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Republic of South Africa

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

IN RESPECT OF

**TWO AREAS KNOWN AS THE BLYDEVOORUITZICHT NORTH AND
BLYDEVOORUITZICHT SOUTH PROJECTS LOCATED WITHIN
TASMAN PACIFIC LIMITED'S PROSPECTING RIGHT AREA KNOWN AS
SITE 5**

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[SAHRA REF 9/2/029/0001]

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1. Description of the project area:

The project area comprises two areas within Tasman Pacific Limited's Prospecting Right area know as Site 5 in the Northern Cape. These areas are referred to, herein, as the Blydevooruitzicht North and the Blydevooruitzicht South Projects (Figure 1).

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

Table 1. Blydevooruiyzicht North Project area corner points (WGS84) (see figure 2 for location):

Corner point	Latitude	Longitude
1	-31.7193672090	21.4403648112
2	-31.7175606003	21.4414944700
3	-31.7174280970	21.4548863826
4	-31.7210303704	21.4549039728
5	-31.7260781072	21.4472882278
6	-31.7260699329	21.4434071387
7	-31.7229481219	21.4433922769
8	-31.7229917334	21.4422136457
9	-31.7211994774	21.4421462954
10	-31.7209322372	21.4404012721

Table 2. Blydevooruitzicht South Project area corner points (WGS84) (see Figure 3 for location):

Corner point	Latitude	Longitude
1	-31.7432695537	21.4474563277
2	-31.7433257227	21.4448769718
3	-31.7422779385	21.4448950942
4	-31.7417877711	21.4437362230
5	-31.7415239608	21.4428560062
6	-31.7414813341	21.4387369127
7	-31.7410881605	21.4384636870
8	-31.7408627366	21.4382243726
9	-31.7406288623	21.4379750924
10	-31.7404430614	21.4376902783
11	-31.7385904659	21.4365733547
12	-31.7385562956	21.4464362800
13	-31.7395980722	21.4464634408
14	-31.7393484732	21.4474153136

The aerial extent of the two project areas is approximately:

1. Blydevooruitzicht North Project = 96.5 ha
2. Blydevooruitzicht South project = 35.38 ha

2. Description of the projects:

Tasman Pacific Minerals Limited is the holder of a Prospecting Right known as Site 5. 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 5. These two areas are identified in the draft amended EMP as the Blydevooruitzicht North and Blydevooruitzicht South Project areas (Figure 4). These two areas constitute a relatively small proportion of the entire Prospecting Right area, but are the only areas where disturbance of the land surface (i.e. invasive prospecting) is allowed within the draft amended EMP.

