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A LETTER OF RECOMMENDATION FOR THE EXEMPTION OF A FULL PHASE 1 PALAEONTOLOGICAL HERITAGE IMPACT ASSESSMENT

IN RESPECT OF

AN AREA KNOWN AS THE TAAIBOSCHFONTEIN PROJECT LOCATED WITHIN TASMAN PACIFIC LIMITED'S PROSPECTING RIGHT AREA KNOWN AS SITE 49

[DME FILE NUMBER (NC) 30/5/1/1/2/347 PR]

[SAHRA REF 9/2/100/0001 AND 9/2/019/001]

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1. Description of the project area:

The project area comprises one area within Tasman Pacific Limited's Prospecting Right area, know as Site 49, in the Northern Cape referred to, herein, as the Taaiboschfontein Project (Figure 1).

GPS co-ordinates of the corner points defining the project area are as follows:

Table 1. Taaiboschfontein Project area corner points (WGS84) (see Figure 2 for location):

Corner point	Latitude	Longitude
1	-31.4700160268	22.5307837977
2	-31.4719375704	22.5332719280
3	-31.4733503553	22.5330695596
4	-31.4741162557	22.5336455574
5	-31.4782083573	22.5291138462
6	-31.4782870816	22.5241334565
7	-31.4769537156	22.5225339595
8	-31.4770489337	22.5210252396
9	-31.4759003948	22.5201275637
10	-31.4743357702	22.5201022704
11	-31.4685779200	22.5266357268
12	-31.4709572161	22.5296270515

The aerial extent of the project area is approximately:

1. Taaiboschfontein Project = 89.1 ha

2. Description of the projects:

Tasman Pacific Minerals Limited is the holder of a Prospecting Right known as Site 49. Application has been made to amend the approved Environmental Management Plan (EMP) and Prospecting Work Programme (PWP) to allow drilling upon two areas within Site 49. The area is identified in the draft amended EMP as the Taaiboschfontein Project area (Figure 3). The area constitutes a relatively small proportion of the entire Prospecting Right area (which totals 63,386.6129 ha), and are the only areas where disturbance of the land surface (i.e. invasive prospecting) is allowed within the draft amended EMP.

The borehole drilling will be predominantly conducted using reverse circulation percussion drill rigs, but will include a very small proportion (approximately 5%) of diamond drill holes. The maximum diameter of these holes at the earth's surface will be approximately 5½ inches (or 14cm).

Drilling is planned to occur in two phases. Phase 1 drilling will be spaced out over a 100m x 100m grid. The intent of Phase 1 drilling is to delineate the lateral extent of uranium/molybdenum mineralisation in the subsurface. Should such mineralisation be identified the Phase 2 drilling will take place on a more closely spaced 50m x 50m grid. Phase 2 drilling will occur only in the immediate vicinity of the mineralisation.

Trenching, pitting or test mining activities are not allowed to occur and are specified as such in the approved and amended Prospecting Work Programmes. Thus, there will be no significant disturbance of the land surface or excavations occurring during the exploration outlined in the amended EMP.

3. Possible palaeontological impacts of the projects:

The major possible palaeontological impacts of the proposed exploration project are the crushing and moving of palaeontological specimens from their original location. These two out comes may occur as a result of the fossils being drilled through by the drill rig or as a result of vehicle wheels passing over the fossils. However, as outlined below this is not a significant probability. Similarly, there is a very small possibility of a fossil actually being drilled through by the drilling rig.

The possible impacts, as outlined above, are mitigated by the fact that Tasman Pacific has indicated in their amended EMP document that an Environmental Control Officer (ECO) will be appointed who will be on site during the conducting of the drilling. That ECO will be the site geologist and, as such, will have professional training sufficient to allow them to recognise the presence of fossils should any be encountered during the movement of vehicles across the land surface.

The amended EMP states that vehicular movements will be restricted to a defined system of tracks (twin spoor pads only, as no new graded roads will be

constructed). Both these tracks and the sites of the proposed boreholes will be inspected by the ECO before their initial usage and should any fossil material be identified the track would be diverted around the material or the borehole relocated to avoid damage. The discovery would then be reported to a suitably qualified professional palaeontologist for appraisal and possible excavation.

4. Reasons why a Palaeontological Impact Assessment is not required:

The drilling activities will take place upon sediments of the Poortjie Member of the Teekloof Formation (Adelaide Subgroup, Beaufort Group). Accordingly, it may be expected that the strata may contain vertebrate representatives of the *Pristerognathus* Assemblage Zone and plants of the *Glossopteris* flora. However, the vertebrate fossils of the Beaufort Group are normally rare occurrences at the surface. This situation is also true of plant fossil assemblage sites; but where they do occur they tend to be distributed of a sufficiently wide area that the amount of damage done by a borehole of vehicle wheel would not be significant (considering the small percentage of the land surface that will be affected directly by these activities).

