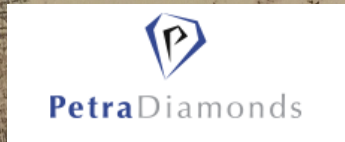




Cultural Heritage Management Plan

For the Koffiefontein Diamond Mine



Cultural Heritage Management Plan

for the

Koffiefontein Mine

Koffiefontein, Northern Cape Province

July 2018

Signed by:		Signature & date
as authorized representative of:	Petra Diamonds	<i>By executing this Cultural Heritage Management Plan the signatory warrants that the signatory is authorized to execute the Cultural Heritage Management Plan on behalf of Petra Diamonds.</i>
Signed in the Presence of:		
Name of Witness:		
Signature of Witness:		

Signed by:	Principal Investigator	Signature & date
as authorized representative of:	G&A Heritage Properties (Pty) LTD	<i>By executing this Cultural Heritage Management Plan the signatory warrants that the signatory is authorized to execute the Cultural Heritage Management Plan on behalf of G&A Heritage Properties (Pty) LTD.</i>
Signed in the Presence of:		
Name of Witness:		
Signature of Witness:		

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Executive Summary

Cultural Heritage Management Plan

Layout

This Cultural Heritage Management Plan (CHMP) has two distinct sections that should be followed in order for the recommendations to be effected.

- The first section has to do with the results of previous heritage surveys on the mine site. Several sites have been identified in the past as well as graves uncovered. This first section gives immediate management recommendations for each of these sites to be implemented on acceptance of this CHMP. These recommendations will ensure adherence to the relevant legislation as well as the preservation of sites of heritage significance. In some cases, sites have been included in the future monitoring suggested.
- The second section of the report deals with a proactive program which it is recommended be installed at the Koffiefontein Mine. The mine is in an area that is of high historic significance. This includes mining structures and activities themselves. As a result, modern mining progress is often in conflict with these resources. Since the resources are scattered all over the mining rights area it is recommended that this program be initiated here.
 - o The program will centre around the nomination of “Site Field Monitors”. These are persons who are already in the employ of the mine and who will function as the “eyes and ears” of the Heritage Coordinator on the ground. It is important that these extra duties do not interfere with their current obligations. It is also the prerogative of the mine to decide whether extra remuneration will be paid for these services.
 - o These Site Field Monitors will be subjected to a training session by G&A Heritage Properties (Pty) LTD to enable them to identify heritage occurrences on site. They will also be trained in the necessary mitigative measures needed for different finds.
 - o Information from these Site Field Monitors will be collated by the Environmental Specialist at Koffiefontein Mine in cooperation with the appointed Heritage Coordinator.
 - o Information will be relayed to the Heritage Coordinator electronically.
 - o A monthly site meeting and evaluation for the monitoring is recommended for the Heritage Coordinator. The need for this will be evaluated yearly and if necessary longer periods can be recommended between site visits.
 - o Monitoring of sites through Fixed Point Photography is recommended
 - o Overall changes in landscape due to mining or other activities will be measured by drone based aerial photography and the production of three-dimensional elevation models. This will form part of the monthly inspections by the Heritage Coordinator.
- All necessary training and equipment will be provided by G&A Heritage Properties (Pty) LTD
- It is recommended that the grave sites within the mining area be recorded through a ground penetrating radar survey as well as a surface survey. It is then recommended that a permit for their relocation be applied for and that they are then relocated to a formal cemetery. This will ensure that future mining is not impacted. A proposal to this effect has already been submitted to mine management for consideration.

Implementation of this CHMP is incumbent on acceptance of the budget for the identified training, actions and monitoring as set out.

AIM OF THE CULTURAL HERITAGE MANAGEMENT PLAN

This Cultural Heritage Management Plan (CHMP) has three important roles, namely to:

- Recognise and protect the cultural value, meaning and significance of places and objects of present and future communities within the mining area.
- Detail the actions and procedures to be carried out during the implementation phase of the project to ensure that all identified heritage sites and places are assessed, mitigation options fully outlined, and approved management recommendations implemented.
- Set employment agreements in place to ensure that this work is undertaken.

INTRODUCTION

Rationale for the Cultural Heritage Management Plan (CHMP)

This plan seeks to outline a structured approach to providing mechanisms for the identification, protection and management of cultural heritage values during the mining life of this project.