The borehole drilling activities on either site will be conducted in the same manner, but on differing numbers of holes and over differing areal extents. 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 outcomes 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 Davids Kolk Member of the Abrahamskraal Formation (Adelaide Subgroup, Beaufort Group). Accordingly, it may be expected that the strata may contain vertebrate representatives of the *Tapinocephalous* Assemblage Zone (Rubidge *et al.*, 1995) and fossil 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 over a sufficiently wide area that the amount of damage done by a borehole or 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 two proposed drilling project areas and extensively traversed the areas by foot. **It was my observation that no fossil material was observed anywhere within the boundaries of the two areas.** Thus, the likelihood 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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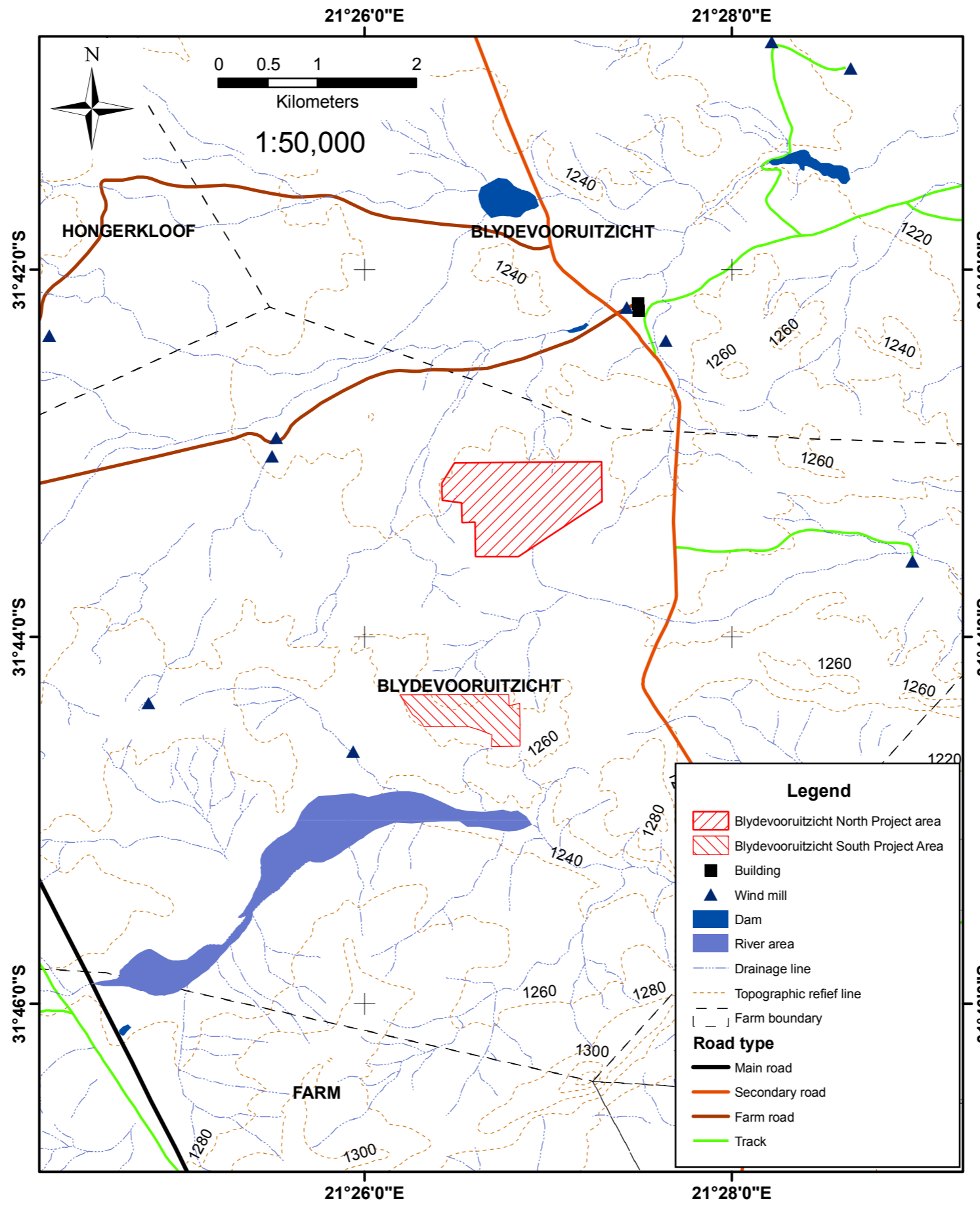


Figure 1. A topographic map showing the location of the Blydevooruitzicht North and Blydevooruitzicht South Project areas relative to each other within Tasman Pacific Limited's Prospecting Right area known as Site 5.

