4.2. Middle Stone Age (MSA) (250 000 – 30 000 years ago)

The Middle Stone Age spans a period from 250 000 - 30 000 years ago and focuses on the emergence of modern humans through the change in technology, behaviour, physical appearance, art and symbolism. Various stone artefact industries occur during this time period, although less is known about the time prior to 120 000 years ago, extensive systemic archaeological research is being conducted on sites across southern Africa dating within the last 120 000 years (Thompson & Marean 2008). The large handaxes and cleavers were replaced by smaller stone artefacts called the Middle Stone Age flake and blade industries. Surface scatters of these flake and blade industries occur widespread across southern Africa although rarely with any associated botanical and faunal remains. It is also common for these stone artefacts to be found between the surface and approximately 50-80cm below ground. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age handaxes are usually observed in secondary context with no other associated archaeological material.

From as early as 1915, stone artefacts which were of a “peculiar character”, referred to as hand-axes and tortoise-cores by Reginald A. Smith, were plentiful within the Victoria West district. The latter were only found in certain areas and the hand-axes occurred in conjunction with the cores or without them (Smith 1919). During the 1920’s, A.H.J. Goodwin (1926, 1946), identified the Victoria West stone artefact industry, presumably referring to those artefacts with a “peculiar character” found within the district, the wider Karoo region, as well as along the Vaal River. They comprised mainly of stone tools that had been manufactured using a prepared core technique, and were regarded as being transitional between the Early Stone Age and Middle Stone Age. Recent research has established that the Victoria West cores were the “evolutionary step” towards the Levallois prepared core industry, indicating an outward spread of this technological change (Lycett 2009).

The Middle Stone Age is distinguished from the Early Stone Age by the smaller-sized and distinctly different stone artefacts and chaîne opératoire (method) used in manufacture, the introduction of other types of artefacts and evidence of symbolic behaviour. The prepared core technique was used for the manufacture of the stone artefacts which display a characteristic facetted striking platform and includes mainly unifacial and bifacial flake blades and points. The Howiesons Poort Industry (80 000 - 55 000 years ago) is distinguished from the other Middle Stone Age stone artefacts: the size of tools are generally smaller, the range of raw materials include finer-grained rocks such as silcrete, chalcedony, quartz and hornfels, and include segments, backed blades and trapezoids in the stone toolkit which were sometimes hafted (set or glued) onto handles. In addition to stone artefacts, bone was worked into points, possibly hafted, and used as tools for hunting (Deacon & Deacon 1999).
Other types of artefacts that have been encountered in archaeological excavations include tick shell (*Nassarius kraussianus*) beads, the rim pieces of ostrich eggshell (OES) water flasks, ochre-stained pieces of ostrich eggshell and engraved and scratched ochre pieces, as well as the collection of materials for purely aesthetic reasons. Although Middle Stone Age artefacts occur throughout the Eastern Cape, the most well-known Middle Stone Age sites include the type-site for the Howiesons Poort stone tool industry, Howiesons Poort (HP) rock shelter, situated close to Grahamstown and Klasies River Mouth Cave (KRM), situated along the Tsitsikamma coast. Middle Stone Age sites are located both at the coast and in the interior across southern Africa. Scatters of Middle Stone Age stone artefacts are known to occur within the surrounding area were these have been recorded in archaeological and heritage impact assessments.

The site of Howieson’s Poort is situated about ten kilometres south-west of Grahamstown and is the archetype site for a distinctive type of Middle Stone Age stone tool with similar specimens having been documented at the Kasouga River Mouth and at Bell in the Peddie District (van Riet Lowe *et al.* 1929). The Middle Stone Age in the region has been dated to between 125 000-75 000 years ago as it coincides with the last interglacial period when climatic and environmental conditions were similar to those of the present interglacial. It is possible, although lacking in evidence, that seasonal movement between the Cape folded mountains behind Grahamstown and the coast took place (Hall 1985).

