

5.9 BP 10 (S 30 22.077 E 17 29.303)

BP 10 is located directly alongside (i.e. south of) MR739 on the crest of the road and on a flat ridge overlooking the Spoeg River (Figures 25-27). Existing fill material will be re-used and new material will be exploited from around the perimeter of the quarry. Surrounding land use is vacant land/grazing.

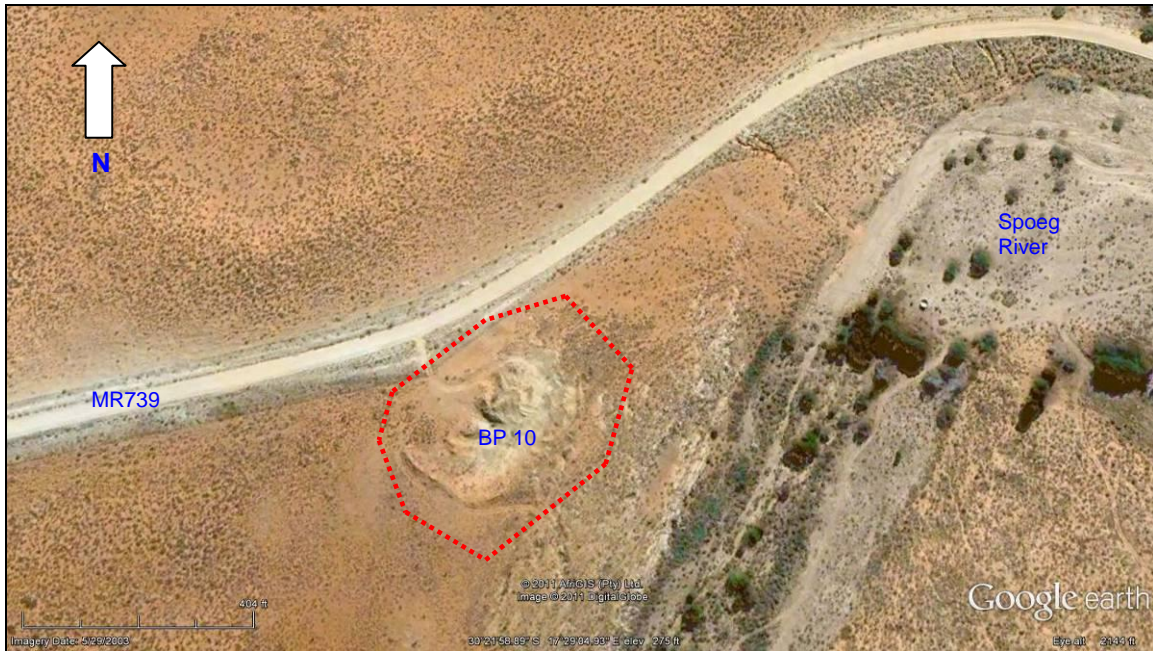


Figure 25. Google aerial photograph of BP 10



Figure 26. BP 10. View facing south east



Figure 27. BP 10. View facing west

5.10 Quarry A (S 30 29.378 E 17 52.000)

Quarry A is located alongside DR2963, on northern side of the road, on the Farm Droogekraal, about 4 kms north of Klipfontein (Figures 28-30). Access to the proposed site is via a gravel road which will be upgraded. The proposed site, which is situated either side of the access road slopes fairly steeply to the north and northwest. There are several granite outcroppings to the west of the road, and the site is covered in very thick natural veld. Surrounding land use is vacant veld.



Figure 28. Google aerial photograph of Quarry A



Figure 29. Quarry A. View facing north west



Figure 30. Quarry A. View facing north west

5.11 Quarry B (S 30 31.740 E 17 48.230)

Quarry B is located alongside (i. e. south of) DR2963, and about 3 kms south of Klipfontein. A new, short, access road to the proposed site will be constructed. The proposed quarry is naturally terraced and slopes quite steeply to the south, just above a dry river bed. There is a large granite outcropping on the north eastern boundary of the site, which is covered in short natural veld (Figures 31 & 32). The soils are brown and gritty. Surrounding land use is vacant land/grazing.