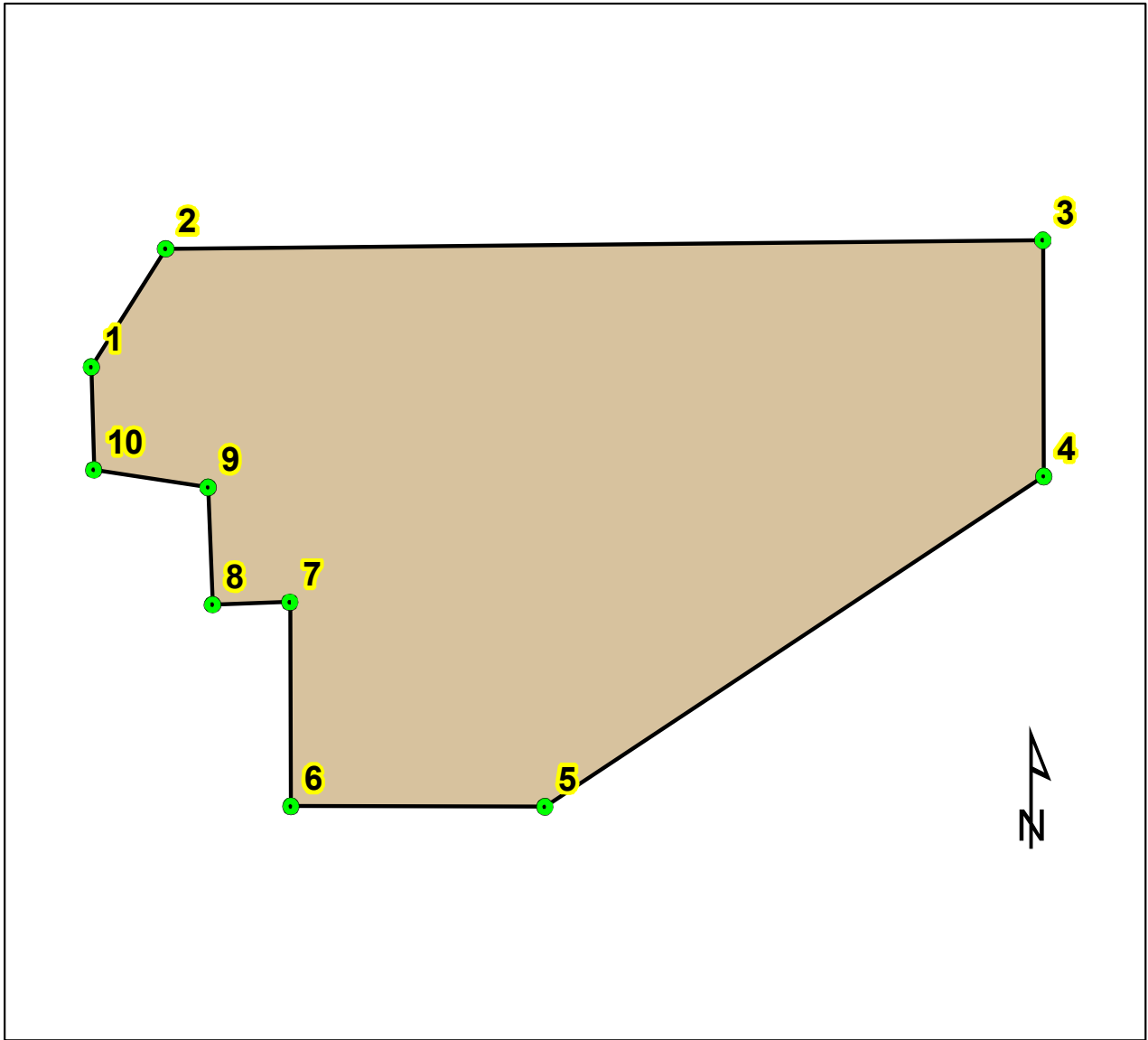


Figure 2. Figure indicating the location of the numbered corner points appearing in Table 1 and which define the Blydevooruitzicht North project area.