This CHMP seeks to mitigate possible potential impacts on cultural heritage by:

- Ensuring direct involvement by mine personnel in the development and implementation of this CHMP by reviewing and commenting on the first version and by approval of this CHMP, and by being actively involved in the implementation and organisation of the CHMP by participating in the monitoring process.
- Ensuring direct mine management of, and involvement in, all management actions considered necessary to protect cultural heritage values in the area of the mine and all areas where ancillary works are planned to occur.
- Providing mechanisms that ensure the project causes minimal impact to such areas.
- Demonstrating respect for indigenous culture and ensuring that all concerned with this project demonstrate such respect.
- Providing protection for any historical heritage material that is found during the mining phase of the mine.

Description of the Project

Mining first started at Koffiefontein over 140 years ago and the mine's remarkable longevity is a testament to its quality.

Koffiefontein is a low-grade deposit, but this is countered by the very high value of its diamond production. The mine produces white stones of exceptional quality, a regular proportion of which

are of between 5 and 30 carats, and occasional fancy pink diamonds. In 1994, a 232 carat diamond was recovered at Koffiefontein, being the largest rough diamond ever produced by the mine.

Petra's expansion plan at Koffiefontein is expected to increase production from 51,173 ctpa in FY 2017 to approximately 85,000 ctpa steady state (underground only). The Company's current mine plan has a life to 2031.

The Company's expansion plan at Koffiefontein is expected to increase production from 51,173 ctpa in FY 2017 to approximately 85,000 ctpa steady state (underground only). The Company's current mine plan has a life to 2031. Koffiefontein's expansion programme entails the development of an SLC from 560mL to 600mL, before putting in place a new block cave at approximately 720mL. However, the Company's ongoing review of its future capital requirements may result in a continuation of the SLC to deeper levels, in preference to the installation of the block cave currently included in the Company's plans.

