



APPLICATION FORM NOTIFICATION OF INTENT TO SECTION 38 (1) AND SECTION 38 (8)

Heritage Western Cape Reference No:

*To be completed by
applicant*

20100206

Completion of this form is required by Heritage Western Cape for the initiation of all impact assessment processes under Section 38 (1) & (8) of the National Heritage Resources Act (NHRA).

Whilst it is not a requirement, it may expedite processes and in particular avoid calls for additional information if certain of the information required in this form is provided by a heritage specialist/s with the necessary qualifications, skills and experience.

A. APPLICABILITY OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA)

DEADP/ DMR Reference Number:

This application is made in terms of Section 38(8) of the NHRA and an application under NEMA has been made to the following authority:

This development will not require a NEMA application.

NOTE: Making an incorrect statement or providing incorrect information in this part of the form may result in all or part of the application having to be reconsidered by HWC in the future, or submission of a new application.

B. BASIC DETAILS

PROPERTY DETAILS:

Name of property:

Park Avenue, Beaufort West;

New Street, Beaufort West;

Donkin Steet (N1 / N12), Beaufort West;

R381, Beaufort West to Loxton
 Fraserburg Street, Loxton;
 Auret Street / R381, Loxton;
 R63, Loxton to Carnarvon;
 South Street, Carnarvon;
 Margaretha Prinsloo Street, Carnarvon;
 Biblioteek Street, Carnarvon;
 Zahn Street, Carnarvon;
 Van Riebeeck Street, Carnarvon;
 Stasieweg Street, Carnarvon.

(an application has been made on SAHRIS for SAHRAs attention for the portions of the development in the Northern Cape)

Street address or location (eg: off R44):

The fibre optic cable route is proposed in the road reserves of roads R386 and R63 (and various roads within the towns of Beaufort West, Loxton and Carnarvon), and traverses a total of 98 erven / land parcels / farms. Addresses of route start, signal regeneration station, and end are provided below.

Route start at Beaufort West Transnet building:

•Corner of Kerk Street and Second Avenue, Beaufort West, 6970, Western Cape (32°21'2.47"S; 22°34'35.38"E).

Carnarvon signal regeneration station (new-build):

•Corner of Fraserburn Street and Smit Street, Loxton, 6985, Northern Cape (31°28'44.39"S; 22°20'55.29"E).

Route end at existing Carnarvon SKA internet Point of Presence (PoP):

•Corner of Stasieweg Street and Esterhuizen Street, Carnarvon, 8925, Northern Cape (30°58'12.14"S; 22° 8'29.17"E).

(an application has been made on SAHRIS for SAHRAs attention for the portions of the development in the Northern Cape)

Erf or farm number/s: Road Reserve for R381 and R63	Coordinates: From 32°21'2.47"S; 22°34'35.38"E to 32°21'2.47"S; 22°34'35.38"E (A logical centre point. Format based on WGS84.)
Town or District: Beaufort West	Municipality: Beaufort West in the Western Cape
Extent of property: Total 183 km (102 km in the Western Cape, and 81 km in the Northern Cape).	Current use: Road Reserve
Predominant land use/s of surrounding properties: Agricultural	

REGISTERED OWNER OF PROPERTY:

Name and Surname: **Mr Evan Burger ***

Address **Private Bag X9185, Cape Town, 8000**

Telephone **021 483 2180**

Cell

E-mail

Evan.Burger@westerncape.gov.za

APPLICANT/ AUTHORISED AGENT:

Name and Surname: **Jenna Lavin**

Address: **34 Harries Street, Plumstead**

Telephone 083 619 0854	Cell 083 619 0854	E-mail jenna.lavin@ctsheritage.com
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By the submission of this form and all material submitted in support of this notification (ie: 'the material'), all applicant parties acknowledge that they are aware that the material and/or parts thereof will be put to the following uses and consent to such use being made: filing as a public record; presentations to committees, etc; inclusion in databases; inclusion on and downloading from websites; distribution to committee members and other stakeholders and any other use required in terms of powers, functions, duties and responsibilities allocated to Heritage Western Cape under the terms of the National Heritage Resources Act. Should restrictions on such use apply or if it is not possible to copy or lift information from any part of the digital version of the material, the material will be returned unprocessed.

I confirm that I enclose with this form two hardcopies of all material submitted together with a CD/ USB containing digital versions of all of the same.

