Agency for Cultural Resource Management
Specialists in Archaeological Studies and Heritage Resource Management

19 January, 2017

Ms Natasha Higgit
Heritage Officer
South African Heritage Resources Agency
PO Box 4637
Cape Town
8000

Dear Ms Higgit,

RECOMMENDED EXEMPTION: HERITAGE IMPACT ASSESSMENT, DWAGGAS SALT MINE NEAR LOERIESFONTEIN, CALVINIA MAGISTERIAL DISTRICT, NORTHERN CAPE

1. Introduction

The Dwaggas Salt Mine (Farm Dwaggas Oos 190/5, & incorporating Commissioners Pan Extension) is located about 70kms north east of Loeriesfontein in the Bushmanland region of the Northern Cape Province (Figures 1-4).

The salt mine has been operating since 1999, while mining on Commissioners Pan began in 1957, until about 25 years ago. Brine from Commissioners Pan to Dwaggas Pan is fed via an existing pipeline connecting the two pans. Both the Dwaggas Salt Mine operation and the pipeline which connects Dwaggas Salt Mine and Commissioners Pan, are already approved activities (Site Plan Consulting 2017).

Infrastructure at the mine on Dwaggas Pan includes the following:

- Office & stores
- Generator
- Diesel tank
- Crusher
- Evaporation ponds
- Final production ponds
- Bagging plant
- Wells, trenches, pumps & pipelines

All evaporation ponds, logistical facilities, plant equipment and accommodation are located at the Dwaggas Pan operation. Apart from the pipeline pumping brine from Commissioners Pan, well and pumps, no other infrastructure is located at Commissioners Pan. There will be no new workings at the pan, and no change to existing infrastructure, with the possible exception of the lengthening of a trench in the middle of the pan (Figure 5).

2. *The application*

The application is an amendment to an existing mining right on Dwaggas Salt Mine, which already has Environmental Authorisation.

Commissioners Pan operates under an approved Prospecting Right and also has Environmental Authorisation.

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There will be no changes to any existing infrastructure, except for the possible extension of a trench (± 200m long) at Commissioners Pan (Site Plan Consulting 2017).

3. Archaeology of the Loeriesfontein area

Bushmanland was one of the last regions of the Cape Province to be settled by early European farmers, partly because it is so dry and partly because it was so far from Cape Town and produce markets. The result was that it became a last outpost of the /Xam Bushman who still hunted and gathered there in the last decades of the 19th Century (Deacon 1986, 1997). Because of the dry, arid nature of the region, many of the farms in Bushmanland were only allocated after the introduction of the wind pump to South Africa in the 1870s, which then made the arid lands accessible and suitable for grazing (Webley & Halkett 2012).

Very little archaeological work has been done in Loeriesfontein, but in recent years, with the development of a nascent alternative energy industry, a number of Heritage Impact Assessment (or HIAs) have been undertaken, as part of the EIA process.

