richards Bay Minerals' mining activities on ancestral lands.
- Khovokeni and Mvutshane communities at Kosi Bay - investigated feasibility of declaring Tsonga fish traps as significant cultural landscape;
- Amangwane and Amazizi Traditional Authorities - Mweni Valley cultural landscape management plan for inclusion into the uKhahlamba / Drakensberg World Heritage Site.
- Amangwane and AmaZizi Traditional Authorities – establishment of Cultural Centres and Cultural Guide training / Rock Art Custodians in the Mweni Area of the Okhahlamba/Drakensberg World Heritage Site.
- KwaNdengezi *in situ* housing and infrastructure upgrade - negotiation of appropriate mitigation for exhumation and reinterment of 30 ancestral graves. eThekweni Metropolitan Municipality.
- Dube and Mkhwanazi communities – management of 550 graves in Zulti South Mineral Lease Area for Richards Bay Mining.
- Dodoma Avenue/Kennedy Road Hindu Burial Site. Clare Estate Development Forum and eThekweni Metro (2013 - 2015).

### Collaborative Research and Archaeological Site Management

- University of Manitoba, Canada – Ndongondwane Early Iron Age research Project 1994 – 2004 with Professor Haskel Greenfield.
- University of Calgary, Canada – Cattle Transhumance and Isotope Study 2005 -2008 with Dr Elizabeth Arnold.
- University of Manitoba, Canada – Zulu Ethnographic and Ethnoarchaeology Ceramic Project. 2009 – 2013 with Professor Kent Fowler.
- University of Manitoba, Canada – Ceramics and Geochemistry Study of the eMakhosini Basin 2014 – 2015 with Professor Kent Fowler (ongoing).
- University of Manitoba, Canada – Cattle Transhumance and Isotope Study of the eMakhosini Basin 2015 – 2016 with Professor Kent Fowler (ongoing).
- University of Witwatersrand – Acacia Project – Site Management and Stabilisation of Sibudu Cave, Tongaat. 2007 – 2013 with Professor Lyn Wadley.
- University of Toronto, Canada – Grassridge MSA Site reconnaissance 2014. with Dr. Ben Collins.
- University of Cape Town – Indigenous Small Livestock Project 2013 – 2015 with Professor Judy Sealey and Louisa Hutton.
- University of Witwatersrand – Border Cave in the 21<sup>st</sup> C - Site Management and Stabilisation of Border Cave MSA Project Excavations with Dr. Lucinda Backwell and Professor Lyn Wadley 20014 – 2016 (ongoing).
- Evolutionary Studies Institute, University of the Witwatersrand - MSA Site Reconnaissance, lower Mtamvuna, Izotsha and Umzimkulu Valleys, 2016 with Drs. Paloma de la Peña and Aurore Val.
- University of Cape Town – 500 Year Project – Dingane's Capital, Mgungungdlovu with Professor Carolyn Hamilton. 2014 – 2016. Ongoing.
- Isimangaliso Wetland Park Authority - Cultural Heritage Resources Management Plan for the Isimangaliso Wetland Park 1916. Current.
- University of Witwatersrand - Klasies River Mouth Cave MSA Excavations: Cave lighting and logistics for Prof. Sarah Wurz.

## Employment Record

### December 2000 to present

Director at eThembeni Cultural Heritage, an independent consultancy specialising in heritage impact assessments, ancestral grave management and integrated environmental management.

### November 1996 to December 2000

Assistant Director (Research, Professional Services and Compliance) of Amafa aKwaZulu-Natali, in charge of ten professional and administrative staff, including archaeologists, anthropologists, architects, compliance and database managers.

### November 1992 to October 1996

Archaeologist with the KwaZulu Monuments Council; Principal Professional Officer-(Research Division), in charge of six professional and administrative staff. Responsible for Museum and Interpretive Centre co-ordination in the previous KwaZulu Homeland.

### February 1986 to October 1992

Professional Officer and officer-in-charge at Ondini Museum in Ulundi with KwaZulu Monuments Council, responsible for supervising archaeological excavations and reconstruction of King Cetshwayo's Ondini Royal Residence; management of the Historical Reserve and Nguni cattle herd; development of the Ondini Museum and its tourist facility, and regional site interpretation. Responsible for 30 General-Assistant and administrative staff members.

