



Cape Archaeological Survey cc
Archaeological Impact Assessment & Heritage Management

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25 March 2010

Dear Nic,

RE: FINAL ARCHAEOLOGICAL IMPACT ASSESSMENT REPORT FOR THE ATLANTIS HOUSING PROJECT

Please find attached the final AIA report for the Atlantis Housing Project. I would be grateful if you would place this on the 30th March agenda for the APM Committee meeting on the April 2010. Many thanks.

Yours sincerely,

Mary Patrick
Director



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Archaeological Impact Assessment: Atlantis Extension 12 (Kanonkop) Erf6268



Prepared for

City of Cape Town, Housing Directorate

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Executive Summary

An Archaeological Impact Assessment was commissioned by the Housing Directorate of the City of Cape Town in response to the proposed construction of 2 000 houses in Atlantis Extension 12. The first phase entails the development of 500 dwellings on Erf 6268 and the brief was to undertake a field survey of the site and to carry out an inspection of the remainder of Extension 12 to determine the archaeological sensitivity of the development footprint.

Although no archaeological material was revealed during the survey it did provide an opportunity to examine the site of the proposed construction area in some detail. The site contained no built structures and the only item of heritage importance was the adjacent historic Mamre tree lane which, according to a previous agreement defined by the City of Cape Town is to be preserved in perpetuity.

We conclude that it is unlikely that any archaeological material or heritage resources are present on the site and as a result it is not thought necessary to carry out any detailed monitoring procedures during earth moving or construction activities. However, it is recommended that periodic site visits are made by a suitably qualified person during the various phases of development in case any palaeontological or archaeological remains exist beneath the surface so that they may be mapped and mitigated where necessary.

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1. Introduction

This report was commissioned by the Housing Directorate of the City of Cape Town in response to the proposed construction of 2 000 houses on Extension 12 in Atlantis. The first phase entails the development of 500 dwellings on Erf 6268. The current brief was to undertake an Archaeological Impact Assessment (AIA) of the area to be developed and figure 1 shows the location of the site in the Western Cape. The AIA consisted of a desktop assessment of the archaeological resources of the site, a field survey of Erf 6268 (see Figure 2) and a brief inspection of the remainder of Extension 12 to determine the archaeological sensitivity of the area. This was to be followed by the submission of a final report to Heritage Western Cape (HWC) for comment and an ROD for inclusion into the Environmental Impact Assessment (EIA) which is currently being undertaken for the same project.

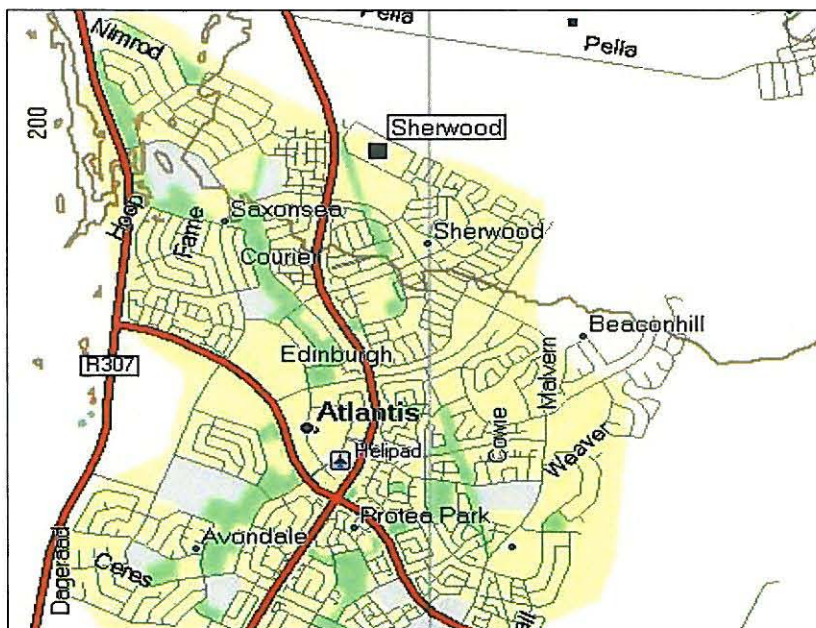


Figure 1: 1 50 000 Location Map showing the position of Atlantis and the study site marked with a black square at Sherwood (Reference: Map Source 2010).

