

SPECIALIST REPORT
**PHASE 1 ARCHAEOLOGICAL / HERITAGE IMPACT ASSESSMENT FOR THE
DEVELOPMENT OF A FOOTBRIDGE ACROSS THE ELANDS RIVER,
ELANDSHOEK, MPUMALANGA**

MPUMALANGA PROVINCE

**REPORT PREPARED FOR
WANDIMA ENVIRONMENTAL SERVICES cc**

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APRIL 2014

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EXECUTIVE SUMMARY

A Phase 1 Heritage Impact Assessment (HIA) regarding archaeological and other cultural heritage resources was conducted on the footprint for a proposed footbridge at the Elands River, Elandshoek, Mpumalanga Province. The study area is situated on topographical maps 1:50 000, 2530BC BOSHALTE as well as 2530DA NGODWANA, on the farms *Lindenau 303JT* and *Goedgeluk 444JT*, which fall within the Mpumalanga Province, under the jurisdiction of the Ehlanzeni district municipality, and Mbombela local municipality.

The National Heritage Resources Act, no 25 (1999)(NHRA), protects all heritage resources, which are classified as national estate. The NHRA stipulates that any person who intends to undertake a development, is subjected to the provisions of the Act.

The proposed pedestrian footbridge over the Elands River will be approximately 42 meters long and 2.4 meters wide. The client, SHUMA AFRICA PROJECTS in association with Wandima Environmental are proposing four options for a new footbridge to be investigated. The existing footbridge across the Elands River is opposite the Elandshoek Railway Station, next to the N4, between Nelspruit and Waterval Onder. The Elandshoek Railway station played a role in the development of the historic Eastern Railway Line from Maputo (Delagoa Bay) to Pretoria. The line went along the route from Komatipoort, Hectorspruit, Malelane, Kaapmuiden, Nelspruit, Elandshoek, Waterval Onder to Pretoria, and was developed in the 1890's by the NZASM (Nederlandsche Zuid-Afrikaanche spoorweg-Maatskappij).

The Elandshoek Railway station building is a declared Provincial Heritage site (SAHRA ID no: 9/2/248/0002). The railway building is currently in a severe state of disrepair but the original tiles are still visible under debris.

Four options for the pedestrian footbridge were investigated. The field survey, literature study and personal communication with specialists in the field revealed that Options 1, 3 and 4 are the best options for the proposed project and no mitigation measures will be necessary for these options. The routes for Option 2 however, is situated closely to the Railway Station building which is older than 60 years in terms of section 34 of the NHRA and which is a declared Provincial Heritage site. It is recommended that should Option 2 be chosen, a full documentation report on the railway buildings will be necessary and a management plan be put in place, which needs to be approved by the Provincial Heritage Resources Agency (PHRA) of Mpumalanga.

Based on the findings in this report, Adansonia Heritage Consultants cc, states that there are no reasons that may prevent options 1, 3 or 4 to continue, as no archaeological or heritage resources will be impacted upon, along these routes.

Disclaimer: *Although all possible care is taken to identify all sites of cultural significance during the investigation, it is possible that hidden or sub-surface sites could be overlooked during the study, Christine Rowe trading as Adansonia Heritage Consultants will not be held liable for such oversights or for costs incurred by the client as a result.*

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- 3) Recommendations delivered to the Client.*

April 2015

Christine Rowe

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PHASE 1 ARCHAEOLOGICAL / HERITAGE IMPACT ASSESSMENT FOR THE DEVELOPMENT OF A FOOTBRIDGE ACROSS THE ELANDS RIVER, ELANDSHOEK, MPUMALANGA

A. BACKGROUND INFORMATION TO THE PROJECT

Adansonia Heritage Consultants were appointed by Wandima Environmental Services cc in conjunction with SHUMA AFRICA PROJECTS, to conduct a phase 1 heritage impact assessment (HIA) on archaeological and other heritage resources on the footprint for a proposed pedestrian footbridge across the Elands River, Elandshoek, Mpumalanga Province, which fall on the farms *Lindenau 303JT* and *Goedgeluk 444JT*, along the N4 from Nelspruit to Waterval Onder.

Four options were proposed to establish a new pedestrian footbridge across the Elands River, to replace an existing footbridge (fig. 1). The existing footbridge is at the river crossing on the western side of the Elandshoek Railway station.



Map 1: Google image: Four options are proposed for the Elandshoek footbridge – Option 1 (red), Option 2 (green), Option 3 (white) and Option 4 (yellow). See Appendix 3 for the construction plan.

- Option 1 (red) is proposing a new footbridge at the existing river crossing, a footpath on the western side of the railway of 860m long to avoid crossing the railway, to the Bell mouth at the N4;
- Option 2 (green) is proposing the construction of a new footbridge at the existing river crossing, a footpath on the western side parallel to the railway. It will then provide an unmanned railway crossing which is automatically controlled towards the N4. The total distance is 410m;
- Option 3 (white) is proposing a new footbridge at the existing river crossing. Construction of a footpath of 200m to follow the existing arrangement and crossing the railway (unmanned, and automatically controlled) towards the N4;
- Option 4 (yellow) is proposing the construction of a new footbridge at a new location south of the existing footbridge. It will then cross the railway (unmanned and automatically controlled), towards the N4, and then turn in a northern direction along the N4 for approximately 250m. The total distance will be 450m.

The existing infrastructure on the site consists of a railway line which is in use. A few buildings of the Elandshoek Railway Station (1960's) are still visible but severely neglected. The walls of the old Railway Station building (ca 1896) are still standing, but there is no roof, windows or doors. It is overgrown with vegetation. The original floor tiles are still visible under the mud.¹ This building is a declared Provincial Heritage Site (SAHRA ID no: 9/2/248/0002).²

The study area is situated on topographical maps 1:50 000, 2530BC BOSHALTE and 2530DA NGODWANA.

A literature study, relevant to the study area was done, to determine that no archaeological or heritage resources will be impacted upon by the proposed development (Map 3: Topographical Map).

The aims for this report will therefore be to source all relevant information on archaeological and heritage resources in the study area, and to advise the client on sensitive heritage areas and where it is viable for the development to take place in terms of the specifications as set out in the National Heritage Resources Act no., 25 of 1999 (NHRA). Recommendations for maximum conservation measures for any heritage resource will also be made. The study area is indicated in Maps 1, 2, 3 & 4. Photographic evidence is in Appendix 1, and the footbridge options and locations is in Appendix 3.