### July 1983 to January 1986

Field Director of an Early Iron Age archaeological research project in the lower uThukela Valley under the aegis of the KwaZulu Bureau of Natural Resources. Solely responsible for 15 General-Assistants, all excavations and curation/reporting; procurement, logistics, wage payments and balance sheets/stock returns.

### December 1978 to June 1983

Deployed as a Ranger/Naturalist in the Kruger National Park under Messrs. Piet van Wyk, Johan Vehoef, Irene Grobelaar, and Richard Garstang..

### December 1977 to February 1978

Field Research Assistant in Hluhluwe/iMfolozi Game Reserve under Regional Ecologist, Roger Porter.

LANGUAGES	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Good	Excellent	Good
Zulu	Good	Poor	Basic

## Conference papers

- 2015 'Grief, at what cost ? Ancestral land displacement and alienation – What about our graves?'  
(African Heritage Challenges Conference. University of Cambridge, United Kingdom).
- 2014 'Graves and Ancestors – Managing for the Intangibles of Tangible Cultural Heritage'.  
(Society of Petroleum Engineers International – HSE Conference, Maputo, Mozambique).
- \*2004 'Rescue excavation of an Iron Age Shell midden, Shrimp Lane, Salt Rock, KwaZulu-Natal'.  
(Southern African Association of Archaeologists biennial conference, Kimberley).
- 1996' The Early Iron Age site of Ndongondwane, KwaZulu-Natal, South Africa. Preliminary report on the 1995 excavations'.  
(Southern African Association of Archaeologists biennial conference, Bloemfontein).
- \*1995 'Archaeology, amasiko, and cultural resource management: a dialogical approach. A case-study from Richards Bay Minerals' mining concession areas in northern KwaZulu-Natal'.  
(South African Museums Association regional conference, Hermannsburg).
- 1994 Settlement shifts and socio-economic transformations in early farming communities in the lower Thukela Basin, Zululand. A Revisionist Model.  
(Conference on the growth of farming-communities from the Equator southwards, Newnham College, University of Cambridge, United Kingdom).
- 1994 'Border Cave: who really cares? The site management of a priceless cultural resource' and 'People, pots and pits: women's space in the Early Iron Age'.

(Southern African Association of Archaeologists biennial conference, Pietermaritzburg).

## Publications

- 2008 co-author with Haskel J. Greenfield Early Iron Age Regional Settlement and Demographic Patterns along the Eastern seaboard of South Africa: a view from the lower Thukela Valley. In. Animals and People: Archaeozoological Papers in Honour of Ina Plug. **BAR International Series** 1849: 131-151.Oxford.
- 2004 co-author with Kent D. Fowler and Haskel J. Greenfield The effects of burrowing activity on archaeological sites: Ndongondwane, South Africa. **Geoarchaeology** 19(5): 441-470.
- \*2003 co-author with Haskel J. Greenfield. Intra-settlement social and economic organisation of Early Iron Age farming communities in southern Africa: a view from Ndongondwane. **Azania** 38: 121-137.
- \*2000 co-author with Haskel J. Greenfield and Tina L. Jongsma. Surface and subsurface reconnaissance at Ndongondwane: preliminary results of the 1995-97 field seasons. **Southern African Field Archaeology** 9: 5-16.
- 2000 co-author with Kent D. Fowler and Haskel J. Greenfield. The identification and significance of ceramic ecofacts from Early Iron Age Ndongondwane, South Africa. **Southern African Field Archaeology** 9: 32-42.
- 1999 The archaeological excavations of Ondini, the Royal Capital of King Cetshwayo ka Mpande: 1873-1879. **One World Archaeology Series**. The Constructed Past: Experimental Archaeology, Education and the Public (15). UNESCO.
- \*1997 Mining Yields Up Ancient Past. **Titania**. Richards Bay Minerals.  
co-author with Haskel J. Greenfield and Tina L. Jongsma. Preliminary results of the 1995 research at the Early Iron Age site of Ndongondwane, KwaZulu-Natal, South Africa. **Nyame Akuma** 47: 42-52.
- \* co-author with Haskel J. Greenfield and Tina L. Jongsma. The Early Iron Age site of Ndongondwane, KwaZulu-Natal Province, South Africa. **Southern African Field Archaeology** (6)2.
- \*1996 Settlement Shifts and Socio-Economic Transformations in Early Farming Communities in the lower Thukela Basin, Zululand. A Revisionist Model. Proceedings of the conference on the growth of farming communities from the Equator southwards. **Azania** (XXVIII).
- 1996 A new relevance for old monuments: the Isandlwana model. **Southern African Museums Association Bulletin** (21).
- 1996 co-author with Jo Walker. Monuments and cultural heritage conservation in KwaZulu-Natal. **Restorica** (29).
- \*1994 Rediscovering the Iron Age. **Titania**. Richards Bay Minerals.
- \*1994 Wosi - an Early Iron Age village in the lower Thukela Basin, Zululand. Natal Museum Journal of Humanities (6): 65-117.
- 1994 Mamba Confluence - a preliminary report on an Early Iron Age industrial centre in the lower Thukela Basin, Zululand. **Natal Museum Journal of Humanities** (6): 119-152.
- \*1994 Tracking down old miners and beachcombers - Brown mussels and iron working long, long ago. **Titania**. Richards Bay Minerals.
- 1993 Fort Ivuna and the Battle of Ndunu Hill. **Journal of the Natal Institute of Architects** (18): 8-9.
- \*1989 Exploding a Myth - Natal's First Farmers. **Condenser**. Hulett-Tongaat Corporation, Durban.
- \* *indicate archaeological retrieval and curation of human remains*