Our desktop study revealed that very little archaeological work has been undertaken in the immediate vicinity of Atlantis Extension 12 and the area is an unknown quantity in terms of possible impact. The historic tree lane (Frontispiece) which traverses a portion of the site marks the position of the old Mamre road. It has been established that the tree lane will be preserved for posterity by the City of Cape Town. As a landscape element it does not form part of the propose Archaeological Impact Assessment unless it is found to contain any archaeological resources

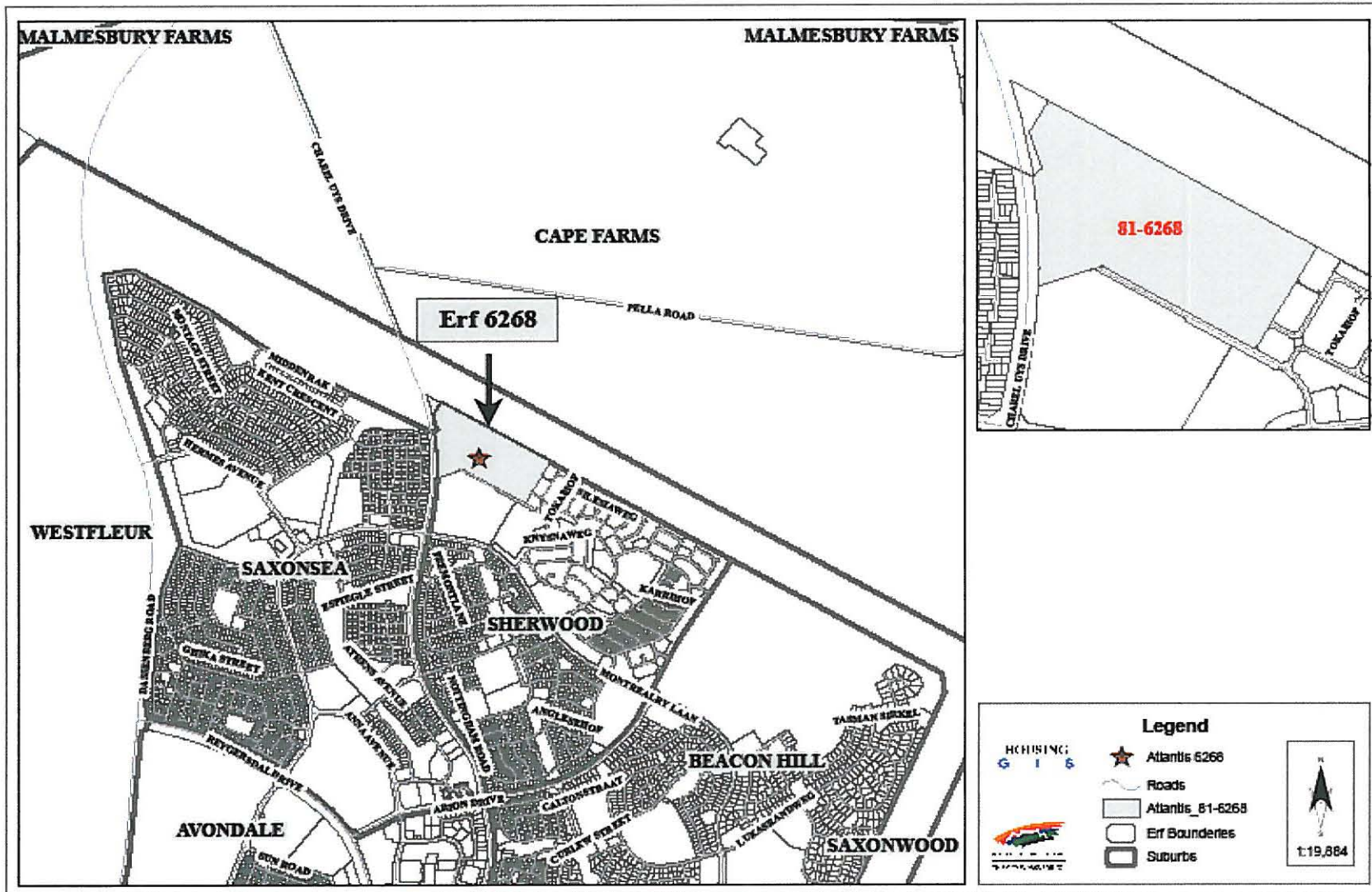


Figure 2: Site plan showing location of Erf 6268 Atlantis (Reference: Map provided by the Housing Department, City of Cape Town).

2. Historical Background

The township of Atlantis was established during the 1980's with the original idea that it would accommodate middle-income groups. The infrastructure and services, suitable for the target-income groups, were installed followed by the construction of a large number of housing units. The township, however, was never completed due to social and financial constraints that had a negative impact on the scheme as a whole. The initial plans to develop an industrial centre and to provide transport facilities, such as railway links to Cape Town for commuters, were never fully realised. The net result was a rather different initiative which promoted the growth of the largely low cost residential housing units which today characterise Atlantis. In hindsight, the original scenario of a large industrialised township located in an unpromising locality was probably flawed although the potential for growth still remains.¹

3. The Site Today

Atlantis is located approximately 12km inland from the sea, almost due east of Silwerstroomstrand. Extensive shell middens, the residues of Khoisan coastal utilization, are seldom found more than 5km from the coast in the Western Cape; hence Atlantis lies well beyond the zone of intensive marine exploitation. Similarly, the agriculturally productive Malmesbury shales of the Swartland lie some distance to the east of Atlantis. In pre-colonial times these shale deposits supported a mixed grass and bush vegetation