

Comprehensive and Professional Solutions for all Heritage Related Matters
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**PHASE 1 HIA REPORT FOR THE PROPOSED
ADDITIONAL COAL SIDING AT BROODSNYERSPLAAS
APPROXIMATELY 32KM SOUTH OF MIDDELBURG IN MPUMALANGA**

For:

***M2 Environmental Consultants (Pty) Ltd
P.O.Box 2047
Garstfontein East
0060***

REPORT: **APAC021/96**

by:

***A.J. Pelser
Accredited member of ASAPA***

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**P.O.BOX 73703
LYNNWOOD RIDGE
0040
Tel: 083 459 3091
Fax: 086 695 7247
Email: apac.heritage@gmail.com**

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

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A handwritten signature in black ink, appearing to be 'A. Pelser', is centered below the disclaimer text.

SUMMARY

APelser Archaeological Consulting (APAC) was appointed by M2 Environmental Consultants (Pty) Ltd to conduct a Phase 1 HIA for the proposed development of an additional coal siding at the existing Broodsniersplaas Coal Siding. The study & development area is located approximately 32km south of Middelburg (Nkangla) in the province of Mpumalanga. One area earmarked for the addition was assessed as part of the fieldwork.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. The assessment of the specific study area did not identify any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance in the study & proposed development area footprint. This land parcel - and the surrounding areas - has been extensively impacted through previous developments (mining and railway/siding related) and agricultural activities. The report discusses the results of both the background research and physical field assessment.

From a Cultural Heritage perspective it is recommended that the proposed Additional Broodsniersplaas Coal Siding development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.

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1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by M2 Environmental Consultants (Pty) Ltd to conduct a Phase 1 HIA for the proposed development of an additional coal siding at the existing Broodsnyersplaas Coal Siding. The study & development area is located approximately 32km south of Middelburg (Nkangla) in the province of Mpumalanga. One area earmarked for the addition was assessed as part of the fieldwork.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. The assessment of the specific study area did not identify any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance in the study & proposed development area footprint. This land parcel - and the surrounding areas - has been extensively impacted through previous developments (mining and railway/siding related) and agricultural activities.

The client indicated the location and boundaries of the study area and the assessment concentrated on this portion.

2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
5. Review applicable legislative requirements;

3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two Acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

3.1. The National Heritage Resources Act

According to the Act the following is protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

- a. Places, buildings, structures and equipment of cultural significance
- b. Places to which oral traditions are attached or which are associated with living heritage
- c. Historical settlements and townscapes
- d. Landscapes and features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Sites of Archaeological and paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the Act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) of the Act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

Human remains

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

3.2. The National Environmental Management Act

The Act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

4. METHODOLOGY

4.1. Survey of literature

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

4.2. Field survey

The field assessment section of the study was conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

4.4. Documentation

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

5. DESCRIPTION OF THE AREA

The Broodsnyersplaas Coal Siding and study area for the additional coal siding is located approximately 32km to the south of Middelburg (Ekangala) in the Province of Mpumalanga. An area adjacent to the existing siding has been earmarked for the development.

The study and proposed development area's topography is generally flat and open with no rocky outcrops and ridges present. The study area and the adjacent land has been extensively impacted in the past through activities associated with the existing Coal Siding and the related railway line, while past agricultural activities such as ploughing and crop growing, as well as related activities such as water pipelines for irrigation, has severely impacted on the area. Through these activities the original natural and historical landscape has been extensively altered. If any archaeological and/or historical sites, features or material did exist here in the past it would have been largely disturbed or destroyed as a result.