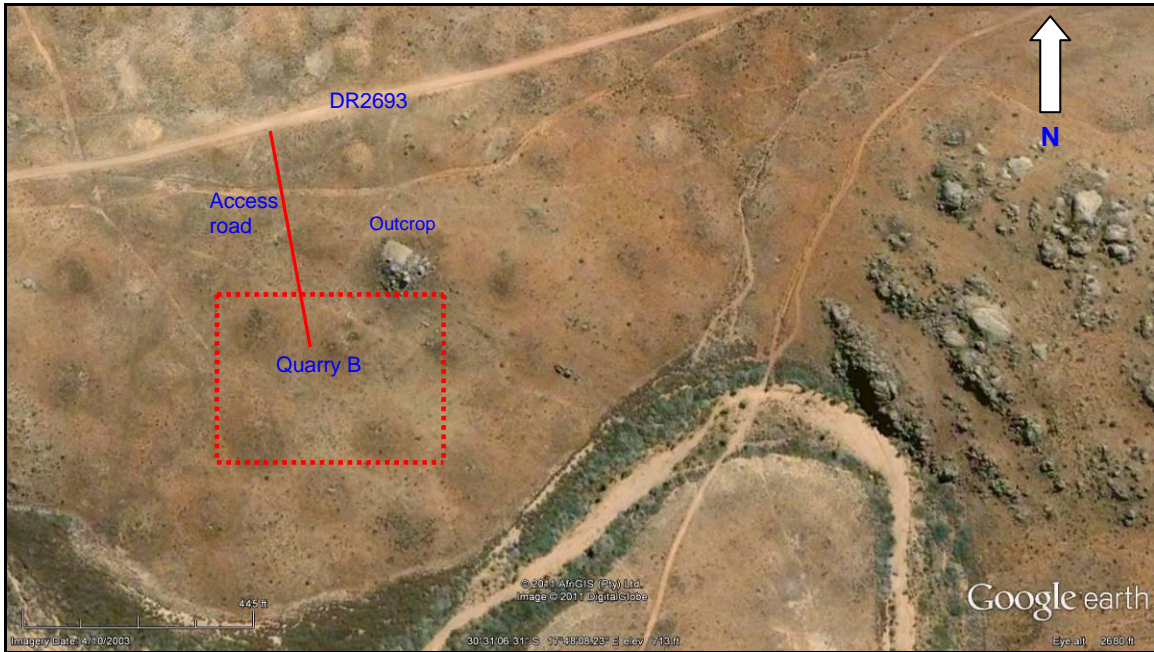


Figure 31. Google aerial photograph of Quarry B.



Figure 32. Quarry B. View facing east. Note the granite outcropping in the left hand corner of the plate.

5.12 Quarry C (S 30 29.387 E 17 42.875)

Quarry C is located on a high granite ridge and steep slope alongside (i. e.) north of and overlooking MR739. Access to the site is via small 2-track road which will be upgraded, with a new short section of road to be built. The ridge is fairly flat at the top and bedrock is exposed on the surface (Figure 33-35). Surrounding land use is vacant land/grazing.