Scatters of Middle Stone Age (MSA) and Later Stone Age (LSA) artefacts were first encountered in Loeriesfontein during an Archaeological Impact Assessment (AIA) for a proposed low cost housing project on the south western edge of the town (Kaplan 2010), while a few MSA and LSA implements were also found near the towns Waste Water Treatment Works (Kaplan 2008). Dispersed scatters of LSA and MSA implements were recorded during a HIA for a bulk water supply pipeline connecting to the reservoir in the water stressed town (Kaplan 2015). Further afield, Webley & Halkett (2010) reported on weathered indurated shale MSA artefacts scattered over a wide area during an assessment for the construction of a substation alongside the Sishen Saldanha railway about 60kms south west of Loeriesfontein. Weathered MSA artefacts were also found randomly scattered across the landscape on the Farm Klein Rooiberg during an HIA for a solar energy farm about 40kms to the north of Loeriesfontein (Webley & Halkett 2012). Scatters of LSA flake tools, ostrich eggshell and pottery were found on several hilltop sites on the same farm, while LSA lithics and portable grooved stones were found on the banks of a small stream during the same study. Scatters of LSA material were recorded on hilltops, and ephemeral scatters of highly weathered Middle Stone Age artefacts were encountered on the flat arid plains, during an HIA for a proposed power line for the Loeriesfontein 2 Wind Energy Facility about 50kms north of the town (Orton 2014). Open sites with surface scatters of MSA, and scatters of LSA material on hilltops were encountered by Van Schalkwyk (2011) during an HIA for a wind energy farm north of Loeriesfontein. Morris (2013) encountered very sparse scatters of MSA and LSA during an assessment of powerline options, access road and substation sties for the above wind energy farm, and also encountered sparse MSA remains about 40kms north east of Loeriesfontein during an assessment of the proposed upgrading of the Sishen-Saldanha railway line (Morris 2007). A few traces of MSA material was recorded by van der Walt (2010) during an HIA for a solar energy farm on the farm Naronsies north of Loeriesfontein. A collection of ostrich eggshell water containers, bored stones and soapstone pipes are on display at the Loeriesfontein Museum.

4. Discussion

The literature review indicates that a paucity of MSA material occurs on the flat arid plains of Southern Bushmanland, while scatters of LSA material is mostly visible on hilltops and dunes and alongside small river beds and streams.

Figures 6 & 7, including Google Earth imagery (refer to Figure 3) indicate that the salt mine is a transformed landscape and has been in its current state for nearly 60 years. The current impacts and management of the operation are well established. The required infrastructure for continued mining is also in place. There are no plans to expand the mining operations at Dwaggas Pan and Commissioners Pan beyond its current footprint. No new evaporation ponds or infrastructure will be developed. The status quo will thus remain. All historical disturbances in respect of Environmental Authorisation are already in place.

5. Conclusion

Since no new development activities are planned (apart from a possible new trench at Commissioners Pan), it is the opinion of the heritage practitioner that a HIA of the existing operation is not required.

6. Recommendations

1. It is recommended that exemption from a HIA be granted.

Yours sincerely

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7. References

Deacon, J. 1997. Home of the /Xam: A guide to places in the Northern Cape where /Xam lived in the nineteenth century. Guide for the post-conference excursion on "Khoisan Identities and Cultural Heritage".

Deacon, J. 1986. `My place is the Bitterpits': the home territory of Bleek and Lloyd's /Xam San informants. African Studies 45: 135-155.

Kaplan, J. 2014. Heritage Impact Assessment, proposed Loeriesfontein bulk water supply pipeline and reservoir, Loeriesfontein Northern Cape. Report prepared for EnviroAfrica cc. ACRM, Cape Town.

Morris, D. 2013. Khobab Wind Energy Facility: power line route options, access road and substation positions. Specialist input for the environmental Basic Assessment and Environmental Management Programme for proposed power line options for the Loeriesfontein 1 Wind & Loeriesfontein 3 Solar Energy facility at Sous and Aan De Karee Doorn Pan, north of Loeriesfontein, Northern Cape Province: archaeology. Unpublished report prepared for Savannah Environmental. Kimberley: McGregor Museum.

Morris. D. 2007. Archaeological Specialist Input with respect to upgrading railway infrastructure on the Sishen-Saldanha Ore Line in the vicinity of Loop 7a near Loeriesfontein, and at Oorkruis, Loop 15, near Groblershoop, Northern Cape.

Orton, J. 2014. Heritage Impact Assessment for the proposed re-alignment of the authorized 132 kV power line for the Loeriesfontein 2 Wind Energy Facility, Calvinia Magisterial District, Northern Cape. Report prepared for Savannah Environmental (Pty) Ltd. Asha Consulting

Donald C. 2017. Scoping Report, Dwaggas Salt Mine (Incorporating Commissioner's Pan Extension). Site Plan Consulting, Cape Town

Van der Walt, J. 2012. Archaeological Impact Assessment for the proposed Hantam PV Solar Energy Facility, on the farm Naronsies 228, Loeriesfontein, Northern Cape. Report Prepared for Savannah Environmental (Pty) Ltd. Heritage Contracts and Environmental Consulting

Van Schalkwyk, J. 2011. Heritage Impact Assessment for the proposed establishment of a wind farm and PV facility by Mainstream Renewable Power in the Loeriesfontein region, Northern Cape. Unpublished report for SiVest Environmental Division.