favourable to both grazing and browsing fauna. This would have attracted San hunters and, at a later date, Khoikhoi herder populations with large numbers of domestic stock. The town of Atlantis is built on Aeolian sands of late Quaternary age (Compton 2004; Pether 2010) which are less productive in terms of flora and fauna than either the coastal strip or the inland shale deposits. Thus, Atlantis appears to occupy what may be termed a relatively unfavourable archaeological zone.

Erf 6268, the focus of this report, is an almost rectangular strip of open land orientated approximately North West – South East in the long axis. The terrain is virtually flat with a slight rise towards the south-eastern corner. Most of the area consists of whitish sands without any dune systems and only traces of low, hummocky ridges in the central part (see Figure 3). Topographically, it is a mosaic of open sandy patches and thin grass cover swamped in many places by ubiquitous alien vegetation incursion (see Figure 4). Most of the aliens are acacias, small trees which have yet to realise their full growth potential. There is

¹ The background history of the development of Atlantis was provided as part of the CSA brief and we acknowledge with thanks the Housing Directorate, City of Cape Town for the use of this information.

evidence of tree cutting in the central area which suggests that the taller acacia trees have been removed, cut off close to ground level. There is scant evidence of any indigenous vegetation, only some low restios in the slightly deflated central areas and isolated ericas flowering in the south east section.



Figure 3: View of sandy terrain with dune mole rat burrows



Figure 4: Stands of Alien vegetation

The infrastructure for the housing units was installed previously but the township was not completed due to economic restraints. The results of the instillation of services can be seen today in the form of a number of open man-holes dotted around the site. There is copious evidence of dune mole rat activity with characteristic mounding. Overall, Erf 6268 shows considerable surface disturbance with pathways through the alien vegetation, littering and occasional dumps of rubbish.