***The road reserves in which the fibre optic cable is proposed is owned by the Western Cape Government Department of Public Works and South African National Roads Agency (SANRAL). Wayleave approval has been obtained - see attached**

Signature of Owner: _____

Date:

Signature of Applicant/ Authorised Agent: _____
(Applicants/ agents must attach copy of power of attorney to this form.)

Date:

C. DEVELOPMENT DETAILS:

Please indicate below which of the following Sections of the National Heritage Resources Act, or other legislation has triggered the need for notification of intent to develop.

X	S38(1)(a) Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.	S38(1)(c) Any development or activity that will change the character of a site -
<input type="checkbox"/>	S38(1)(b) Construction of a bridge or similar structure exceeding 50m in length.	
		<input type="checkbox"/> (i) exceeding 5 000m ² in extent;

<input type="checkbox"/>	S38(1)(d) Rezoning of a site exceeding 10 000m ² in extent.	<input type="checkbox"/>	(ii) involving three or more existing erven or subdivisions thereof;
<input checked="" type="checkbox"/>	Other triggers, eg: in terms of other legislation, (ie: National Environment Management Act, etc.) Please set out details: This application also triggers NEMA	<input type="checkbox"/>	(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years.
		If you have checked any of the three boxes above, describe how the proposed development will change the character of the site:	

If an impact assessment process has also been / will be initiated in terms of other legislation please provide the following information:

Authority / government department (ie: consenting authority) to which information has been /will be submitted for final decision: **National Department of Environment, Forest and Fisheries (DEFF)**

Present phase at which the process with that authority stands: **Pre-application phase. Application submission estimated early-November 2020**

Provide a full description of the nature and extent of the proposed development or activity including its potential impacts:

The South African Radio Astronomy Observatory (SARAO) spearheads South Africa's activities in the SKA Radio Telescope through engineering, science and construction. SARAO is a National Facility, managed by the National Research Foundation, which incorporates radio astronomy instruments and programmes such as the MeerKAT and KAT-7 telescopes in the Karoo, the Hartebeesthoek Radio Astronomy Observatory (HartRAO) in Gauteng, the African Very Long Baseline Interferometry (AVN) programme in nine African countries, as well as the associated human capital development and commercialisation endeavours.

Connectivity is required between the SKA core site in the Northern Cape and a data processing facility in Cape Town to transport the science data for the SKA project and its precursor,

MeerKAT. Access to dark fibre is required to transport this data due to the expected data throughputs for the SKA project.

The details of the preferred and selected SKA fibre route (Route A) is as follows:

- 1. The fibre route starts from Beaufort West Transnet building, to a 3 m x 6 m signal repeater station at Loxton, and then on to the Carnarvon SKA Point of Presence (PoP) site (location where networking equipment may be accessed).**
- 2. The fibre duct and cable will be laid in a 1 m deep and 300 mm wide trench and be buried by backfilling and compacting the trench.**
- 3. The full fibre route will be installed within the road reserves of roads R381 and R63, and 1 m from the fence of the private land.**
- 4. 155 km will be underground and 25 km will be overhead due to it not being technically or financially feasible to trench on the Molteno Pass section. The total pole length is 9 m, buried 1.5 m deep, with a resultant above-ground height of 7.5 m**
- 5. There are several streams / rivers and associated wetlands to cross. Rivers will be crossed using directional drilling 2 m below the riverbed starting 32 m away from river banks.**
- 6. There is only one river with solid bedrock (the Brak River near Loxton) where directional drilling is not technically or financially feasible. Here the fibre cable will be attached to the existing road bridge.**

D. ANTICIPATED IMPACTS ON HERITAGE RESOURCES

Section 3 of the National Heritage Resources Act sets out the following categories of heritage resource as forming part of the national estate. Please indicate the known presence of any of these by checking the box alongside and then providing a description of each occurrence, including nature, location, size, type

Failure to provide sufficient detail or to anticipate the likely presence of heritage resources on the site may lead to a request for more detailed specialist information.

(The assistance of relevant heritage professionals is particularly relevant in completing this section.)