Webley, L. & Halkett, D. 2012. Heritage Impact Assessment: Proposed Loeriesfontein Photo-Voltaic Solar Power Plant on Portion 5 of the Farm Klein Rooiberg 227, Northern Cape Province. Report prepared for Digby Wells Environmental. Archaeology Contracts Office. Department of Archaeology, University of Cape Town

Figure 1. Locality map

Figure 2. Google satellite map indicating the Dwaggas Pan & Commissioners Pan in relation to the town of Loeriesfontein

Figure 3. Close up Google satellite map of the existing salt mine at Dwaggas Pan and Commissioners Pan

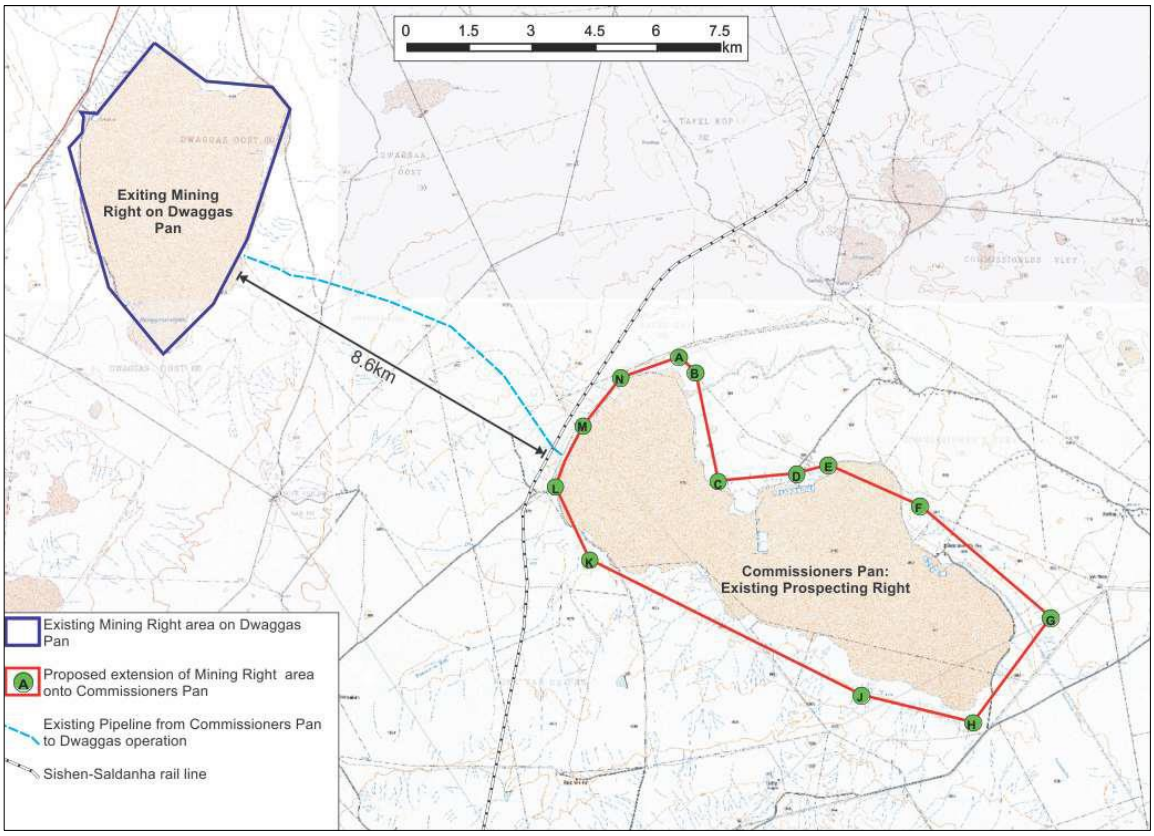

Figure 4. Detailed locality

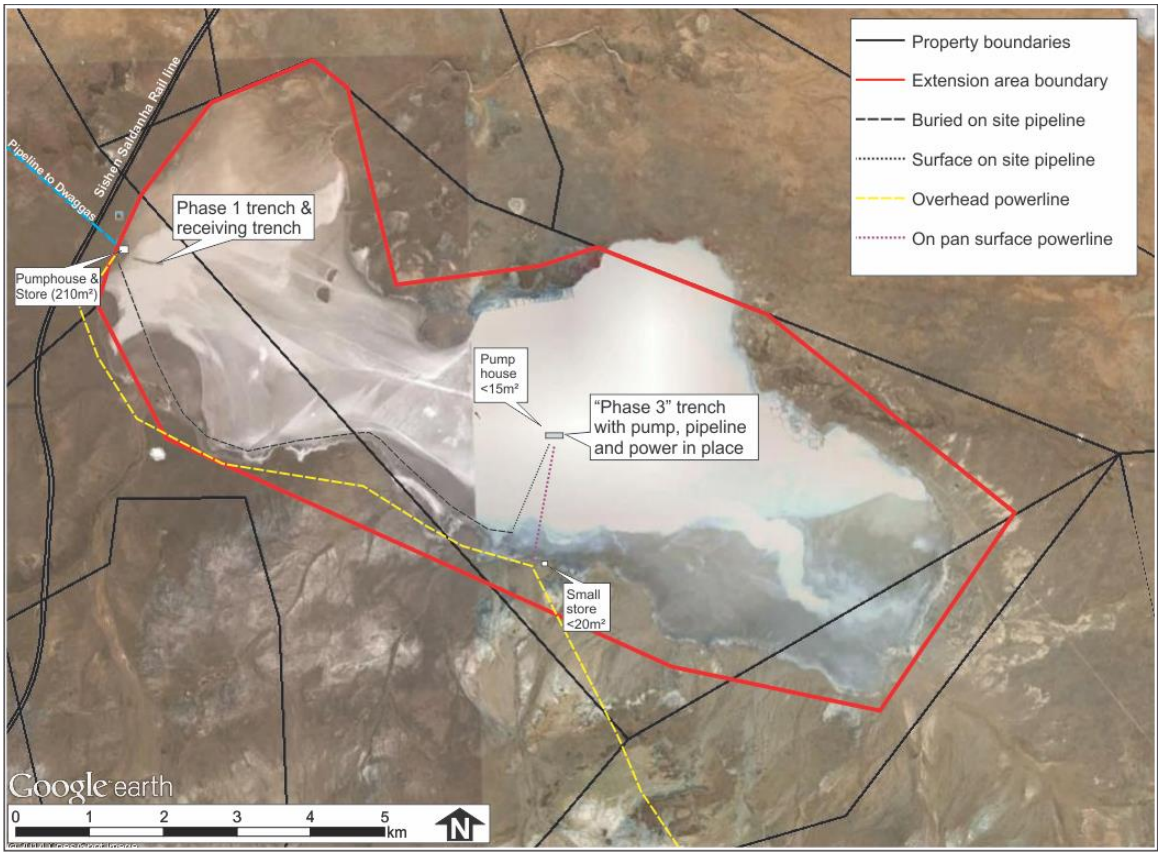

Figure 5. Close up of Commissioners Pan and existing infrastructure

Figure 6. General view of Commissioners Pan, including trench (Photo Craig Donald Site Plan Consulting)

Figure 7,.Close up of trench on Commissioners Pan (Photo Craig Donald Site Plan Consulting)