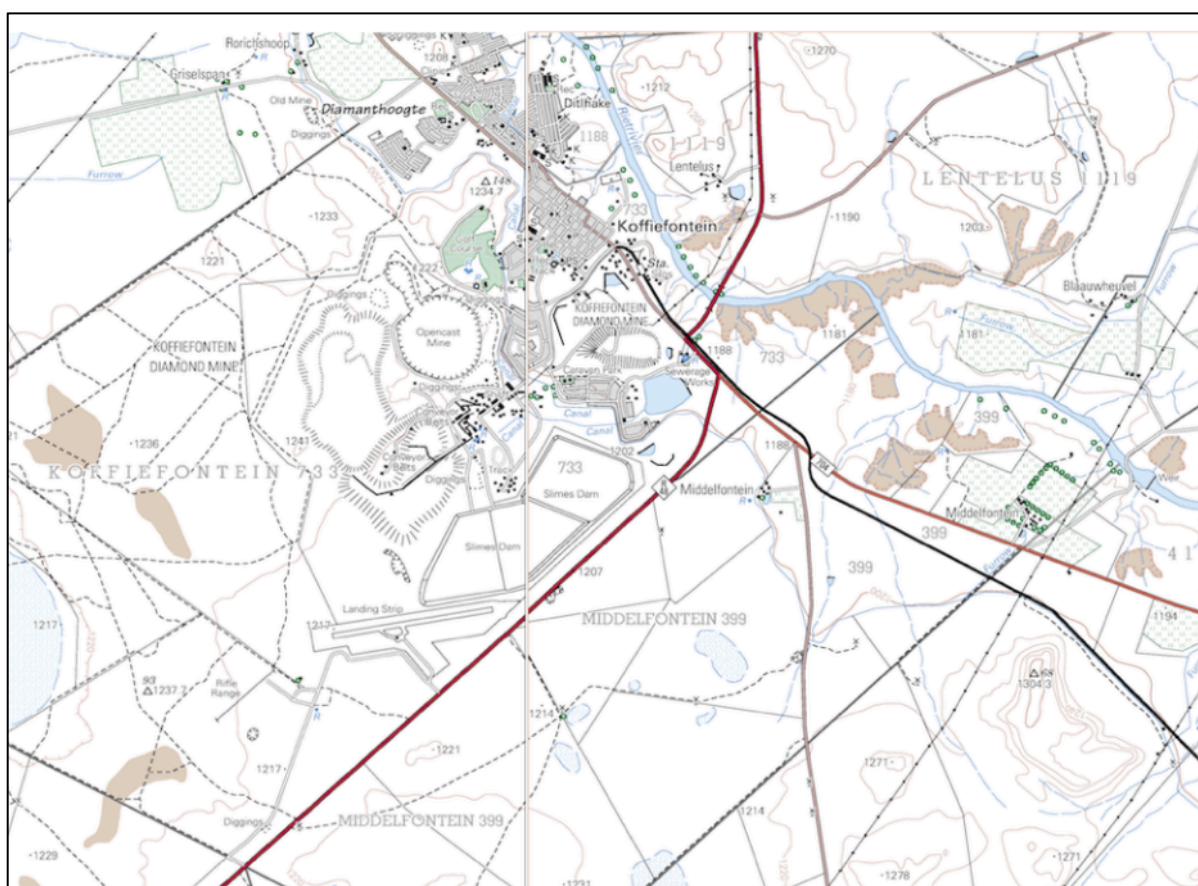


Figure 1. Location of Koffiefontein Mine

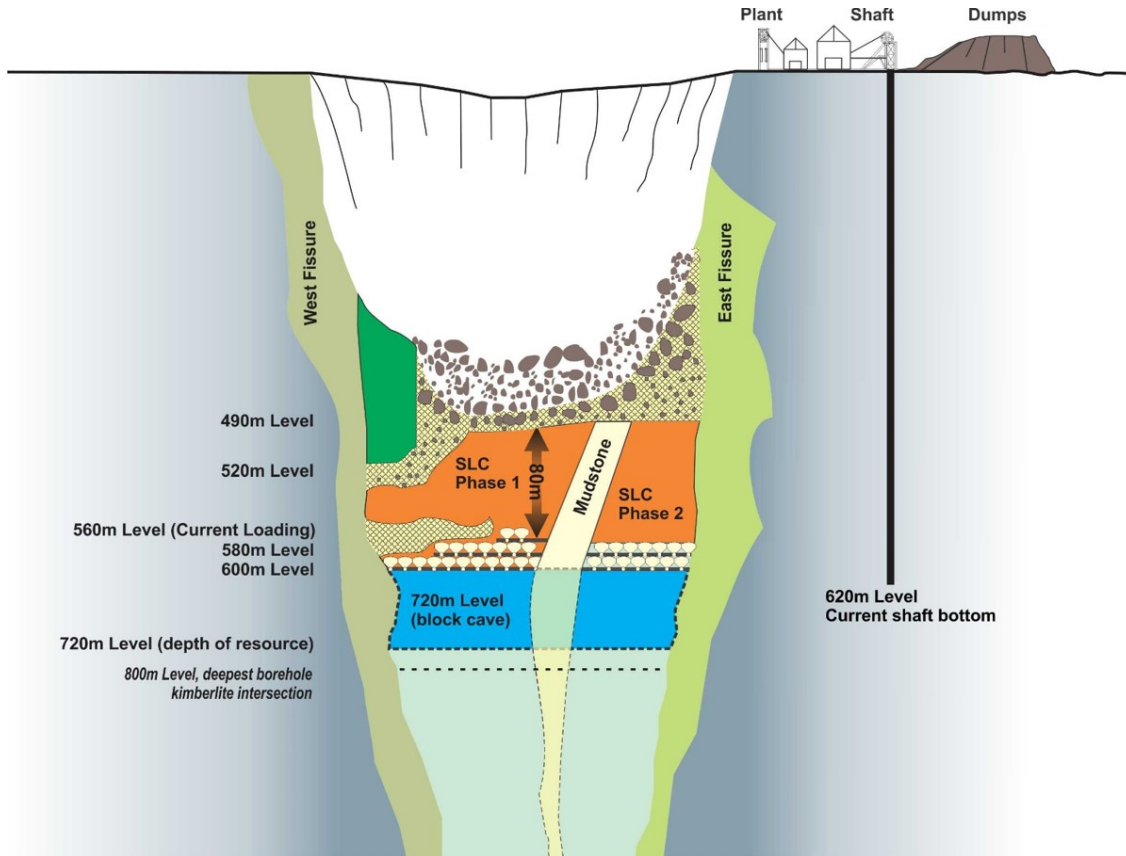


Figure 2. Resource Diagram

Previous Studies

The Koffiefontein Mine has been the subject of several previous heritage investigation.