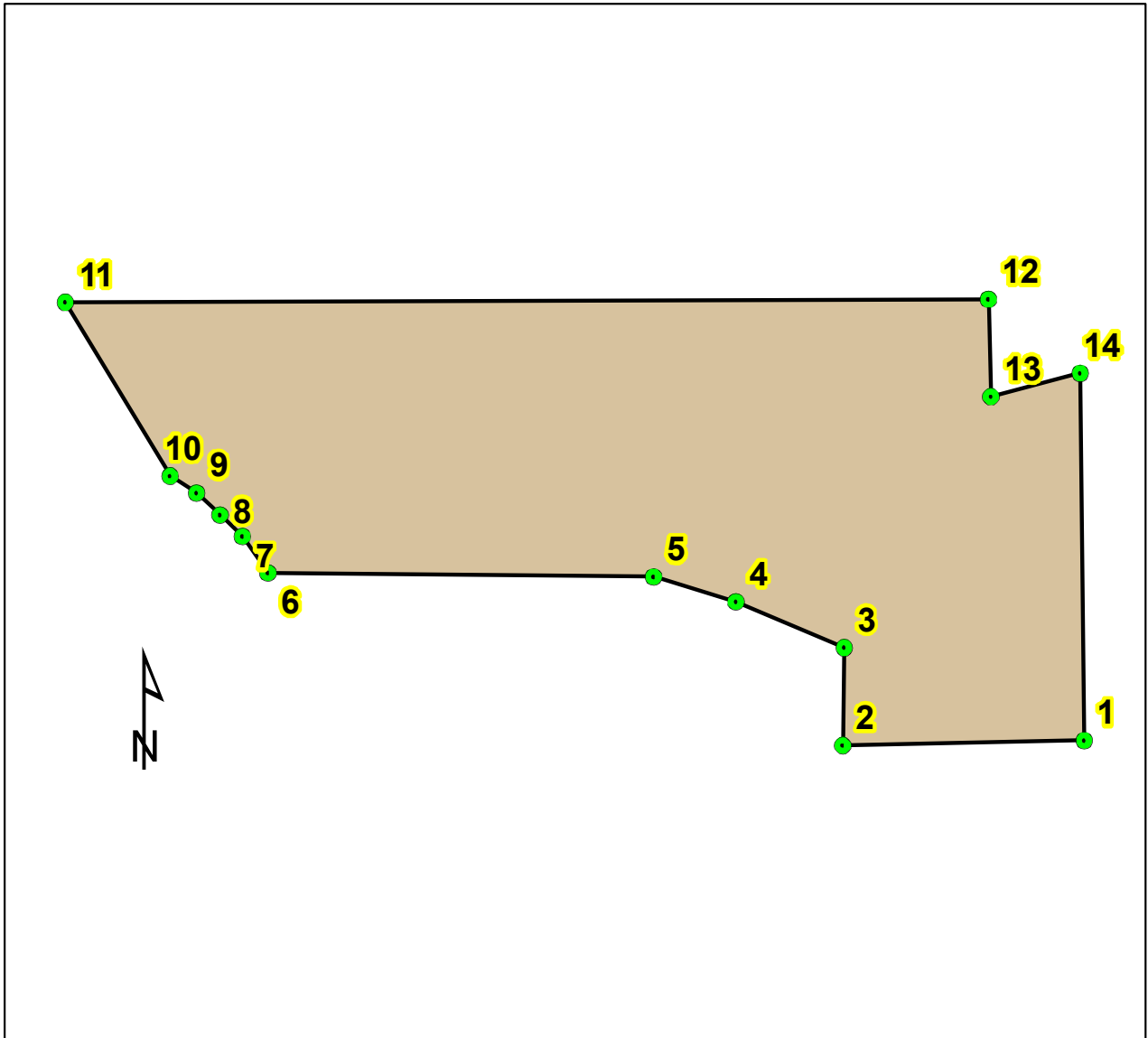


Figure 3. Figure indicating the location of the numbered corner points appearing in Table 2 and which define the Blydevooruitzicht South project area.