The above generalisation concerning the scarcity of Beaufort Group fossils has been substantiated in the field as I (in my capacity as an independent consultant, the holder of a Ph.D in Palaeontology and significant professional experience as a palaeontologist in South Africa) have personally visited the proposed drilling project area and extensively traversed it by foot. **It was my observation that no fossil material was observed anywhere within the boundaries of the two areas**. Thus, the likely hood of any palaeontological material being destroyed or moved as a result of the proposed prospecting activities is remote due to the scarcity of material.

There are no known or historical fossil sites of significance or scientific importance (e.g. Geosites or the locations of the sites of historically important collecting activities) located within either project area that would require specific preservation.

Given the above information I feel that it can fairly be motivated that there is no need for a full Phase 1 Palaeontological Impact Assessment to be conducted on either of the two project areas.

5. References

Rubidge, B.S., Johnson, M.R, Kitching, J.W., Smith, R.M.H., Keyser, A.W. and Groenewald, G.H. (1995). An introduction to the Biozonation of the Beaufort Group. - In: Rubidge, B.S. (ed), *Biostratigraphy of the Beaufort Group (Karoo Supergroup)*. South African Committee for Stratigraphy Bisotratigraphic Series, **1**, 46 pp.

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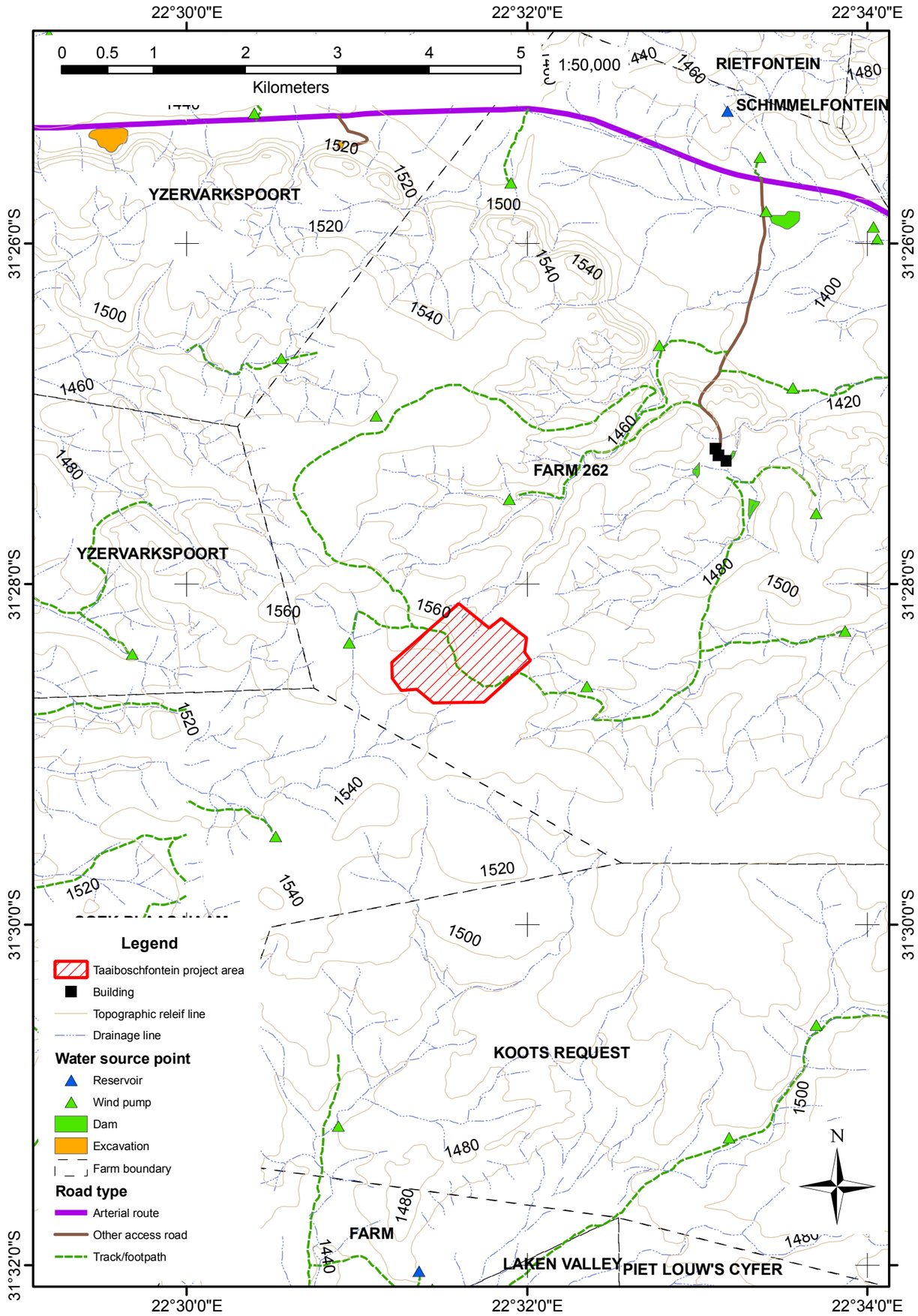