- This study forms part of an EIA, Consultant: Wandima Environmental Services, P.O. Box 1072, Nelspruit, 1200, Tel: 013 7525452 / Fax: 013 – 7526877 / e-mail: admin@wandima.co.za.

¹ Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.

² Heritage sites: http://www.en.wikipedia.org/wiki/List_of_heritage_sites_in_mpumalanga, p. 1.

- Type of development: Development of a pedestrian footbridge of approximately 42 meters long and 2.4 meters wide across the Elands River. Four options are proposed which were investigated (see Map 1& Appendix 3, Planning – Footbridge options and locations).
- The site is currently zoned as: Residential. No rezoning will take place.
- Location of Province, Magisterial district / Local Authority and Property (farms): The area falls within the Mpumalanga Province under the jurisdiction of the Ehlanzeni district municipality, Mbombela local municipality.
- Land owners: Department of Public Works, Roads and Transport.

- **Terms of reference:** As specified by section 38 (3) of the NHRA, the following information is provided in this report.
 - a) The identification and mapping of heritage resources where applicable;
 - b) Assessment of significance of the resources;
 - c) Assessment of the impact of the development;
 - d) Evaluation of the impact of the development;
 - e) Consultation with community members.
 - f) Alternatives given to affected heritage resources by the development;
 - g) Plans for measures of mitigation.

- **Legal requirements:**

The legal context of the report is grounded in the National Heritage Resources Act no. 25, 1999, as well as the National Environmental Management Act (1998) (NEMA).

- **Section 38 of the NHRA**

This report constitutes a heritage impact assessment investigation linked to the environmental impact assessment required for the development. The proposed development is a listed activity in terms of Section 38 (1) of the NHRA. Section 38 (2) of the NHRA requires the submission of a HIA report for authorisation purposes to the responsible heritage resources agency, (SAHRA).

Heritage conservation and management in South Africa is governed by the NHRA and falls under the overall jurisdiction of the South African Heritage Resources Agency (SAHRA) and its provincial offices and counterparts.

Section 38 of the NHRA requires a Heritage Impact Assessment (HIA) to be conducted by an independent heritage management consultant, for the following development categories:

- Construction of a road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length;

- Construction of a bridge or similar structure;
- Development or other activity that will change the character of a site -
 - exceeding 5000sq m;
 - involving three or more existing erven or subdivisions;
 - involving three or more erven or divisions that have been consolidated within the past 5 years;
 - rezoning of a site exceeding 10 000sq m;
 - the costs of which will exceed a sum set in terms of regulation by SAHRA or a provincial heritage resources authority;
- Any other development category, public open space, squares, parks or recreation grounds.

In addition, the new EIA regulations promulgated in terms of NEMA, determine that any environmental report will include cultural (heritage) issues.

The end purpose of this report is to alert Wandima Environmental Services, the client and interested and affected parties about existing heritage resources that may be affected by the proposed development, and to recommend mitigation measures aimed at reducing the risks of any adverse impacts on these heritage resources. Such measures could include the recording of any heritage buildings or structures older than 60 years prior to demolition, in terms of section 34 of the NHRA and also other sections of this act dealing with archaeological sites, buildings and graves.

The NHRA section 2 (xvi) states that a “heritage resource” means any place or object of cultural significance, and in section 2 (vi) that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

Apart from a heritage report assisting a client to make informed development decisions, it also serves to provide the relevant heritage resources authority with the necessary data to perform their statutory duties under the NHRA. After evaluating the heritage scoping report, the heritage resources authority will decide on the status of the resource, whether the development may proceed as proposed or whether mitigation is acceptable, and whether the heritage resource require formal protection such as a Grade I, II or III resource, with relevant parties having to comply with all aspects pertaining to such grading.

- **Section 35 of the NHRA**

Section 35 (4) of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object. This section may apply to any significant archaeological sites that may be discovered. In the case of such chance finds, the heritage practitioner will assist in investigating the extent and significance of the finds and consult with an archaeologist about further action. This may entail removal of material after documenting the find or mapping of larger sections before destruction. This section does not apply since no archaeological material was found.

- **Section 36 of the NHRA**

Section 36 of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority. This section may apply in case of the discovery of chance burials. No graves were identified during the survey.

- **Section 34 of the NHRA**

Section 34 of the NHRA stipulates that no person may alter, damage, destroy, relocate etc, any building or structure older than 60 years, without a permit issued by SAHRA or a provincial heritage resources authority. This section does apply since the old Elandshoek Railway station building is older than 60 years and a declared Provincial Heritage site, which will be affected by two of the four options proposed for the footbridge and walkway development.

- **Section 37 of the NHRA**

This section deals with public monuments and memorials but does not apply in this report.

- **NEMA**

The regulations in terms of Chapter 5 of the National Environmental Management Act, (107/1998), provide for an assessment of development impacts on the cultural (heritage) and social environment and for specialist studies in this regard.

B. BACKGROUND TO ARCHAEOLOGY AND HISTORY OF THE STUDY AREA

- **Literature review, museum databases & previous relevant impact assessments**

Very little historic information is available on the study area and there are no museums in Nelspruit (the closest town to Schoemanskloof), dealing the history of this area. The Lydenburg and Pilgrim's Rest Museums had no information available on the history of Schoemanskloof, Montrose or Elandshoek. The Barberton Museum had some history the area and on the Eastern Railway line.

The topographical maps of BOSHALTE (2530BC, 1984) & NGODWANA (2530 DA, 1988) show the Elandshoek Railway Station buildings, railway line, and cultivated lands next to the national N4 freeway. Most of the study area is highly disturbed with informal roads, alien vegetation such as kikuyu grass, weeds, Syringa, bluegum and other exotic trees. (Appendix 1).

The 1920 topographical map of MACHADODORP also show the Elandshoek railway station and one building, which is probably the original station building.

Very little contemporary research has been done on prehistoric African settlements in the study area. Only one professionally excavated Early Iron Age site was executed, in the wider area namely the

Plaston site near White River, dating ca 900 AD.³ The Lydenburg Head site, which was discovered by a school boy in the 1960's, dated to approximately 400 AD.⁴ The *Bushman Rock Shelter* was excavated in the 1970's near Ohrigstad.⁵ Archaeological excavations dating to the Later Iron Age have been conducted in the Kruger National Park and in the Lydenburg area⁶ but none have been conducted to date directly within the study area. A stone walled settlement with terracing was recorded by C. van Wyk (Rowe) near Hazyview,⁷ as well as several others further west and north-west,⁸ outside the study area. Extensive LIA stone walled settlements were identified (by the author) on the farm Mooiland 294JT, close to Elandshoek in 2012.