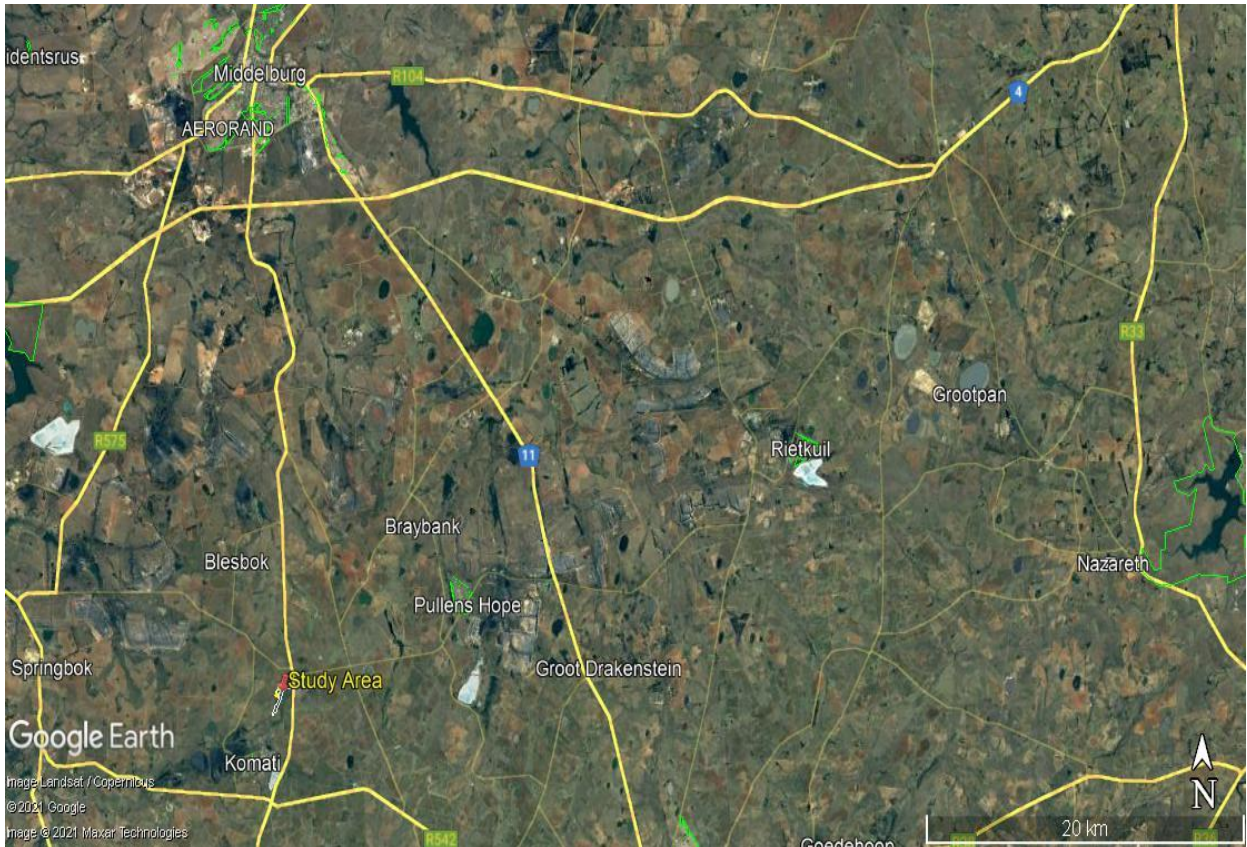


Figure 1: General location of the study & proposed development area (Google Earth 2021).



Figure 2: Closer view of the Broodsnyersplaas Coal Siding, with the study area indicated in the yellow polygon (Google Earth 2021).

6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

According to Bergh (1999: 5) the only recorded Stone Age occurrence in the vicinity of Middelburg is a rock art site to the southeast of the town. The fact that there are no known Stone Age sites in the area might be indicative of the lack of Stone Age research, although recent agricultural and mining activities might have destroyed any evidence of it if it existed at all.

No Stone Age sites or objects (such as stone tools) were identified in the area. If any Stone Age artifacts are to be found in the area then it would more than likely be single, out of context or small scatters of stone tools.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

No Early Iron Age sites are known to exist in the area, although there are a fairly large number of Late Iron Age stone walled sites in the bigger geographical area that includes Lydenburg, Dullstroom, Machadodorp, Badplaas and Belfast (Bergh 1999: 6-7). Late Iron Age sites have been identified to the north and east of Middelburg in the vicinity of Belfast (Bergh 1999: 7). Some of these sites might be related to the so-called Marateng facies of the Urewe pottery tradition of the LIA, dating to between AD1650 and 1840 (Huffman 2007: 207). During the 19th century the Ndzundza Ndebele inhabited the land to the north of

Middelburg, but it seems as if the area directly surrounding the town was largely uninhabited. The Ndebele of Mzilikazi did move through this area during the *difaqane* which probably left it uninhabited for some time (Bergh 1999: 10-11).

No Iron Age sites, features or material remains were identified during the assessment of the study area.