Provide a short history of the site and its environs (Include sources where available): **See attached Heritage Screening Assessment**

Please indicate which heritage resources exist on the site and in its environs, describe them and indicate the nature of any impact upon them: **See attached Heritage Screening Assessment**

X	<p>Places, buildings, structures and equipment of cultural significance</p> <p>Description of resource:</p> <p>Description of impact on heritage resource:</p>
<input type="checkbox"/>	<p>Places to which oral traditions are attached or which are associated with living heritage</p> <p>Description of resource:</p> <p>Description of impact on heritage resource:</p>

<input type="checkbox"/>	<p>Historical settlements and townscapes</p> <p>Description of resource: see attached screening assessment</p> <p>Description of impact on heritage resource:</p>
<input type="checkbox"/>	<p>Landscapes and natural features of cultural significance</p> <p>Description of resource: see attached screening assessment</p> <p>Description of impact on heritage resource:</p>
<input type="checkbox"/>	<p>Geological resources of scientific or cultural importance</p> <p>Description of resource:</p> <p>Description of impact on heritage resource:</p>
<input checked="" type="checkbox"/>	<p>Archaeological resources (Including archaeological sites and material, rock art, battlefields & wrecks):</p> <p>Description of resource: see attached screening assessment</p> <p>Description of impact on heritage resource:</p>
<input checked="" type="checkbox"/>	<p>Palaeontological resources (ie: fossils):</p> <p>Description of resource: see attached screening assessment</p> <p>Description of impact on heritage resource:</p>
<input type="checkbox"/>	<p>Graves and burial grounds (eg: ancestral graves, graves of victims of conflict, historical graves & cemeteries):</p> <p>Description of Resource:</p> <p>Description of Impact on Heritage Resource:</p>
<input type="checkbox"/>	<p>Other human remains:</p> <p>Description of resource:</p> <p>Description of impact on heritage resource:</p>
<input type="checkbox"/>	<p>Sites of significance relating to the history of slavery in South Africa:</p> <p>Description of resource:</p> <p>Description of impact on heritage resource:</p>
<input type="checkbox"/>	<p>Other heritage resources:</p> <p>Description of resource:</p> <p>Description of impact on heritage resource:</p>

Describe elements in the environs of the site that could be deemed to be heritage resources:

This application is for the proposed installation of a fibre line from Carnarvon to Loxton in the Northern Cape, and from Loxton to Beaufort West in the Western Cape in order to connect the Square Kilometer Array (SKA) to the internet for the purposes of sending and receiving data. The proposed Fibre Line will be allocated within the existing road reserve for the majority of the route and will supplement existing overhead lines where trenching is not possible.

Carnarvon was established in 1853 on a route between Cape Town and Botswana that was followed by early explorers and traders. It was originally established as a mission station of the Rhenish Missionary Society and named Harmsfontein. Loxton's first church building and schoolhouse was built in 1900. Tree-lined streets and flood irrigation channels that run alongside the town's main roads were completed in the same year. The town became a municipality in 1905 as it developed to serve the region's sheep-farming community. The church that stands in the town's centre was constructed in 1924. Beaufort West was the first town to be established in the central Karoo. The town was founded in 1818 and became the first municipality in South Africa on 3 February 1837 and had the country's first town hall. When the railroad reached the town in 1880 it became a marshalling yard and locomotive depot and today it is the largest town in the Karoo. All of these towns have significant historic town centres with a unique sense of place. It is not anticipated that the proposed trenching for the SKA Fibre Line will negatively impact on any historic fabric or on this unique sense of place. However, care must be taken to ensure that historic features such as leiwater systems are not negatively impacted by the proposed trenches.

According to Tusenius (2012, SAHRIS NID 503050), "with the notable exception of the research done by Sampson in the Seacow Valley (1985), the rich archaeological heritage of the Karoo has not been systematically studied... Sites and scatters of Early, Middle and Late Stone Age (ESA, MSA and LSA) material have been recorded, as well as pastoralist occurrences, historical sites, rock paintings and engravings." According to a concise summary of the heritage of the area provided by Rossouw (2019, SAHRIS NID 521590), Rock engravings located to the southeast of Loxton, suggest the possibility that a giant long-horned buffalo (*Syncerus antiquus*), which became extinct more than 10 000 years ago, previously occurred in the area. Furthermore, "multiple rock engraving sites have been recorded in the region and are mainly attributed to San hunter-gatherers who inhabited the area and had done so for thousands of years (Smith et al., 2000: 4) while the pastoralist Khoekhoe had been present in the Karoo for at least 2 000 years (Smith, 2002) The historical footprint is largely represented by the vernacular architecture of the well-known corbelled houses in the region, which is related to 19th century trekboers who occupied these buildings, and whose cultural history dates back to their 18th century movement onto the VOC Cape frontier that resulted in ongoing interaction with indigenous people in the Karoo." As the proposed development is anticipated to be restricted to existing road reserve, it is not anticipated that the proposed development will have a negative impact on significant archaeological heritage. However, it is well established that ESA, MSA and LSA archaeological occurrences are prevalent throughout the broader Karoo landscape and these resources may be impacted by the proposed development.