According to Bergh, there are Late Iron Age sites in the study area,⁹ which have been confirmed by the LIA stone walls which were identified on the farm Mooiland (see above), and many recorded sites from Machadodorp to Lydenburg, which fall within the Badfontein tradition.¹⁰

Elizabeth Voight's *Guide to the Archaeological sites in the northern and eastern Transvaal*, revealed no significant sites in the study area.¹¹

In order to place the area of Elandshoek in archaeological context, primary and secondary sources were consulted. Ethnographical and linguistic studies by early researchers such as Ziervogel and Van Warmelo shed light on the cultural groups living in the wider area since ca 1600. Historic and academic sources by Küsel, Meyer, Voight, Bergh, De Jongh, Evers and Myburgh were also studied.

The author was involved in surveys in the area, such as:

- C. Van Wyk Rowe: May 2012: Specialist Report for proposed building sties on the farm Mooiland 294JT, (Falls Fish Farm), Schoemanskloof;
- C. Van Wyk Rowe: June 2012: Phase 1 AIA / HIA for proposed Boarding School: Remainder of portion 8 of the farm Rietfontein 365JT, Machadodorp;
- C. Van Wyk Rowe: August 2012: Phase 1 Archaeological Impact assessment, survey and management guidelines for Majuba 1, rock art site, Berlin Plantation, Kaapsehoop.
- C. Van Wyk Rowe: May 2010: Phase 1 AIA / HIA for the proposed Township establishment on

³ M.M. Van der Ryst., *Die Ystertydperk*, in J.S. Bergh (red.), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*. p. 97.

⁴ M.M. Van der Ryst., *Die Ystertydperk*, in J.S. Bergh (red.), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*. p. 97.

⁵ E. Voight, *Guide to Archaeological sites in the Northern and Eastern Transvaal*, p. 110.

⁶ A. Pelsler 2014: Report on 1st phase of archaeological investigation of LIA stone walled sites, Lydenburg, Mpumalanga.

⁷ C. Van Wyk, *Inspection of Umbhaba Stone-walled settlement, Hazyview*, pp. 1-2.

⁸PRMA: Information file 9/2.

⁹ J.S. Bergh, *Geskiedenis Atlas van Suid-Afrika Die Vier Noordelike Provinsies*, pp. 4-7

¹⁰ Huffman, T.N., *Handbook to the Iron Age*, p. 32

¹¹ Voight, E., 1981, *Guide to the Archaeological sites in the Northern and Eastern Transvaal*.

portions 86, 87 and the remainder of portion 92 of the farm Doornhoek 344JT, Emgwenya Ridge, Waterval Boven.

The SAHRA database for archaeological and historical impact assessments was consulted and revealed the following Archaeological Impact assessment reports in the direct vicinity of the study area:

- Tobias Coetzee: September 2010: A Phase 1 Heritage Impact Assessment on Falls Fish Farm, Schoemanskloof, revealed the LIA stone walls as mentioned in the report.

Several early ethnographical and linguistic studies by early researchers such as D. Ziervogel and N.J. Van Warmelo, revealed the wider area was inhabited by Swazi people from before the 18th century.^{12 13}

When the Swazi began to expand northwards they forced the local inhabitants out of Swaziland, or absorbed them.¹⁴ There is evidence of resistance, but the Eastern Sotho groups who lived in the northern parts of Swaziland, moved mainly northwards.¹⁵ This appeared to have taken place towards the end of the 18th century,¹⁶ when these groups fled from Swaziland to areas such as Nelspruit, Bushbuckridge, Klaserie, Blyde River and Komatipoort.¹⁷

Several circular stone-walled complexes and terraces as well as graves have been recorded in the vicinity of Hazyview¹⁸, Bushbuckridge, Graskop and Sabie, clay potsherds and upper as well as lower grinding stones, are scattered at most of the sites.¹⁹ Many of these occur in caves as a result of the Swazi attacks on the smaller groups.²⁰

A study on the farm Mooiland 294JT, close to Elandshoek was done in 2012, and revealed extensive LIA stone and terrace walls on the extent of the farm. Some of the LIA stone walls were still in pristine condition and reach up to a height of 1500mm. The stone walls were utilized as settlements, cattle enclosures and terraces. The remains of upper and lower grinding stones suggest settlement over a length of time. The LIA stone walls are possibly connected to the history of the nearby Sudwala caves in the Mankelekele hills, Houtbosloop (some 6km away). The caves together with its history are popular tourist destinations in Mpumamalga.

¹²N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. pp. 90-92 & 111.

¹³H. S. Webb, *The Native Inhabitants of the Southern Lowveld, in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p.16.

¹⁴A.C. Myburgh, *The Tribes of Barberton District*, p. 10.

¹⁵N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. p. 111.

¹⁶H. S. Webb, *The Native Inhabitants of the Southern Lowveld, in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 14

¹⁷*Ibid.*, p. 16.

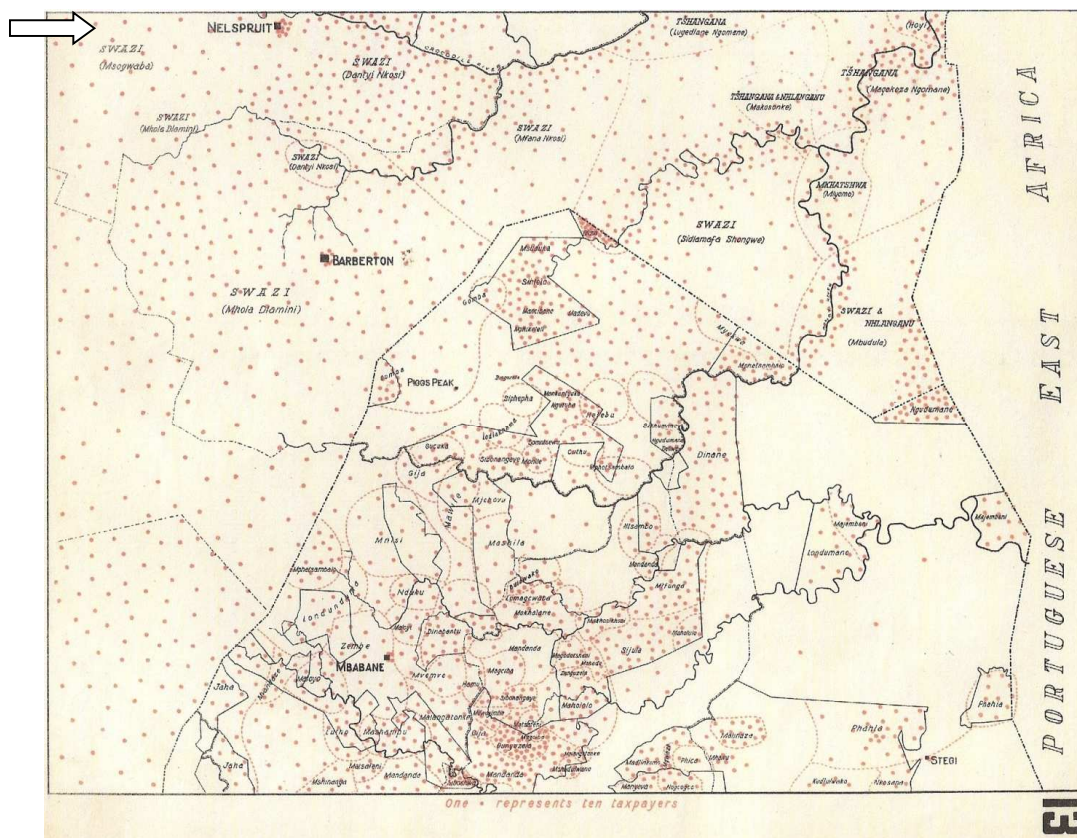
¹⁸PRMA: Information file 9/2.