The results of this work are found in the following reports:

- ✚ Gaigher, S. 2016. HIA Koffiefontein Empowerment JV: Solar Plant and Brick Making Plant Feasibility Study.
- ✚ Henderson, Z. 2001. Archaeological Survey for De Beers Consolidated Mines, Koffiefontein Mine, a Division of Central Mines.
- ✚ Henderson, Z. 2004. Heritage Survey for De Beers Consolidated Mines, Koffiefontein Mine.
- ✚ Henderson, Z. 2003. Report on the Excavation of an Informal Graveyard in the Whitworth Dump, De Beers Mine, Koffiefontein.

Several sites of heritage potential were identified through these studies as well as the identification of several burial sites within the mining area. One of these, within the Whitworth Dump, was exhumed and relocated in 2003.

In particular, the Heritage Impact Assessments raised the possibility that significant archaeological material associated with 19th century mining activities as well as an above normal number of burial sites are possibly located within the way of direct mining. Sections of these sites documented must be seen as representing only a portion of each overall site and of their former historical functions. From a cultural heritage point of view this report recommends that extreme caution be shown in relation to any development plans for areas in the vicinity of each of these sites and especially the burial sites.

In the light of the above, three specific management approaches are recommended for;

- ✚ In the case of areas where grave and burial sites are located within the immediate mining areas it is recommended that these be surveyed, identified and systematically relocated to a cemetery under municipal administration.
- ✚ In the areas where other heritage components have not been identified, construction contractors should be made aware of their responsibilities to monitor for historical material during earth disturbing activity. This report outlines the monitoring process to be followed with the appointment of Site Field Monitors out of the existing staff. If any material becomes apparent, then an archaeologist (Cultural Coordinator) should be called to site to assess and collect the material appropriately.
- ✚ Areas with known heritage resources should be managed as outlined below;

While the rest of the mining area should be subjected to the monitoring outlined in this report plan the following identified sites should be managed as per the specific recommendations given below.:

Engravings behind the mine manager's house (29° 25'417"S, 25° 00'761"E):

These four engravings occur on a koppie behind the mine manager's house (Fig. 2). Two engravings occur towards the base of the koppie and two towards the top. These engravings are well executed, and one in particular is unusual. The engravings have been pecked, and some occur in outline while others have been filled in.



Figure 3. Engraving of an Eland

Management Recommendations

The area where these engravings are located is not often visited and is also not subject to direct mining activities. It is recommended that the location of these engravings is not made public, to prevent their possible destruction. It is further recommended that the engravings be included in a fixed-point

photography (FPP) monitoring program that should be recorded monthly during the heritage inspection. This will indicate if any of the engravings are suffering from exposure to acid rain or other forms of air pollution and if they have been physically altered or moved. Should the monitoring indicate that these sites are endangered in their current location they can easily be relocated (per SAHRA permit) to a safer location due to most of them being located on loose boulders rather than stone ridges.

The FPP monitoring will form part of the larger heritage management plan proposed.

ESTABLISHING FIXED PHOTO POINTS IN THE FIELD

To determine the location of a fixed photo point, consider the following:

- ✚ Will changes be visible on the photo?
- ✚ Will the photo capture the “area of interest”?
- ✚ Can this location be reached conveniently and consistently?
- ✚ Will the location of the photo point need to change over time?

Carefully record the location of each fixed photo point.

- ✓ Mark each photo point location in the field with a stake or other identifying marker that will hold up to site conditions for the duration of the monitoring effort.
- ✓ Typical markers are a t-post, wood survey stake sprayed fluorescent, or capped rebar.
- ✓ For permanent points (such as conservation easement monitoring), a recommended marker is a survey grade stake with fluorescent cap pounded in to expose two to three inches above ground. Some caps can be imprinted with text (point ID) for no additional cost.
- ✓ If it meets the objectives; use an already established feature as the photo point marker (e.g. fence brace/gate, on top of a water control structure/culvert, at the toe of a stream vane, etc.).
- ✓ Consider potential conflicts with livestock (rubbing on posts), or damage to vehicle/farm equipment.
- ✓ Avoid using plastic flagging or tape.
- ✓ Consider placing a second stake or post in the centre of the photo area, 5-10 meters from the photo point; to serve as a marker for where to place a cover pole (gives scale to the photo). See Figure.
- ✓ Record GPS coordinates for each photo point location. Download the waypoints to a point shapefile. Label the GPS points using double digits (01, 02, 03...). Save the shapefile in the Toolkit customer folder, with an easily identifiable name such as “KFM Photo Points”.
- ✓ Record detailed directions for locating and taking the photo points. The next person taking the photo may be unfamiliar with the site; provide them with enough information to easily find the location. These details can be documented in field notes, in the table of the photo point shapefile (print report for file on the photo point map, or any other format that works for this purpose. Consider using a marker board to place in the corner of the photo, which states point number, date, and direction of the photo. See Figure.
- ✓ It helps to label each photo with the point number and general direction it was taken (01-NW).
- ✓ Develop a Photo Point Map. Mark the location and number of each photo point on an aerial map.
- ✓ Use an appropriate map scale and small point symbol; to provide an exact point location, that if necessary, a user could take out into the field to find the photo point marker.