The Albany Museum Database provides locations of several Middle Stone Age stone artefact scatters and sites at the coast and inland. Scatters of Middle Stone Age stone artefacts have also been documented by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments ranging between Grahamstown and the coastline and the surrounding east-west region (Van Ryneveld 2012a; Nilssen 2011).

### 4.3. The Later Stone Age (LSA) (30 000 – recent) and Pastoralism within the last 2000 years

#### 4.3.1. The Later Stone Age

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities continue making stone tools today. The period between 30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; although there is a lack of crucial sites and evidence that represent this change. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens sapiens*, and in Europe, had already replaced *Homo Neanderthalensis*. 
The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs and raw material availability, from smaller microlithic Robberg (20/18 000-14 000ya), Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones used as part of digging sticks, grooved stones for sharpening and grinding and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

Hunting and gathering made up the economic way of life of these communities; therefore, they are normally referred to as hunter-gatherers. Hunter-gatherers hunted both small and large game and gathered edible plantfoods from the veld. For those that lived at or close the coast, marine shellfish and seals and other edible marine resources were available for the gathering. The political system was mainly egalitarian, and socially, hunter-gatherers lived in bands of up to twenty people during the scarce resource availability dispersal seasons and aggregated according to kinship relations during the abundant resource availability seasons. Symbolic beliefs and rituals are evidenced by the deliberate burial of the dead and in the rock art paintings and engravings scattered across the southern African landscape.

Later Stone Age sites occur both at the coast (caves, rock shelters, open sites and shell middens) and in the interior (caves, rock shelters and open sites) across southern Africa. There are more than a few significant Later Stone Age sites in the Eastern Cape. The most popular are the type sites for the above-mentioned stone artefact industries, namely Wilton (for the Wilton Industry), Melkhoutboom (for the Albany Industry), both rock shelters situated to the west of Grahamstown, and Kabeljous Rock Shelter (for the Kabeljous Industry) situated just north of Jeffreys Bay.

The majority of archaeological sites found in the area would date from the past 15 000 years where San hunter-gatherers inhabited the landscape living in rock shelters and caves as well as on the open landscape. These latter sites are difficult to find because they are in the open veld and often covered by vegetation and sand. Sometimes these sites are only represented by a few stone tools and fragments of bone. The preservation of these sites is poor and it is not always possible to date them (Deacon and Deacon 1999). Caves and rock shelters, however, in most cases, provide a more substantial preservation record of pre-colonial human occupation.
Between 75,000 and 15,000 years ago there seems to have been no human occupation within the Grahamstown region owing to the worsening climatic conditions. From about 15,000 years ago populations of hunter-gatherers re-established themselves within the region as is evidenced in the preserved Later Stone Age occupational deposits of the few caves and rock shelters that have been excavated, namely Melkhoutboom in the Suurberg (Deacon 1976), Wilton near Alickdale, Uniondale about 20km north-east of Grahamstown (Leslie-Brooker 1987), Springs Rock Shelter and Glen Craig situated immediately north and north-east of Grahamstown, and Edgehill and Welgeluk located on the Koonap River some 40km to the north of Grahamstown (Hall 1985). In addition, most of these sites and many more caves and shelters in the surrounding Grahamstown area contain rock art.

The Albany Museum Database holds records of several Later Stone Age sites that have been recorded between Grahamstown and the coastline as well as within the surrounding region east-west of the proposed development site. Most of these archaeological remains occur in as shell midden along the coastline, as surface scatters, as well as within caves and rock shelters, where available and along the rivers. Scatters of Later Stone Age stone artefacts have also been documented by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments ranging between (Nilssen 2011; Anderson 2009).