¹⁹D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 3.

²⁰C. Rowe, 2009: *Heritage Management of Archaeological, Historical and Industrial resources on the Blyde River Canyon Nature Reserve*, MA dissertation. Pretoria: UP.

The caves were re-discovered by Somquba in the early 19th century, one of the sons of the Swazi king Sobhuza I, who was fleeing from his brother Mswati II. Somquba and his followers used the caves as a refuge, until Somquba was killed in an attack. Survivors stayed on under the leadership of a headman named Sudwala (after whom the caves were named).²¹ Somquba had built a village near the entrance of the caves where they could hide during attacks.²² The ruins on Mooiland are most probably part of the LIA villages of the descendants of the Swazi (Somquba).

Van Warmelo based his 1935 survey of *Bantu Tribes of South Africa* on the amount of taxpayers in an area. The survey does not include the extended households of each taxpayer, so it was impossible to actually indicate how many people were living in an area, but if it is compared to other sections, the habitation was very sparse (see map 2).²³ Van Warmelo recorded the groups in the study area in 1935 and identified them as mainly Swazi. The Swazi constantly attacked the Eastern Sotho groups during the nineteenth century (see Map 2).



Map 2: 1935 Map of Van Warmelo: The arrow indicates the study area.

²¹ http://en.wikipedia.org/wiki/sudwala_caves.

²² http://www.highlandmeander.co.za/html/sudwala_caves.html

²³ N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p.9.

HISTORY OF ELANDSHOEK

Elandshoek was the site where a government saw mill was established as part of the poor relief policy during the 1930's and 1940's.²⁴ The Union Forestry Department established numerous settlements as a measure of poor relief and a large number of schools were opened in connection with these. A school was also built at Elandshoek even with the centralization policy which was adopted in the 1920's.²⁵ Elandshoek was also the end terminus of a small train which transported indigenous wood in ca 1913 from Schoemanskloof.²⁶

The proposal for a railway link from Delagoa Bay was already put forward in 1866. It was only on 14 December 1883 that a concession was granted to build a railway line from Delagoa Bay to the Portuguese border and established the Delagoa Bay and East African Railway Company.

In August 1884 the government appointed a railway commission to investigate the matter and an agreement was entered into with the 'Nederlandsche Zuid-Afrikaanche Spoorweg-Maatskappij' (NZASM or ZASM). Construction of the line from Delagoa Bay commenced in 1887. On 5 December 1888, the Delagoa Bay and East African Railway Co. completed the line on the Portuguese side to the border of the Transvaal. The railway bridge at Komatipoort was completed at the end of May 1891, and it reached Komatipoort on 1 July 1891, Hectorspruit on 1 October, Malelane on 28 December and Kaapmuiden on 10 March 1892. The first locomotive entered Nelspruit station on 20 June 1892. By 1893, work commenced on the line from Pretoria to the east, and from Nelspruit to the west simultaneously.

From Nelspruit to Waterval Onder the line twisted and climbed through the scenic Elands River Valley until it reached Waterval Onder on 20 January 1894, south of the Elandshoek station. Construction engineers were faced with exceptionally difficult terrain between Waterval Onder and Waterval Boven. The gradient of one and fifty was agreed upon. This resulted that this section of the railway was provided with a rack. The rack consisted of two channel section beams with steel rack teeth fitted between them and spaced 100mm apart and arranged to engage the gear wheel of the rack engine.

On 2 November 1894, the line between Pretoria and Delagoa Bay was completed, and on 8 July 1895 officially declared open by President Paul Kruger.²⁷

It is not exactly known when the station building at Elandshoek was built. Bergh named it the 'NZASM'

²⁴ Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.

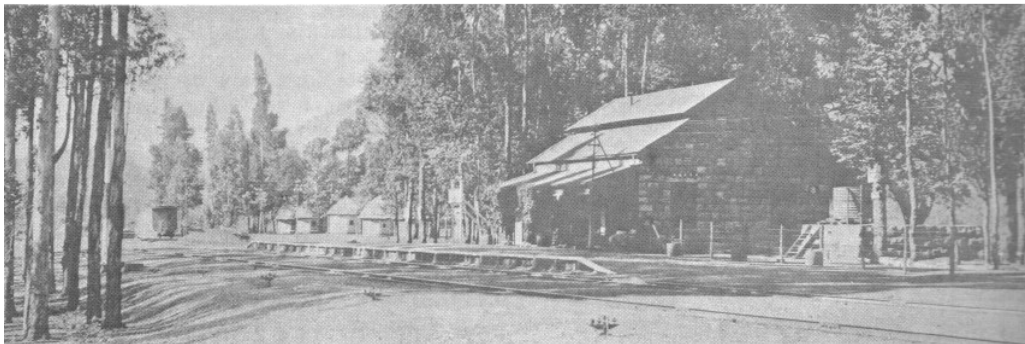
²⁵ H. S. Webb, The Native Inhabitants of the Southern Lowveld, in *Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 174.

²⁶ Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.