4. Method of Investigation

The objectives of the Archaeological Impact Assessment are:

- (a) To assess the study area for traces of archaeological materials.
- (b) To identify options for archaeological mitigation in order to minimise potential negative impacts
- (c) To make recommendations for archaeological mitigation.

Terms of Reference (ToR):

- (a) Locate boundaries of the study area.
- (b) Conduct a foot survey of the study area to identify and record archaeological and

Heritage -related resources.

(c) Assess the impact of the proposed development on archaeological and heritage-related materials.

(d) Recommend mitigation measures where necessary.

(e) Prepare and submit report to the Housing Directorate of the City of Cape Town that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999.

As noted above, although very little archaeological work has been conducted in the immediate vicinity and the area does not appear to be very propitious the existence of archaeological residues is always possible.

The range of possibilities may be summarised as follows:

(a) The presence of Acheulian stone artefacts of Early Stone Age origin which are older than 100 000 years

(b) Middle Stone Age artefacts dating from approximately 100 000 to 30 000 years ago.

(c) Later Stone Age artefacts dating to within the last 30 000 years

(d) The presence of Khoikhoi herders within the area over the last 1500 years(e) Structures or modifications to the landscape within the colonial era including buried residues.

(f) The presence of unmarked graves dating from the colonial era to the recent past as well pre-colonial burials.

5. Results

5.1 Archaeology

The Archaeological Impact Assessment was carried out on Saturday 27th February 2010 by Anthony Manhire and John Lanham from the Cape Archaeological Survey. The field work consisted of a comprehensive foot survey of Erf 6268 which was GPS recorded (see Figure 5 and Appendix 1) complemented by an extensive digital photographic record. The research area was easily accessible from Charel Uys Drive (see Figure 2) and the visibility of the ground surface, crucial for the detection of archaeological remains, was generally very good despite the ubiquitous presence of alien vegetation. To simplify the fieldwork, Erf 6268 was divided into three areas. These consisted of the North-Western Section, the Central Section and the South-Eastern Section. The results are described according to these three areas along with a brief mention on the remainder of Extension 12.



Figure 5: View of Erf 6268 showing the GPS track log and the boundary roads (Map reference Google Earth).

North-Western Section

Erf 6268 is well defined on the ground by the boundary roads (see Figure 6) which enclose the whole area of the Erf. The old Mamre road with its historic tree lane (see Frontispiece) just clips the north-western edge of Erf 6268. As mentioned above, this will be preserved for posterity. The North-Western Section is an area of flat whitish sand with a thin grassy cover

interspersed with a mosaic of alien acacias (see Figure 7). The installation of services has already commenced with a number of circular, concrete lined man-holes, presumably for sewerage or cable ducts. The man-holes offered a useful glimpse of what lay beneath the surface and although no sections were visible, due to the concrete lining, the spoil heaps of excavated soil were informative. These showed there was no essential difference between the surface soil and the sub-surface deposits. Furthermore, there were no traces of any archaeological residues in the soil removed during the man-hole excavations. Similarly, no archaeological material was found on the surface of the North-Western Section.



Figure 6: View of boundary Road



Figure 7: View of North-Western Section

Central Section

This was very similar to the North-Western Section with thin grassy cover and patches of bush-height alien vegetation. The major difference was a greater degree of disturbance in the form of diggings, litter and evidence tree cutting with stumps showing where the acacias had been cut off close to the ground level. There was copious evidence of dune mole rat activity as shown by the characteristic mounds of soil brought up by underground burrowing. These mounds are useful as, like the man-holes, they offer clues to the nature of sub-surface deposits and sometimes reveal buried artefacts. In this instance, they confirmed that, apart from a few pieces of calcrete, there was little change in the sub-surface sandy soil.