Based on the SAHRIS Palaeosensitivity Map (Figure 4a and 4b), most of the area proposed for development is underlain by sediments that have very high palaeontological sensitivity. According to geology maps from the CGS, these sediments include the Poortjie Member and Hoedemaker Member of the Teekloof Formation, and the Abrahamskraal Formation of the Beaufort Group. According to Rossouw (2019), the study area is located within "early Permian Abrahamskraal Formation rocks of the Adelaide Subgroup (Karoo Supergroup) that is capped by severely degraded, superficial sheet wash and channel related (Quaternary) deposits bounded by Jurassic age dolerite intrusions to the north. The Loxton area lies within the outcrop area of the

Tapinocephalus Assemblage Zone (AZ) which spans the middle part of the Abrahamskraal Formation. Vertebrate fossils of the Tapinocephalus AZ are not as common as in succeeding biozones and are usually found as individual specimens in the mudrock sequences in association with, and often enveloped by, brown-weathering calcareous nodular material. This faunal assemblage is mainly represented by small dicynodonts, large dinocephalians, pareiasaurs and pristerognathid therocephalians.” It is therefore likely that any excavation conducted within this palaeontologically sensitive area is likely to negatively impact on significant palaeontological heritage.

Description of impacts on heritage resources in the environs of the site:

As the proposed development may negatively impact on significant archaeological and palaeontological heritage and as such, it is recommended that an HIA is required in order to assess the nature of these impacts and proposed methods for mitigating this impact.

Summary of anticipated impacts on heritage resources:

As the proposed development may negatively impact on significant archaeological and palaeontological heritage and as such, it is recommended that an HIA is required in order to assess the nature of these impacts and proposed methods for mitigating this impact.

E. ILLUSTRATIVE MATERIAL (This form will not be processed unless the following are included):

Attach to this form a minimum A4 sized locality plan showing the boundaries of the area affected by the proposed development, its environs, property boundaries and a scale. The plan must be of a scale and size that is appropriate to creating a clear understanding of the development.

Attach also other relevant graphic material such as maps, site plans, satellite photographs and photographs of the site and the heritage resources on it and in its environs. These are essential to the processing of this notification.

Please provide all graphic material on paper of appropriate size and on CD/ USB in JPEG format. It is essential that graphic material be annotated via titles on the photographs, map names and numbers, names of files and/or provision of a numbered list describing what is visible in each image.

F. RECOMMENDATION

In your opinion do you believe that a heritage impact assessment is required?

Yes No

Recommendation made by: **Jenna Lavin**

Name **Jenna Lavin**

Capacity **Heritage Practitioner**

PLEASE NOTE: No Heritage Impact Assessment should be submitted with this form or conducted until Heritage Western Cape has expressed its opinion on the need for such and the nature thereof.

G. INFORMATION TO BE PROVIDED AND STUDIES TO BE CONDUCTED AS PART OF THE HERITAGE IMPACT ASSESSMENT (HIA)

If it is recommended that an HIA is required, please complete this section of the form.

DETAILS OF STUDIES TO BE CONDUCTED IN THE INTENDED HIA

In addition to the requirements set out in Section 38(3) of the NHRA, indicate envisaged studies:

<input type="checkbox"/>	Heritage resource-related guidelines and policies.
<input type="checkbox"/>	Local authority planning and other laws and policies.
<input type="checkbox"/>	Details of parties, communities, etc. to be consulted.
<input checked="" type="checkbox"/>	Specialist studies, eg: archaeology, palaeontology, architecture, townscape, visual impact, etc. Provide details:
<input type="checkbox"/>	Other. Provide details:

PLEASE NOTE: Any further studies which Heritage Western Cape may resolve should be submitted must be in the form of a single, consolidated report with a single set of recommendations. Specialist studies must be incorporated in full, either as chapters of the report, or as annexures thereto.