Figure 1. A topographic map showing the location of the Taaiboschfontein Project area.

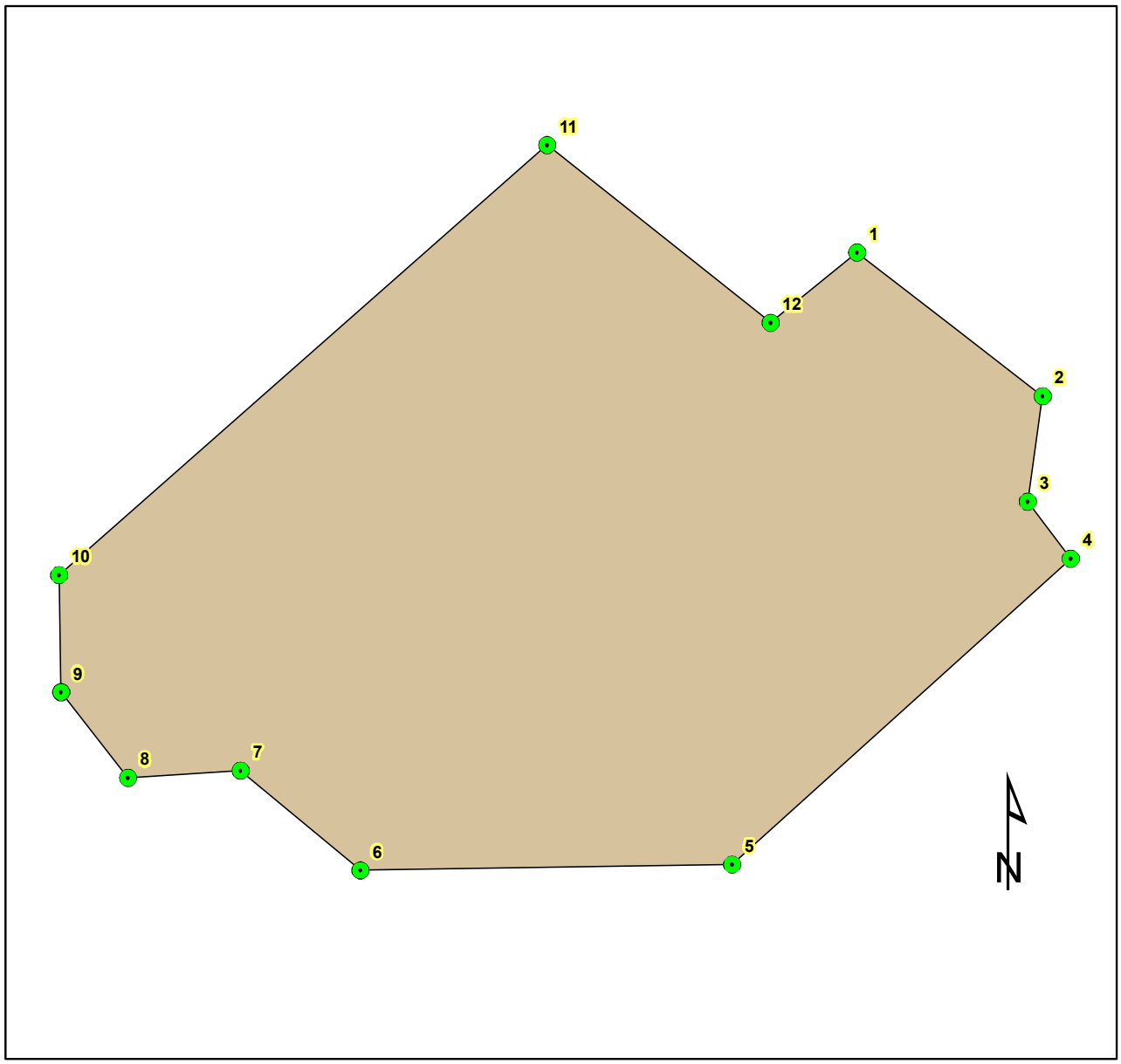

Figure 2. Figure indicating the location of the numbered corner points appearing in Table 1 and which define the Taaiboschfontein project area