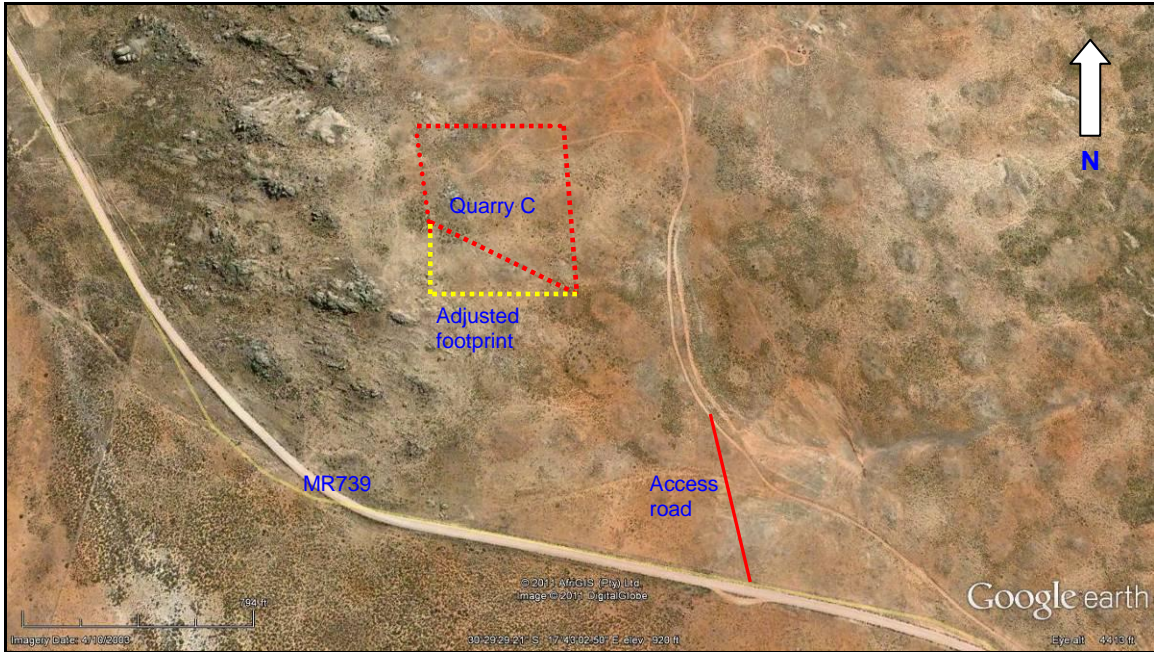


Figure 33. Google aerial photograph of Quarry C.



Figure 34. Quarry C. View facing south



Figure 35. Quarry C. View facing north west

5.13 Quarry D (S 30 23.172 E 17 31.752)

Quarry D¹ is located alongside (i.e. south of) OG120 and about 1.5 kms from the intersection with MR739. The proposed quarry is situated on the mid-upper slopes of a rocky and granite boulder covered hillock. Smaller outcroppings of granite cover part of the lower slopes of the site. A dry stream is situated to the east of the footprint area. The lower slopes are covered in short natural veld, with some open patches of ground that are littered with small quartz stone and pebbles (Figures 36-38). A new access road will be constructed to the proposed quarry. Surrounding land use is vacant land/grazing.

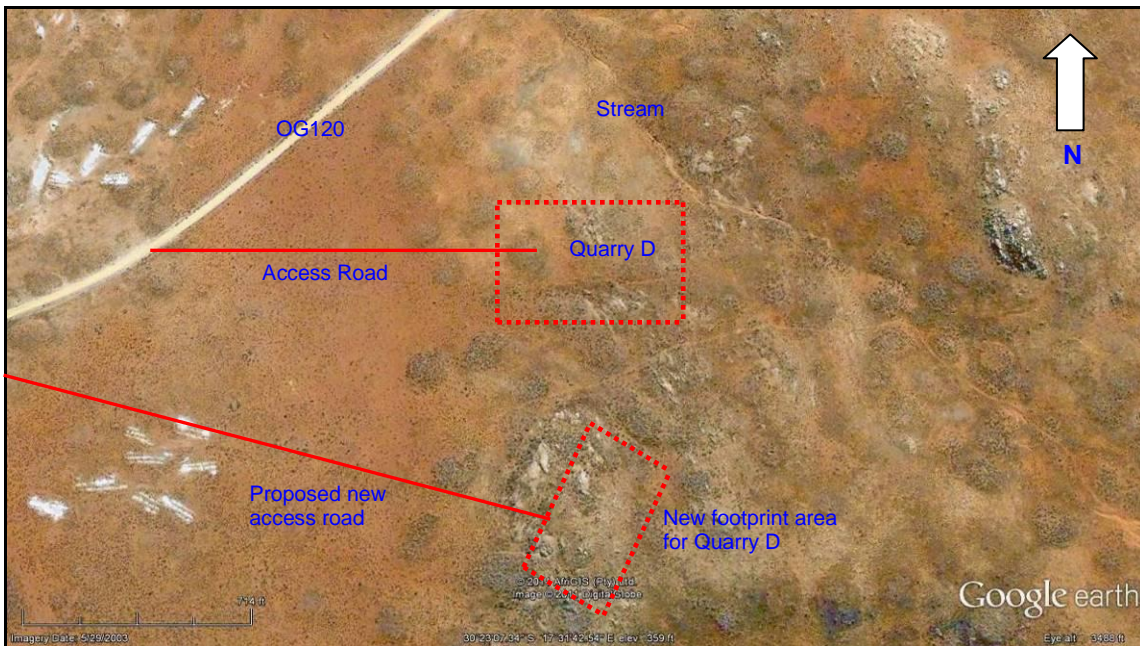


Figure 36. Google aerial photograph of Quarry D.

¹ Note that the footprint area for Quarry D is now located about 150 m south of the original site



Figure 37. Quarry D. View facing south



Figure 38. Quarry D. View facing north.