4.3.2. Pastoralism

Until 2000 years ago, hunter-gatherer communities traded, exchanged goods, encountered and interacted with other hunter-gatherer communities. From about 2000 years ago the social dynamics of the southern African landscape started changing with the immigration of two ‘other’ groups of people, different in physique, political, economic and social systems, beliefs and rituals. Relevant to the study area, one of these groups, the Khoekhoen pastoralists or herders entered southern Africa with domestic animals, namely fat-tailed sheep and goats, travelling through the south towards the coast. They also introduced thin-walled pottery common in the interior and along the coastal regions of southern Africa. Their economic systems were directed by the accumulation of wealth in domestic stock numbers and their political make-up was more hierarchical than that of the hunter-gatherers. The most significant Khoekhoen pastoralist sites in the Eastern Cape include Scott’s Cave near Patensie (Deacon 1967), Goedgeloof shell midden along the St. Francis coast (Binneman 2007) and Oakleigh rock shelter near Queenstown (Derricourt 1977). Often, these archaeological sites are found close to the banks of large streams and rivers.

The Albany Museum Database holds records of several Later Stone Age sites that have been recorded along coastline identified by the presence of coastal thin-walled and mostly undecorated earthenware pottery. Pastoral occurrences along the coastline have also been documented by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments (Binneman 2006).
4.4. Human Remains

It difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. In some instances packed stones or rocks may indicate the presence of informal pre-colonial burials.

The Albany Museum Database holds records of human remains that have been exposed and collection for conservation and curation. Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments have also recorded formal historical cemeteries and informal burials (Van Ryneveld 2008) as well as on the farm Tower Hill (Nilssen 2011) and have attended to instances of exposed human remains during construction activities of development (Van Ryneveld 2010).

4.5. Rock Art (Paintings and Engravings)

Rock art is generally associated with the Later Stone Age period mostly dating from the last 5000 years to the historical period. It is difficult to accurately date the rock art without destructive practices. The southern African landscape is exceptionally rich in the distribution of rock art which is determined between paintings and engravings. Rock paintings occur on the walls of caves and rock shelters across southern Africa. Rock engravings, however, are generally distributed on the semi-arid central plateau, with most of the engravings found in the Orange-Vaal basin, the Karoo stretching from the Eastern Cape (Cradock area) into the Northern Cape as well as the Western Cape, and Namibia. At some sites both paintings and engravings occur in close proximity to one another especially in the Karoo and Northern Cape. The greatest concentrations of engravings occur on the andesite basement rocks and the intrusive Karoo dolerites, but sites are also found on about nine other rock types including dolomite, granite, gneiss, and in a few cases on sandstone (Morris 1988). Substantial research has also been conducted in the Western Cape Karoo area around Beaufort West (Parkington 2008).

The Albany Museum Database holds records of several rock art painting sites that have been recorded between Grahamstown, Fort Beaufort, Peddie, and the coastline. One additional rock art site has been recorded by Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments east of Grahamstown (Nilssen 2011).
5. DESCRIPTION OF THE PROPERTY

5.1. Location data

The proposed area for the N2 National Route road upgrade is situated between Grahamstown and the Fish River Bridge (N2-13, KM62 - KM103). The section of the road extends for 39 km. The area situated within the road reserve has been heavily disturbed by the construction and maintenance of the current N2 National Route. Most of the area within the road reserve and the adjacent area running parallel to the N2 National Route on either side of the road reserve are mostly covered in dense vegetation. The N2 alternative route runs for approximately 4.5 km south of the Fraser’s Camp Adventures and the Fraser’s Motel and Padstal situated along the current N2 route. The western turn-off off the N2 route onto the secondary gravel road is situated between 88.5KM and 89.0 KM and will join the current N2 route to the west between 93.5KM and 94.0KM. The western turn-off can also be identified by the signboard “Fraser’s Camp Signal Tower”.

Three of the six proposed borrow pits are situated along the R72 road between Grahamstown and Fort Beaufort whilst the remaining three are situated along or slightly off the N2 National Route road between Grahamstown and the Fish River Bridge. The three quarries are similarly situated along the N2 National Route or slightly off the route. One borrow pit (BP15) and one quarry (Q1) are situated in the Amathole District Municipality.