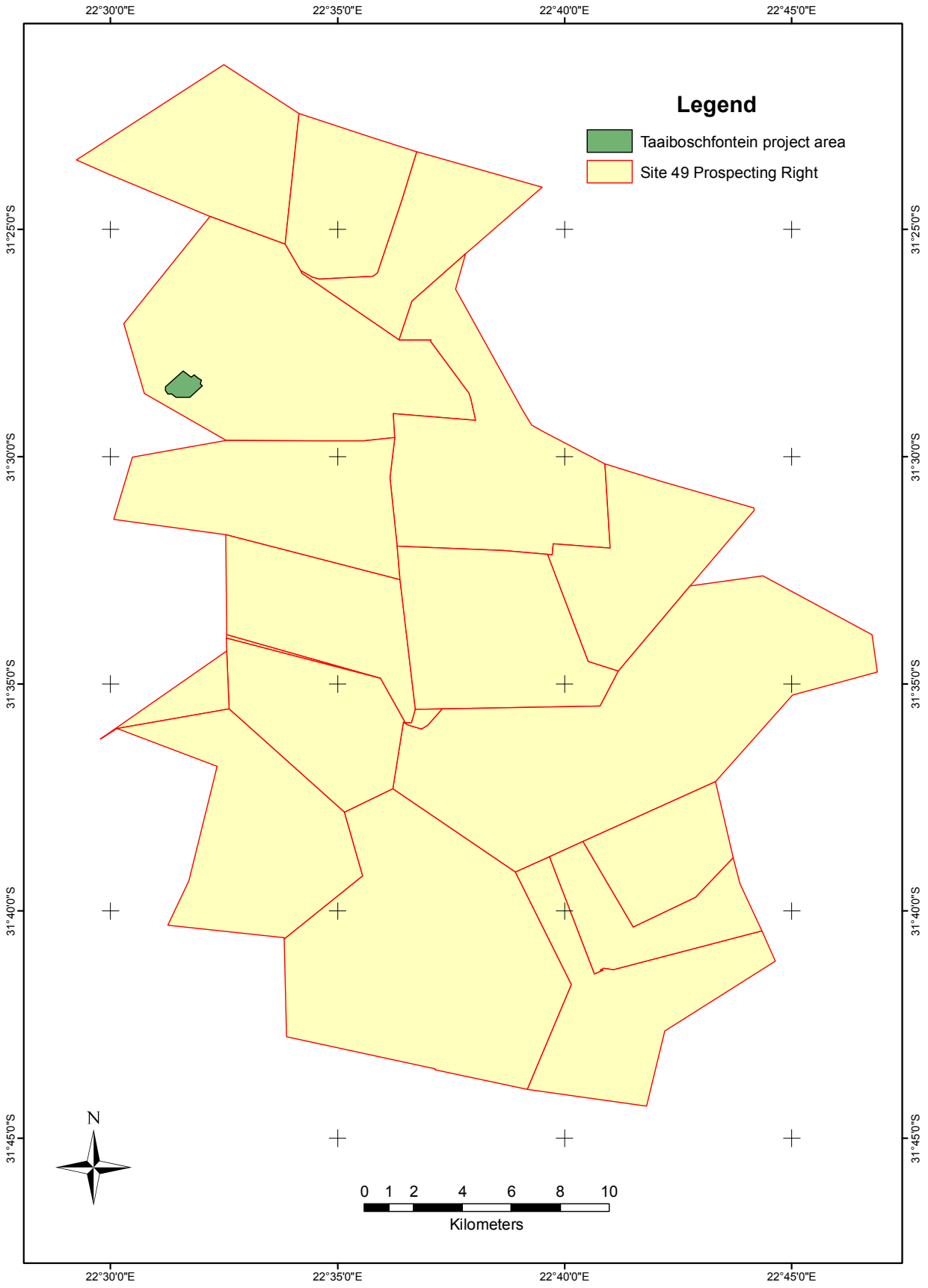

Figure 3. Figure indicating the location of Taaiboschfontein project area within Site 49.