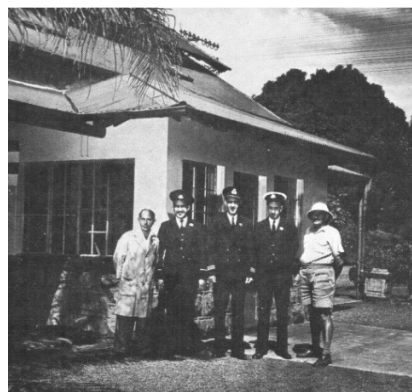
²⁷ H. Bornman, *Pioneers of the Lowveld*, pp. 39-42.

station building, which was built with dressed stone.²⁸ Old photographs of the building show the Victorian architectural style of the building. The small blue clay tiles are still intact under years of debris. These Dutch tiles are similar to the tiles in the Palace of Justice in Pretoria, and which were often used in ZAR post offices, such as the one at Kaapsehoop.²⁹

A few photographs (below), reflect the former glory of this heritage site. The building is currently badly deteriorated and neglected.



Historical photo a: Elandshoek station building (Photo sourced in: *Gedenkboek van Elandshoek Laerskool* (1964) - by Marius Bakkes). Note the buildings (rondawels) to the north of the station building. These are not visible today, although they are in direct line with option 2.



Historical photos b & c: Elandshoek station building with staff in 1964. (Photo sourced in: *Gedenkboek van Elandshoek Laerskool* (1964) - by Marius Bakkes).

²⁸ J.S. Bergh, *Geskiedenis Atlas van Suid-Afrika Die Vier Noordelike Provinsies*, p. 282.

²⁹ Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.



Historical photos d & e: Elandshoek station building in 2000 (Photos by Marius Bakkes).



Historical photos f & g: Elandshoek station building in 2000. The original floor tiles are still visible under debris (Photos by Marius Bakkes).³⁰



Photo h: The current state of the building (C. Rowe). Photo i: The front entrance of the station building. (See historical photo c) (C. Rowe). Photos 2015.

C. DESCRIPTION OF AREA TO BE AFFECTED BY DEVELOPMENT

The proposed pedestrian footbridge over the Elands River will be approximately 42 meters long and 2.4 meters wide. The client, SHUMA AFRICA PROJECTS in association with Wandima Environmental Services, proposed four options for a new footbridge to be investigated.

The existing footbridge across the Elands River is opposite (west) of the Elandshoek Railway Station, next to the N4, between Nelspruit and Waterval Onder (see fig. 1). Most of the study area is highly disturbed with road and railway infrastructure, informal roads, alien vegetation such as kikuyu grass,

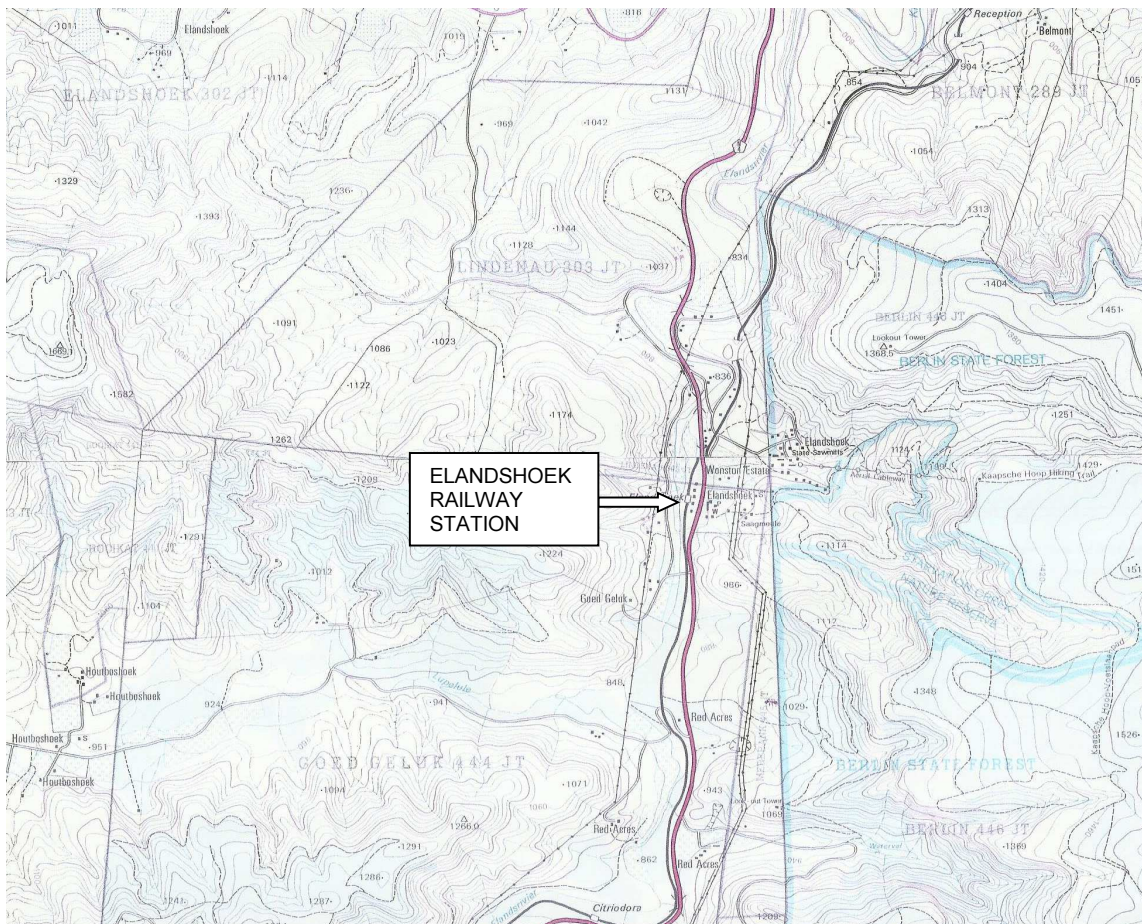
³⁰ Heritage sites: http://www.en.wikipedia.org/wiki/List_of_heritage_sites_in_mpumalanga, p. 1.

weeds, Syringa, bluegum and other exotic trees (see Appendix 1). The area to the north and west of the railway line is under citrus cultivation.