There were, however, two interesting features in the Central Section. The first was a deflated area in which the sand was distinctly yellowish in colour with reddish ferruginous (iron rich)

sand just below the surface (see Figure 8). The second was a fossil termatarium, known colloquially as a heuweltjie, with traces of calcrete on the surface. This, along with the evidence from the done mole rat mounds, suggests the existence of sub-surface calcretes probably associated with a water table fairly close to the surface. However, the only really interesting archaeological find was a single, large quartzite nodule (see Figure 9). Although the nodule showed no signs of having been modified, either by fracture or grinding, it was almost certainly a manuport, introduced by human agency, and probably of pre-colonial origin.



Figure 8: Deflation hollow with ferruginous sand



Figure 9: Quartzite nodule

South-Eastern Section

The south-eastern end of Erf 6268 is very close to the houses on the other side of the boundary road. The terrain here is slightly different with low hummocks of sand, thick acacia encroachment and patches of burnt veld. There were two shallow deflation hollows in this section. In the first one the sand was whitish in colour with clumps of dwarf restios at one end (see Figure 10). The second deflation area was close to the road and was of especial interest as the sand at the base was moist indicating the presence of a water table near the surface (see Figure 11). Deflation hollows were often the focus for occupation at some time in the past by hunter-gatherer or herder groups and frequently contain stone artefacts. In this instance, the complete absence of any artefacts suggests that this part of Atlantis was not a regular occupation focus for prehistoric populations.



Figure 10: Partly vegetated deflation hollow



Figure 11: Moist area in deflation hollow

Remainder of Extension 12

A brief inspection of the remainder of Extension 12 confirmed that the terrain and vegetation cover were very similar to Erf 6268. No visible archaeological remains were encountered.

5.2 Palaeontology

The palaeontological impact assessment (PIA) filed by our associate John Pether, is included with this report, see below.

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15 January 2010

BRIEF DESKTOP PALAEOLOGICAL IMPACT ASSESSMENT

DEVELOPMENT OF ERF 6268, ATLANTIS EXTENSION 12

The City of Cape Town intends to build 500 dwellings on Erf 6268 Atlantis. Infrastructure had been installed previously, but the township was not completed due to economic circumstances.

The Erf is situated on aeolian sands of late Quaternary age. These have relatively low fossil potential, but fossils do occur sparsely.

As the deepest excavations associated with the development, i.e. the installation of infrastructure, have already been completed, it is possible that sparse fossil material may have been lost.

Fossil bones in the shallow subsurface of these geologically-young sands are often in an archaeological context.

It is understood that the area is to be inspected for the occurrence of archaeological material.

The monitoring of the excavations for housing foundations for the occurrence of archaeological materials is to take place, with professional supervision.

This monitoring will be adequate for the recognition and rescue of fossil occurrences.



John Pether

6. Conclusions

Erf 6268 Atlantis is notable for the almost complete absence of any archaeological remains. There are no built structures on this piece of land and the only item of historical interest is the Mamre tree lane which clips the north-western corner of the Erf and, as noted above, is to be preserved. The only possible artefact was a single block-like nodule of quartzite found in the Central Section of the Erf. Whilst this was not modified in any way it is seemingly out of place in the geological context of late Quaternary sands. It seems likely that it was carried into the area at some time in the past but exactly when this occurred and why it was introduced must remain in the realm of the unknown.

The most likely indicator of prehistoric occupation would be the presence of silcrete. Silcrete is one of the most common raw materials used for artefact manufacture in the Western Cape and is readily obtainable from surface and near-surface deposits in the Malmesbury shales to the east of Atlantis. The complete absence of silcrete imply that the site, and the immediate vicinity of the site, were not used to any great extent by hunter-gather populations in the past.

Perhaps the most interesting results of the foot survey were the indications of sub-surface calcrete deposits coupled with the high level of the water table. These two incidences are almost certainly connected as calcrete tends to form in areas of fluctuating underground water. Although this has little significance archaeologically, unless the calcrete occurs in conjunction with buried archaeological remains, the availability of near-surface water may have had some relevance to hunter-gather or herder groups.