5.14 Quarry E (S 30 21.355 E 17 30.103)

Quarry E² is located alongside a minor farm road, about 1.5 kms north of the MR739. The proposed quarry is located on fairly steep, west facing slopes that are covered in sparse vegetation that has been heavily grazed. An outcropping of granite boulders is located at the top of the slope (Figures 39-41). A new access road will be constructed to the proposed quarry. Surrounding land use is vacant farmland/grazing.



Figure 39. Google aerial photograph of Quarry E



Figure 40. Quarry E. View facing east from the minor farm road

² Note new footprint area for Quarry E is located about 200 m north of the original site



Figure 41. Quarry E. View facing west

6. RESULTS OF THE STUDY

6.1 BP 1

No archaeological remains were found in BP 1.

6.2 BP 2

No archaeological remains were found in BP 2.

6.3 BP 3

No archaeological remains were found in BP 3.

6.4 BP 4

One possible flaked quartz chunk was found in BP 4.

6.5 BP 5

One round quartzite core and flake were found in BP 5 (Figure 42)

6.6 BP 6

One quartzite core, one silcrete Middle Stone Age flake, one silcrete chunk, and a handful of 19th Century Annular Ware and Blue and White porcelain were found in BP 6 (Figures 43 & 44).

6.7 BP 7

No archaeological remains were found in BP 7.

6.8 BP 8

No archaeological remains were found in BP 8.

6.9 BP 9

One silcrete chunk and one re-used Middle Stone Age side/end scraper was found in BP 9 (Figure 45).

6.10 BP 10

One silcrete flake, a few isolated and dispersed quartz flakes and a few small pieces of Blue and White porcelain were found in BP 10 (Figure 46).

6.11 Quarry A

One quartz flake and two quartz chunks were found in the proposed footprint area of Quarry A (Figure 47).

6.12 Quarry B

No archaeological remains were found in the proposed footprint area of Quarry B.

6.13 Quarry C

One silcrete Later Stone Age flake was found in the proposed footprint area of Quarry C (Figure 48).

6.14 Quarry D

No archaeological remains were found in the proposed footprint area of Quarry D.

6.15 Quarry E

Three weathered pieces of ostrich eggshell, one silcrete flake, one silcrete chunk, one quartz flake, one quartz chunk, one quartz crystal and one quartzite hammerstone were found in the proposed footprint area of Quarry E (Figure 49).

6.16 Graves

No graves, or cemeteries occur in any of the borrow pits or proposed new quarries.

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Figure 42. BP 5 Quartz core and flake. Scale is in cm



Figure 45. BP 9. MSA flake & silcrete chunk. Scale in cm



Figure 43. BP 6 Collection of archaeological remains. Scale is in cm



Figure 46. BP 10 Collection of artefacts. Scale is in cm



Figure 44. BP 6 silcrete flake and chunk. Scale is in cm



Figure 47. Quarry A. Scale is in cm



Figure 48. Quarry C silcrete flake Scale is in cm



Figure 49. Quarry E. Collection of artefacts Scale is in cm

6.16 Significance of archaeological remains

Their very small numbers, isolated and dispersed distribution, and the mostly disturbed context in which they were found, means that the archaeological remains located during the study are rated as having low significance.

7. CONCLUSION

The Archaeological Impact Assessment has identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to the proposed activities.

Indications are that the borrow pits and proposed new quarry's are suitable for use, and that there will be no negative archaeological impacts.

It is maintained that the receiving environment is not a sensitive archaeological landscape.

While there may be some initial (negative) visual impacts (with respect to Quarries C and E), in terms of the Environmental Management Plan (EMP), the borrow pits and the proposed five new quarries will all be rehabilitated. The net result will be a positive impact; especially since the borrow pits are situated alongside MR739 which is the main road and tourist link between Garies and Hondeklipbaai.

8. RECOMMENDATIONS

With regard to the proposed quarrying of fill material intended for the proposed upgrading of the road between Garies and Hondeklipbaai, the following recommendations are made:

- No archaeological mitigation is required
- The proposed 10 borrow pits are suitable for re-use
- The proposed five new quarries are suitable for quarrying
- In the unlikely event of any unmarked human burials or ostrich eggshell caches being uncovered during quarrying operations, these must immediately be reported to the archaeologist, or the South Africa Heritage Resources Agency (Att: Ms Mariagrazia Galimberti 021 462 4502).