The historical age started with the first recorded oral histories in the area. The first European people to move through this area were the party of the traveler Robert Schoon who passed through during 1836 (Bergh 1999: 13). Although the Voortrekkers moved across the Vaal River during the 1830's, it seems as if Europeans only settled here after 1850 (Bergh 1999: 14-15). The town of Middelburg was established in 1872 (Bergh 1999: 20). During the Anglo-Boer War (1899-1902) both the Boer and British forces occupied the town, but no skirmishes took place close thereto (Bergh 1999: 51). There was however concentration camps for both white and black people during this time at Middelburg (Bergh 1999: 54).

No historical remains, features or cultural material were identified in the study area, as well as the general area around the development site. This includes graves.

Results of the October 2021 Study Area Assessment

As indicated earlier no sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were identified in the study area during the physical assessment. If any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance did exist in the area it would have been extensively disturbed or destroyed as a result of recent historical developments & activities related to the existing Broodsnyersplaas Coal Siding and Railway Line, as well as past agricultural activities that include ploughing, crop growing and irrigation (water pipelines).

Aerial images (Google Earth) of the area dating to between 2009 and 2021 also shows how the existing Broodsnyersplaas Siding and related activities, as well as past & current agricultural activities, have impacted on the study and larger area around it. From these images there is also no evidence of any earlier archaeological and/or historical sites or features being present in the study area.



Figure 3: 2009 Aerial view of the study area. Note the water pipelines/trenches and bordering agricultural fields (Google Earth 2021).



Figure 4: 2021 Aerial view of the area. The expanding activities related to the existing Coal Siding are also clearly visible (Google Earth 2021).



Figure 5: General view of area showing the existing Coal Siding and railway line.



Figure 6: General view showing the flat and open nature of the study & development area.



Figure 7: Another general view of the area proposed for the Additional Coal Siding at Broodsnyersplaas.



Figure 8: View of the area showing the impact of trenching for a water pipeline. Existing ploughed fields bordering the proposed development area is also visible.



Figure 9: Another view of the area with a water pipeline visible.



Figure 10: A general view of the area taken towards the farmstead and related structures. The farmstead and the related structures will not be impacted by the proposed development.



Figure 11: Another general view of the area earmarked for development.

Based on the desktop study and the physical field assessment it can be concluded that - from a Cultural Heritage point of view - the proposed addition to the existing Broodsnyersplaas Coal Siding should be allowed to continue.

It should be noted that although all efforts are made to cover a total area during any assessment and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. This will include low stone-packed or unmarked graves. This aspect should be kept in mind when development work commences and if any sites (including graves) are identified then an expert should be called in to investigate and recommend on the best way forward.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was appointed by M2 Environmental Consultants (Pty) Ltd to conduct a Phase 1 HIA for the proposed development of an additional coal siding at the existing Broodsnyersplaas Coal Siding. The study & development area is located approximately 32km south of Middelburg (Nkangla) in the province of Mpumalanga. One area earmarked for the addition was assessed as part of the fieldwork.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were identified in the study area during the physical assessment. If any did exist here in the past it would have been extensively disturbed or destroyed as a result of recent historical developments & activities related to the existing Broodsniersplaas Coal Siding and Railway Line, as well as past agricultural activities that include ploughing, crop growing and irrigation (water pipelines).

Aerial images (Google Earth) of the area dating to between 2009 and 2021 also shows how the existing Broodsniersplaas Siding and related activities, as well as past & current agricultural activities, have impacted on the study and larger area around it. From these images there is also no evidence of any earlier archaeological and/or historical sites or features being present in the study area.

It should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

Finally it can be concluded - from a Cultural Heritage point of view – that the proposed addition to the existing Broodsniersplaas Coal Siding should be allowed to continue taking into consideration the recommendations provided above.

8. REFERENCES

General and Closer views of Study Area Location & Development Footprint: Google Earth 2021.

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APPENDIX A: DEFINITION OF TERMS:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE

Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

Aesthetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C: SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

- i. National Grade I significance: should be managed as part of the national estate
- ii. Provincial Grade II significance: should be managed as part of the provincial estate
- iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/medium significance)
- v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)
- vi. General protection B (IV B): site should be recorded before destruction (medium significance)
- vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

APPENDIX D: PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – Grade I and II

Protected areas - An area surrounding a heritage site

Provisional protection – For a maximum period of two years

Heritage registers – Listing Grades II and III

Heritage areas – Areas with more than one heritage site included

Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states

Structures – Older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.
2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.
3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.
5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.