The desktop study confirmed that whilst there is ample evidence of prehistoric settlement in the surrounding areas there was very little evidence of any archaeological remains occurring in Atlantis itself. An earlier Archaeological Impact Assessment undertaken by Webley in 2008 at Atlantis demonstrates a very similar scenario to Erf 6268 with a complete absence of any archaeological remains.

The lack of prehistoric settlement is probably due to the rather uncompromising nature of the terrain. For example there are numerous records of shell midden complexes along the coastal strip but a decreasing number of archaeological sites as one moves inland. Similarly, there are known historical settlements at places such as Mamre and Pella but no suggestion of any built environment features on the site of Atlantis Extension 12.

7. Recommendations

As there was an almost complete absence of archaeological remains and no built structures of any kind the recommendations are, in this case, very simple. As it is unlikely that any archaeological material or heritage resources are present on the site it is deemed unnecessary to carry out any monitoring procedures during earth moving or construction activities. However, it is recommended that periodic site visits are made by a suitably qualified person during the various phases of development to note the presence or absence of both palaeontological and archaeological remains.

If any palaeontological or archaeological materials are exposed they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999). Similarly, there is always a possibility that unmarked human burials may occur on the landscape. Should any burials be exposed during earthmoving activities it should be noted that human remains are protected by law and, if older than 60 years, are dealt with the South African Heritage Resources (SAHRA). A permit is required before any human remains may be exhumed from the site and a public consultation phase implemented with descended communities

8. References

Compton, J.S. 2004. *The rocks and mountains of Cape Town*. Double Storey Books: Cape Town.

Pether, J. 2010. Palaeontological Impact Assessment on the development of Erf 6268, Atlantis Extension 12. Unpublished report prepared for City of Cape Town Housing Directorate.

Webley, L. 2008. Phase One Archaeological Impact Assessment: Atlantis Village Developments, Western Cape. Unpublished report prepared for City of Cape Town Housing Directorate.

APPENDIX 1 – GPS TRACK LOG - WAY POINTS

Degrees South	Degrees East	Date	Universal Time
-33.547424	18.494075	02/27/2010	6:57:02
-33.54704	18.494837	02/27/2010	6:59:19
-33.546661	18.495056	02/27/2010	7:00:36
-33.546518	18.495144	02/27/2010	7:01:15
-33.545861	18.495875	02/27/2010	7:03:57
-33.545952	18.496045	02/27/2010	7:04:48
-33.545956	18.495912	02/27/2010	7:05:50
-33.546317	18.496066	02/27/2010	7:07:32
-33.546852	18.495777	02/27/2010	7:09:54
-33.547092	18.495916	02/27/2010	7:11:48
-33.546755	18.496464	02/27/2010	7:14:53
-33.546498	18.496644	02/27/2010	7:15:35
-33.546855	18.49665	02/27/2010	7:17:33
-33.546884	18.496532	02/27/2010	7:18:19
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-33.546728	18.497454	02/27/2010	7:29:09
-33.54709	18.497691	02/27/2010	7:32:50
-33.547523	18.497709	02/27/2010	7:34:14
-33.547711	18.497557	02/27/2010	7:35:21
-33.547996	18.497442	02/27/2010	7:36:10
-33.547752	18.498463	02/27/2010	7:39:55
-33.547646	18.498762	02/27/2010	7:40:14
-33.547949	18.498666	02/27/2010	7:42:08
-33.548478	18.498395	02/27/2010	7:43:46
-33.548762	18.497938	02/27/2010	7:44:54
-33.549114	18.497579	02/27/2010	7:46:03
-33.548644	18.497048	02/27/2010	7:48:55
-33.548601	18.496919	02/27/2010	7:49:37
-33.548364	18.496141	02/27/2010	7:51:43
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