The Elands River Valley is ideal for growing citrus, and most the orchards are irrigated from the Elands River. The soil type is derived from quartzite and shale, is dark brown, stony and sometimes colloidal. There are also alluvial sections which are very fertile.³¹

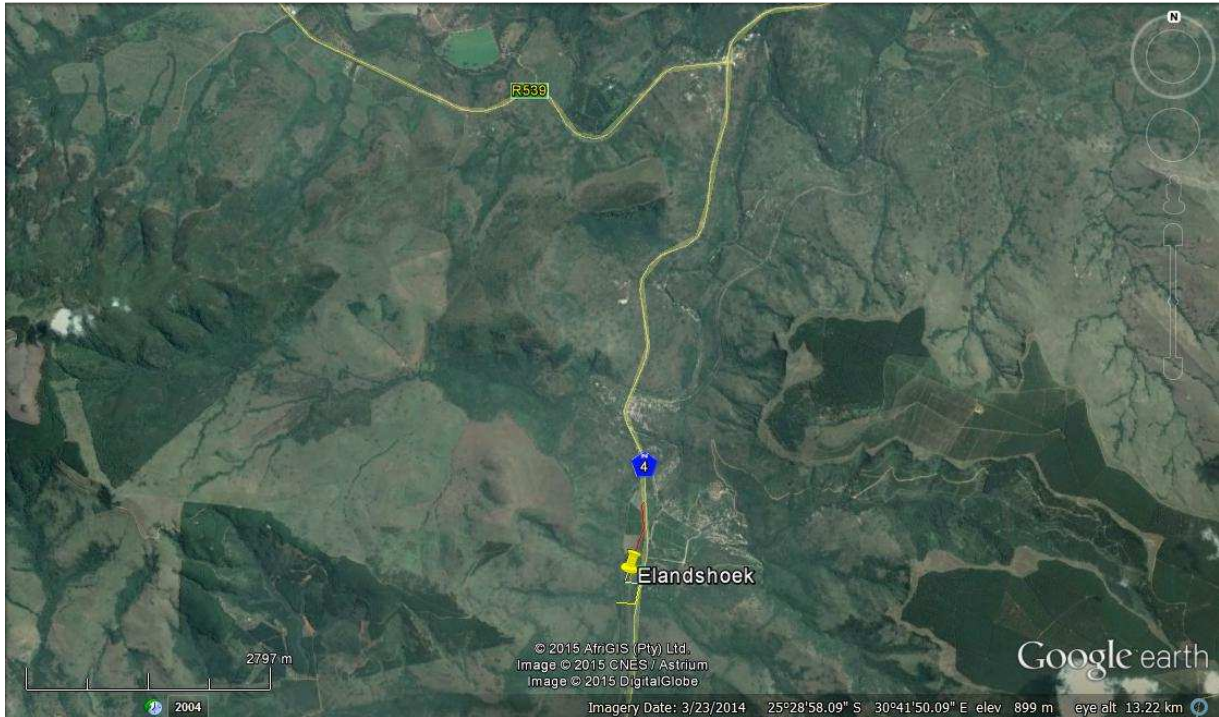
D. LOCALITY

The study area was investigated for all possible heritage related features. The study area falls within the 1: 50 000 topographical maps of BOSHALTE 2530BC as well as NGODWANA 2530DA, on the farms Lindenau 303JT and Goedgeluk 444JT, within the Mpumalanga Province.



Map 3: The study area falls within topographical maps 1:50 000, 2530BC BOSHALTE as well as 2530DA NGODWANA, on the farms Lindenau 303JT and Goedgeluk 444JT.

³¹ H. S. Webb, The Native Inhabitants of the Southern Lowveld, in *Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p.103.



Map 4: Google image of the wider area.

The Elandshoek Railway station is situated next to the N4 from Machadodorp to Nelspruit, along the Elands River. Local pedestrians are crossing the Elands River on an unsafe hand constructed footbridge (fig. 1). The Department of Public Works is proposing the construction of the new footbridge. Four different options are proposed (see previous discussion in section A). The proposed new footbridge will be approximately 42m long and sized on the 1: 50 flood frequency, with a width of 2.4m.

- **Description of methodology:**

In order to reach a comprehensive conclusion regarding the cultural heritage resources in the study area, the following methods were used:

- The desktop study consists mainly of archival sources studied on distribution patterns of early African groups who settled in the area since the 17th century, and which have been observed in past and present ethnographical research and studies, and photographs for any historical information.
- Literary sources, books and government publications, which were available on the subject, have been consulted, in order to establish relevant information.
- Several historians were consulted on the subject.

-Literary sources: A number of books and government publications about prehistory and history of the area were consulted, and revealed valuable information;

-Personal communication with individuals was conducted.

- The fieldwork and survey was conducted on foot with two people over 1 day (See appendix 2).

The various routes of the proposed options were mainly investigated, as well as the surrounding areas.

- Historians concerned with the history of Mpumalanga, were consulted throughout the survey;³²
- Although the grass vegetation was fairly lush it consisted mainly of Kikuyu grass and alien trees. Small footpaths into sections made the area accessible.
- Disturbance related to the railway and road infrastructure was extensive.
- The terrain was even and accessible.
- The relevant data was located with a GPS instrument (Garmin Etrex) datum WGS 84, and plotted. Co-ordinates were within 4-6 meters.
- Evaluation of the resources which might be impacted upon by the footprint, was done within the framework provided by the National Heritage Resources Act, no. 25 (1999).
- **GPS-Co-ordinates of the study area:**

OPTION	Latitude	Longitude
EXISTING FOOTBRIDGE	S25° 30' 21.51"	E30° 41' 56.89"
OPTION 1 (RED)	S25° 30' 21.51"	E30° 41' 56.89"
Start at Existing footbridge		
Before railway line, turns north	S25° 30' 22.06"	E30° 41' 59.10"
West of railway line at bend	S25° 30' 01.47"	E30° 42' 04.61"
West of railway line at N4	S25° 29' 52.06"	E30° 42' 04.89"
OPTION 2 (GREEN)	S25° 30' 21.51"	E30° 41' 56.89"
Start at Existing footbridge		
Before railway line, turns north	S25° 30' 22.06"	E30° 41' 59.10"
Crossing the railway line	S25° 30' 14.99"	E30° 42' 00.53"
East of railway line at N4	S25° 30' 15.39"	E30° 42' 05.33"
OPTION 3 (WHITE)	S25° 30' 21.51"	E30° 41' 56.89"
Start at Existing footbridge		
Straight from footbridge to N4	S25° 30' 22.20"	E30° 42' 03.80"
OPTION 4 (YELLOW)	S25° 30' 29.96"	E30° 41' 57.00"
Start at a new location		
From new location crossing the railway line to N4	S25° 30' 29.80"	E30° 42' 01.83"
Follow parallel to the N4 to end	S25° 30' 22.20"	E30° 42' 03.80"

³² Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.