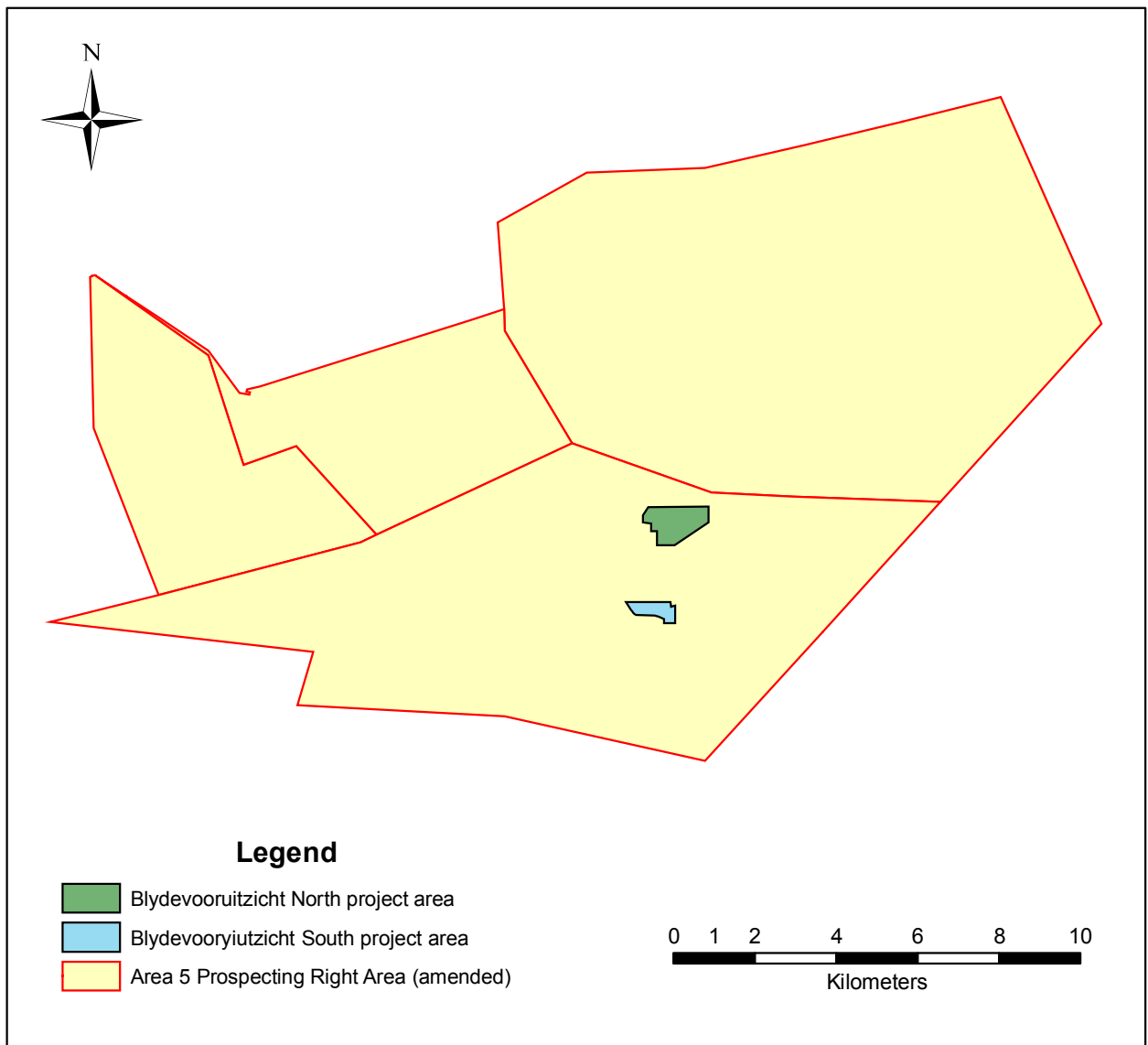


Figure 4. Figure indicating the location of Blydevooruitzicht North and Blydevooruitzicht South project areas in Site 5.