## The Following Persons May Be Contacted To Attest To My Professional Standing:

Prof.Haskel Greenfield	University of Manitoba, Canada	<a href="mailto:greenf@cc.umanitoba.ca">greenf@cc.umanitoba.ca</a>
Prof.Kent Fowler	University of Manitoba, Canada	<a href="mailto:fowlerk@cc.umanitoba.ca">fowlerk@cc.umanitoba.ca</a>
Prof.Judith Sealy	University of Cape Town	<a href="mailto:Judith.Sealy@uct.ac.za">Judith.Sealy@uct.ac.za</a>
Prof.Tim Maggs (retd.)	University of Cape Town	<a href="mailto:Tim.Maggs@telkomsa.net">Tim.Maggs@telkomsa.net</a>
Mr Sicelo Bhengu	Community Affairs Richards Bay Minerals	<a href="mailto:Sicelo.Bhengu@rbm.co.za">Sicelo.Bhengu@rbm.co.za</a>
Mr Leslie Mpanza	International Cultural Affairs,Rio Tinto Mining	<a href="mailto:lesley.mpanza@riotinto.com">lesley.mpanza@riotinto.com</a>
Mr Garth Seneque	Independant International TRP Consultant	<a href="mailto:gseneque@gmail.com">gseneque@gmail.com</a>
Mr Adrian Moore	Attorney at Law	<a href="mailto:mail@moore-attorneys.co.za">mail@moore-attorneys.co.za</a>
Mr Andrew Zaloumis	CEO Isimangaliso World Heritage Site	<a href="mailto:apz@worldonline.co.za">apz@worldonline.co.za</a>
Dr Johan Binneman	Archaeologist Albany Museum (retired)	<a href="mailto:nfbinneman@gmail.com">nfbinneman@gmail.com</a>
Mr Kobus Reichert	Legal Adviser Gamt kwa Khoisan Council	<a href="mailto:kobusreichert@yahoo.com">kobusreichert@yahoo.com</a>
Dr Gavin Whitelaw	Archaeologist KwaZulu-Natal Museum	<a href="mailto:gwhitelaw@nmsa.org.za">gwhitelaw@nmsa.org.za</a>
Mr Jaco van de Walt	Independent Heritage Practitioner	<a href="mailto:jaco.heritage@gmail.com">jaco.heritage@gmail.com</a>
Mr Lebo Mokoatsi	Independant Social Facilitator	<a href="mailto:lebo.mokoatsi@yahoo.com">lebo.mokoatsi@yahoo.com</a>
Adv.Estienne Pretorius	Legal Advisor to the Ministry	<a href="mailto:Estienne.Pretorius@westerncape.gov.za">Estienne.Pretorius@westerncape.gov.za</a>

**Certification**

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

*LO van Schalkwyk*

Leonard Outram van Schalkwyk.

December 2016.

See <https://za.linkedin.com/in/lenvanschalkwyk>