E. DESCRIPTION OF IDENTIFIED SITES

The Elandshoek Railway station building is of historic interest and played a role in the development of the Eastern Railway Line from Maputo (Delagoa Bay) to Pretoria (1895)(Historic photos a – i). The line went along the route from Komatipoort, Hectorspruit, Malelane, Kaapmuiden, Nelspruit, Elandshoek, Waterval Onder to Pretoria, and was built by the NZASM (Nederlandsche Zuid-Afrikaanische Spoorweg-Maatskappij).

The Elandshoek Railway station building is a declared Provincial Heritage site (SAHRA ID no: 9/2/248/0002. The railway building is currently in a severe state of disrepair but the original tiles are still visible under debris (Historic Photo: g). See Appendix 1 & 2 for photographic and other relevant information on the study area. Other buildings are visible on the historic photographs, but the remains / foundations were not visible during the survey.

No archaeological sites were identified on the study area.

SITE	Description / comments	Co-ordinate
Elandshoek railway station building: SAHRA ID 9/2/248/0002 (Historic photos: a – g)	The building is a declared Provincial Heritage site. ³³ It was built around 1896. It is described as the old NZASM railway line station building, Elandshoek. ³⁴ The building is neglected and overgrown but the clay tiles are still visible under the accumulated debris on the floor. The tiles are similar to the tiles in the Palace of Justice in Pretoria, and the post office at Kaapsehoop. ³⁵ Historic photos: g, h & 1)	S25° 30' 16.2" E30° 42' 01.7" Elev: 853m

F. DISCUSSION ON THE FOOTPRINT OF THE PROPOSED DEVELOPMENT

ACT	COMPONENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impact on buildings and structures older than 60 years	NZASM station building ca 1896	Mitigation measures are recommended
NHRA	S35	Impacts on archaeological and palaeontological heritage resources	None present	None
NHRA	S36	Impact on graves	None present	None

³³ Heritage sites: http://www.en.wikipedia.org/wiki/List_of_heritage_sites_in_mpumalanga, p. 1.

³⁴ J.S. Bergh, *Geskiedenis Atlas van Suid-Afrika Die Vier Noordelike Provinsies*, p. 282.

³⁵ Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.

ACT	COMPO- NENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S37	Impact on public monuments	None present	None
NHRA	S38	Developments requiring an HIA	Development is a listed activity	HIA
NEMA	EIA regulations	Activities requiring an EIA	Development is subject to an EIA	HIA is part of EIA

- **Summarised identification and cultural significance assessment of affected heritage resources:** (Standardized set of conventions used to assess the impact of projects on individual heritage features).

General issues of site and context:

Context		
Urban environmental context	No	-
Rural environmental context	No	Located between Nelspruit and Waterval Onder, at Elandshoek.
Natural environmental context	No	-
Formal protection (NHRA)		
(S. 28) Is the property part of a protected area?	No	-
(S. 31) Is the property part of a heritage area?	Yes	Provincial Heritage site: SAHRA ID no. 9/2/248/0002.
Other		
Is the property near to or visible from any protected heritage sites	Yes	NZASM tunnel at Waterval Onder
Is the property part of a conservation area of special interest in terms of the Zoning scheme?	No	-
Does the site form part of a historical settlement or townscape?	No	-

Context		
Does the site form part of a rural cultural landscape?	No	-
Does the site form part of a natural landscape of cultural significance?	No	-
Is the site adjacent to a scenic route?	No	-
Is the property within or adjacent to any other area which has special environmental or heritage protection?	Yes	In vicinity of the Starvation Creek Nature Reserve
Does the general context or any adjoining properties have cultural significance?	Yes	Forms part of the historic Eastern Railway line

Property features and characteristics		
Have there been any previous development impacts on the property?	Yes	N4 directly to the east. Other Informal road infrastructure; Historic railway line; Agricultural developments.
Are there any significant landscape features on the property?	No	-
Are there any sites or features of geological significance on the property?	No	-
Does the property have any rocky outcrops on it?	No	-
Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes	Elands River to the west of the railway line

Heritage resources on the property		
Formal protection (NHRA)		
National heritage sites (S. 27)	No	-
Provincial heritage sites (S. 27)	Yes	SAHRA ID: 9/2/248/0002.
Provincial protection (S. 29)	No	-

Heritage resources on the property		
Place listed in heritage register (S. 30)	No	-
General protection (NHRA)		
Structures older than 60 years (S. 34)	Yes	The Elandshoek railway building is older than 60 years.
Archaeological site or material (S. 35)	No	-
Palaeontological site or material (S. 35)	No	-
Graves or burial grounds (S. 36)	No	-
Public monuments or memorials (S. 37)	No	-
Other		
Any heritage resource identified in a heritage survey (author / date / grading)	No	-
Any other heritage resources (describe)	No	-

NHRA S (3)2 Heritage resource category	ELEMENTS	INDICATORS OF HERITAGE SIGNIFICANCE										RISK
		Historical	Rare	Scientific	Typical	Technological	Aesthetic	Person / community	Landmark	Material condition	Sustainability	
Buildings / structures of cultural significance	Yes	Yes	Yes	0	0	0	Yes	Yes	0	0	0	The building is in a neglected state but may still be restored. It will be negatively affected by Option 2.

NHRA	ELE-	INDICATORS OF HERITAGE SIGNIFICANCE										RISK	
Areas attached to oral traditions / intangible heritage	No	0	0	0	0	0	0	0	0	0	0	0	
Historical settlement/ townscapes	Yes	Yes	Yes	0	0	0	Yes	Yes	0	0	0	0	The building is in a neglected state but may still be restored. It will be negatively affected by Option 2.
Landscape of cultural significance	Yes	Yes	Yes	-	-	-	Yes	Yes	-	-	-	-	Part of the history of the Eastern Railway line ca 1896.
Geological site of scientific/ cultural importance	No	-	-	-	-	-	-	-	-	-	-	-	-
Archaeological / palaeontological sites	No	-	-	-	-	-	-	-	-	-	-	-	-
Grave / burial grounds	No	-	-	-	-	-	-	-	-	-	-	-	-
Areas of significance related to labour history	No	-	-	-	-	-	-	-	-	-	-	-	-
Movable objects	No	-	-	-	-	-	-	-	-	-	-	-	-