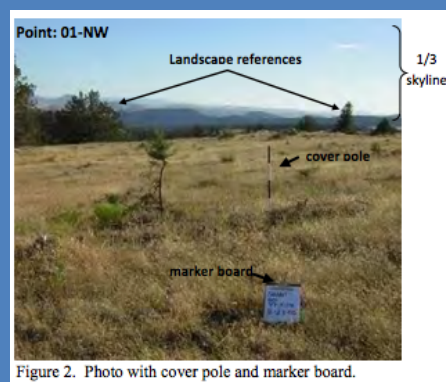


Figure 2. Photo with cover pole and marker board.

Technique of Taking Photos

It is best to take photos early in the morning, late in the afternoon, or on slightly overcast days when the sun is less intense. This eliminates dark shadows and harsh glare in the photos. Avoid taking photos when visibility is poor (due to low light, fog, or heavy rain) or when snow on the ground obscures the habitat changes. Take photos with the sun at your back.

1. Choose camera settings that give the greatest depth of field (every element from foreground to background is in sharp focus). Digital cameras generally provide this requirement in the “Landscape” setting. Document the type of camera (digital vs. 35mm etc.) and settings used.

2. Fill out a marker board (dry erase or similar) with point number, date, and direction of the photo; and place it in an upright position so that it appears in either corner of the photo’s foreground. The text should be large enough to be readable in the photograph.

Else, keep a side record of the data that corresponds to each photo.

3. Hold the camera at eye level. Try to include one-third skyline in the photo to help establish the scale of the area being photographed, and to provide reference points for future replication (Figure).

If replicating a photo point, ensure that the image viewed is the same as in the original photo. Look for references such as rocks, trees, mountains, and fence lines.

If establishing a new photo point, ensure that reference points are included to assist future efforts.

The koppies above the golf course (29° 24'101"S, 24° 59'803"E):

A cross has been erected at the highest point of the koppies. Many of the rocks at the base of the cross are covered with engravings and graffiti. Apart from two San engravings on a split rock (one of an eland and the other of an unidentified quadruped, possibly a feline) all the other engravings were done by Europeans. Most of them are single words or sentences expressing moral thoughts or thoughts of the difficulties people were encountering at the time.



Figure 4. Engravings with a possible yellowfish

Management Recommendations

Due to the similarity in sites, the same management recommendations are given for all engraving and rock art sites (see previous section).

Rivercamp/Middelfontein:

This property has rock engravings, which are located on a koppie near the Riet River. These engravings were recorded by Sven Ouzman of the National Museum, Bloemfontein, Rock Art Department in August 1996. The site is known as Middelfontein in the Museum records and consists of three groups of engravings. The first group (29° 25' 18"S and 25° 01'31"E) contains a couple of human figures. The second group (29° 25'17"S and 25° 01'37"E) is the largest including eland and other unknown antelope.

Management Recommendations

(See previous engraving sites)

The old Ebenhaezer Plant (29°24'465"S, 24°59'295"E):

This complex of structures is located within the mining area to the north of the Ebenhaezer pipe and also within the game farm. The fence and a road cut through the complex of structures. For ease of reference the complex of structures will be referred to as the Ebenhaezer Plant, although it has not

yet been possible to identify the structures individually on the evidence found so far.



Figure 5. Tailings dam wall



Figure 6. Remains at Ebenaezer Pipe

Management Recommendations

These structures are of historic importance in view of the major role that mining plays in this area. Currently these structures are slowly eroding and losing their character. Although the degradation of

these structures is not as a result of mining activities. It is recommended that the mine, in due course, appoint a heritage architect and surveyor to document all the structures before they disappear permanently. This should be done within the next 5 years. Due to the inherent instability of these structures they are potentially very dangerous to visitors. For this reason, it is further recommended that the mine institute some kind of access control to this area to ensure that people do not enter it unaccompanied.