5.2. Map: 1:250 000 Map: 3326 GRAHAMSTOWN (Figure 1).
Figure 1. 1:250 000 topographic map 3326 GRAHAMSTOWN showing the location of the N2-13 National route upgrade (black), the N2 alternative (orange), and the associated borrow pits (dark green dots) and quarries (light green dots).
Figure 2. Aerial view of the location of the proposed area N2 National Route (N2-13) road upgrade (white line) and associated borrow pits and quarries. Nearby archaeological sites stored in the Albany Museum Database have been plotted (3326BC 5, 3326BC 11, 3326BC 18).
6. ARCHAEOLOGICAL INVESTIGATION

6.1. Methodology

The surveys for the six borrow pits and three quarry sites were conducted on foot. The survey for the N2 (N2-13) national route upgrade including the proposed alternative N2 section was conducted by conducting spot checks from a vehicle when structures, features, and exposed areas were observed along the route. GPS readings and photographs were taken using a Garmin Oregon 550 (Table 8.1). The GPS readings have been plotted on the accompanying Google Earth generated maps.

The surveys and results for the N2 National Route (N2-13) road upgrade and associated six borrow pits and three quarries will be individually described.

6.2. Results of Survey

6.2.1. BORROW PIT 6 (BP6), BORROW PIT 7 (BP7), AND BORROW PIT 5 (BP5)

Figure 3. Aerial view showing the locations of Borrow Pit 6 (BP6), Borrow Pit 7 (BP7), and Borrow Pit 5 (BP5) situated along the R67 road.

Borrow Pit 6 (BP6), Borrow Pit 7 (BP7), and Borrow Pit 5 (BP5) are situated along the R67 road between Grahamstown and Fort Beaufort (Figure 3). All three borrow pits are located within the extent of the Ecca Pass.

[Please Note: Technical information for the borrow pits and quarries was provided by Coastal and Environmental Services (CES)]
6.2.1.1. BORROW PIT 6 (BP 6):

BP6 is the northern-most site located approximately 18 km north of Grahamstown on the Farm Glen Melville (Figures 3-4). The Glen Melville Dam is one of the dams that supplies Grahamstown with its municipal water supply and is situated about 1.5 km west of the proposed borrow pit site.

The intention is to expand and deepen the existing borrow pit area. The existing borrow pit area is approximately 130 m x 70 m in extent and a maximum of 2.5 m in depth (Figure 5). The proposed borrow pit area including the existing borrow pit is approximately 180 m x 170 m in extent. The geological make-up is a dark grey, very loosely jointed, fissile to fragmentary mudstone shale.

The vegetation cover is dense Great Fish Thicket that obscured archaeological visibility (Figures 6-7). An Eskom power line and associated service road runs along the northern boundary of the proposed site (Figure 8). The exposed and disturbed surface and soil eroded areas were investigated for the possibility of encountering archaeological heritage remains (Figure 9).
Figure 5. View of the existing borrow pit at the area proposed for Borrow Pit 6 (BP6).

Figure 6. View of the general landscape and dense thicket vegetation on site.
Figure 7. View of the general landscape and dense thicket vegetation.

Figure 8. Eskom power line and service road on northern boundary of the proposed site.
Isolated occurrences of stone artefact scatters were encountered during the survey (BP SA1 – BP SA6). Most of these stone artefacts were encountered outside of the proposed site within the surface disturbed areas (Figure 10). A possible lower grinding stone (BP SA4) was identified within the proposed area (Figure 11). The artefact was identified by the slightly smoothed surface area.

The stone artefacts are predominantly Middle Stone Age (MSA) manufactured on shale raw materials and comprise of flakes, some secondary retouch is evident (Figures 12-14). One Later Stone Age (LSA) formal scraper tool made of a fine-grained silcrete raw material (BP SA2) was documented outside of the proposed area (Figure 15).

Owing to the dense vegetation that obscured archaeological visibility only stone artefacts that occurred in the exposed and surface disturbed areas could be identified during the survey. It is highly probable that the stone artefacts encountered occur in a secondary (ex situ) context and yield very little primary archaeological information. However, it is possible that stone artefacts may occur in primary context (in situ) 50 cm – 80 cm underneath the dense vegetation.