- Summarised recommended impact management interventions

NHRA S (3)2 Heritage resource category	SITE	IMPACT SIGNIFICANCE Cultural significance rating		Impact management	Motivation
		Cultural significan	Impact significanc		
Buildings / structures of cultural significance	Yes	Yes	Will deteriorate further if Option 2 is used.	Other options may be used for the proposed footbridge to avoid impact on the building	Options 1, 3 & 4 are recommended as options 2 & 3 are closely situated to the railway station building, which may result in a negative impact
Areas attached to oral traditions / intangible heritage	No	None	None	-	-
Historical settlement/ townscape	Yes	Yes	See above	See above	See above. History will be lost
Landscape of cultural significance	No	None	None	-	-
Geological site of scientific/ cultural importance	No	None	None	-	-
Archaeological / palaeontological sites	No	None	None	-	-
Grave / burial grounds	No	None	None	-	-
Areas of significance related to labour history	No	None	None	-	-

NHRA S (3)2 Heritage	SITE	IMPACT SIGNIFICANCE Cultural significance rating		Impact management	Motivation
Movable objects	No	None	None	-	-

ACT	COMPO- NENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impact on buildings and structures older than 60 years	Declared Provincial Heritage site	Mitigation measures are recommended
NHRA	S35	Impacts on archaeological and palaeontological heritage resources	None present	None
NHRA	S36	Impact on graves	None present	None
NHRA	S37	Impact on public monuments	None present	None
NHRA	S38	Developments requiring an HIA	Development is a listed activity	Full HIA
NEMA	EIA regulations	Activities requiring an EIA	Development is subject to an EIA	HIA is part of EIA

G. STATEMENT OF SIGNIFICANCE & EVALUATION OF HERITAGE RESOURCES IN THE STUDY AREA

Section 38 of the NHRA, rates all heritage resources into National, Provincial or Local significance, and proposals in terms of the above is made for all identified heritage features.

- **Evaluation methods**

Site significance is important to establish the measure of mitigation and / or management of the resources. Sites are evaluated as *HIGH (National importance)*, *MEDIUM (Provincial importance or LOW, (local importance)*, as specified in the NHRA. It is explained as follows:

- **National Heritage Resources Act**

The National Heritage Resources Act no. 25, 1999 (NHRA) aims to promote good management of the national estate, and to enable and encourage communities to conserve their legacy so that it may be

bequeathed to future generations. Heritage is unique and it cannot be renewed, and contributes to redressing past inequities.³⁶ It promotes previously neglected research areas of which the study area is in crucial need of.

All archaeological and other cultural heritage resources are evaluated according to the NHRA, section 3(3). A place or object is considered to be part of the national estate if it has cultural significance or other special value in terms of:

- (a) its importance in the community, or pattern of South Africa's history;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;³⁷

Heritage resources which were identified in the study area:

SITE	Description / comments	Co-ordinate
Elandshoek railway station building: SAHRA ID 9/2/248/0002 (Historic photos: a – g).	The building is a declared Provincial Heritage site. ³⁸ It was built around 1896. It is described as the old NZASM railway line station building, Elandshoek. ³⁹ The building is neglected and overgrown but the clay tiles are still visible under the accumulated debris on the floor. The tiles are similar to the tiles in the Palace of Justice in Pretoria, and the post office at Kaapsehoop. ⁴⁰ (Historic photos: g – i).	S25° 30' 16.2" E30° 42' 01.7" Elev: 853m

SITE	CULTURAL HERITAGE FEATURES	SIGNIFICANCE	MEASURES OF MITIGATION
Elandshoek railway station building: SAHRA ID 9/2/248/0002 Historic photos: a – g.	The Elandshoek - NZASM railway line station building dates from ca 1896. It is a declared Provincial Heritage site.	MEDIUM	Should proposed route option 2 be chosen, then a full documentation report and management plan need to be put in place

- **Field rating:**

The NZASM station building is a declared Provincial Heritage site and is of Provincial significance (see

³⁶National Heritage Resources Act, no. 25 of 1999. p. 2.

³⁷National Heritage Resources Act, no. 25 of 1999. pp. 12-14

³⁸ Heritage sites: http://www.en.wikipedia.org/wiki/List_of_heritage_sites_in_mpumalanga, p. 1.

³⁹ J.S. Bergh, *Geskiedenis Atlas van Suid-Afrika Die Vier Noordelike Provinsies*, p. 282.

⁴⁰ Personal communication: Marius Bakkes, e-mail: Access: 2015-04-16.

Historic Photos a – g). The developer is proposing four different route options of which Options 1, 3 and 4 are the preferred options. Should the developer choose Option 2, then mitigation measures will be applicable. Although the station building is not in direct line of route 2, the route is closely situated to the building. The historic photographs revealed the existence of other buildings to the north of the station building, of which the foundations / remains were not visible during the survey, but which will be impacted upon by option 2. Mitigation measures will then include a full documentation report and management plan for the historic site.

There are also at least seven neglected buildings in the same area. Although it is not believed that these structures are older than 60 years, visibility was not good in this section and some important foundations or other features might have been missed (see Appendix 1).

Please note that no archaeological or graves were identified on the study area.

H. RECOMMENDATIONS

The Elandshoek Railway station is a declared Provincial Heritage site (SAHRA ID no: 9/2/248/0002). The railway building is currently in a severe state of neglect but the original tiles are still visible under debris and it is believed that the building may still be restored to its former glory (Historic photos h & i).

Four options for the pedestrian footbridge were investigated. The field survey, literature study and personal communication with specialists in the field revealed that Options 1, 3 and 4 are the best options for the proposed project and no mitigation measures will be necessary for these options. The route for option 2 however, is situated close to the NZASM Railway Station building which is older than 60 years in terms of section 34 of the NHRA and which is a declared Provincial Heritage site. It is recommended that should Option 2 be chosen, a full documentation report on the railway buildings will be necessary and a management plan be put in place, which needs to be approved by the Provincial Heritage Resources Agency (PHRA) of Mpumalanga.

Based on the findings in this report, Adansonia Heritage Consultants cc, states that there are no reasons that may prevent options 1, 3 or 4 to continue, as no archaeological or cultural heritage resources will be impacted along these routes.

I. CONCLUSION

Archaeological material or graves are not always visible during a field survey and therefore some significant material may only be revealed during construction activities. It is therefore recommended that the developers be made aware of this possibility and when human remains, clay or ceramic pottery etc. are observed, a qualified archaeologist must be notified and an assessment be done. Further research might be necessary in this regard for which the developer is responsible.

Adansonia Heritage Consultants cannot be held responsible for any archaeological material or graves which were not located during the survey.

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ACKNOWLEDGEMENTS:

- Marius Bakkes: Mpumalanga Heritage Interest Group– for sharing valuable information with regards to the historic Elandshoek railway station.