Hill structures (29°24'198”S & 24°59'491”E):

This collection of structures is located on a ridge near the fort, overlooking the canal. The main construction consists of a series of concrete blocks with iron bolts. The blocks are arranged symmetrically and obviously acted as a foundation for machinery of some kind. A long, low, dump of fine shale gravel extends away from the structure in the direction of the Ebenhaezer pipe.



Figure 7. Concrete Blocks

Management Recommendations

These structures should for part of the survey and documentation done for the Ebenhaezer site.

The Eskom Dump “bins” (29°25'121”S & 25°00'495”E):

This is a series of 10 “bins” built of concrete in a line, about 47 m long, at the base of the eastern side of the Eskom Dump. Two of the bins are on one side and are joined to the other eight bins by a low wall. A plaque, which reads KML 1919, is set towards the top of the left hand one of the two bins on the wall away from the dump.



Figure 8. Eskom Bins



Figure 9. Plaque at Eskom Bins

Management Recommendations

The plaque indicating the age of the site as at least 1919 makes it a protected site under the NHRA no 25 of 1999. Currently the site is not being endangered by any mining activities, however should this change a permit for its destruction will be required from SAHRA.

The Pulsator foundations (29°25'232"S & 25°00'573"E)

The large concrete slab of the pulsator with its iron bolts is still visible. Part of the tailings are also preserved in the area. The pulsator is marked on the 1929-51 map, and it is marked as a concrete slab on the 1968 map.



Figure 10. Pulsator foundations

Management Recommendations

This structure (according to the historic maps) was constructed more than 60 years ago and as such earns protection under the NHRA no 25 of 1999. No further current management if the site is necessary, however should it be impacted on in future a permit for its destruction will be needed from SAHRA.

The fort or skans on the koppie above the golf course (29° 24'101"S, 24° 59'803"E):

On the high point of the koppie above the golf course nearer to the town is a small fort. This fort, or skans in Afrikaans, consists of a dry-stone wall enclosure divided in half (Henderson 2001). One half has been further divided into two small enclosures.



Figure 11. Skans on the Koppie

Management Recommendations

This site is of historic importance as it relates to the South African War. It is also protected under the NHRA no 25 of 1999. Due to its historic value it is recommended that the site be preserved *in-situ*. It is further recommended that the mine employ the services of a qualified heritage practitioner as well as land surveyor to compile a detailed plan of these structures within the next five years. Access to the site should be controlled.

The Guard House and World War II internment camp:

The Great Depression of 1929 caused a significant drop in the prices of diamonds in the early 1930s. As a result, the diamond mines scaled down operations, and many were closed. De Beers had ceased all the operations on their mines by 1932. During World War II the Koffiefontein site (now the mine residential area) contained an internment camp for prisoners of war. Most of this camp has been destroyed during the construction of the mine residences, however some concrete slabs remain. There is also a guardhouse associated with this site which is the only intact structure.



Figure 12. Bottle top mosaics



Figure 13. The Current Guardhouse

Management Recommendations

These structures are not in direct danger of being affected at the moment. Their location should be noted on the mine development map and any future possible impacts should be mitigated. These structures will form part of the monthly heritage monitoring.

The kraals and structures on the Game Farm at shotists points 26 and 27:

These kraals and structures are located in the springbok camp near to the pan. They are probably the remains of the original farm house and kraals on the property. As such they should be preserved as they are over 60 years old. The complex consists of a large kraal (probably in the region of 2-3 hectares), two smaller kraals and three structures, which were probably dwellings.

Whitworth Dump burials:

In 2001 the remains of three skeletons were dug up from the Whitworth dump. These skeletons came from about 10m down in the dump. A report on the skeletons was written by J.B.C. Botha and was submitted to the police in Koffiefontein. All of the skeletons were male.

Management Recommendations

It is recommended that the remaining graves within the Whitworth Dump be located through a Ground Penetrating Radar (GPR) survey of the site and that they are relocated to an official cemetery. The grave relocation proposal has been submitted to mine management. This will ensure that future mining activities are not impacted upon by the discovery of new graves and it will also ensure that the buried persons receive a formal burial.

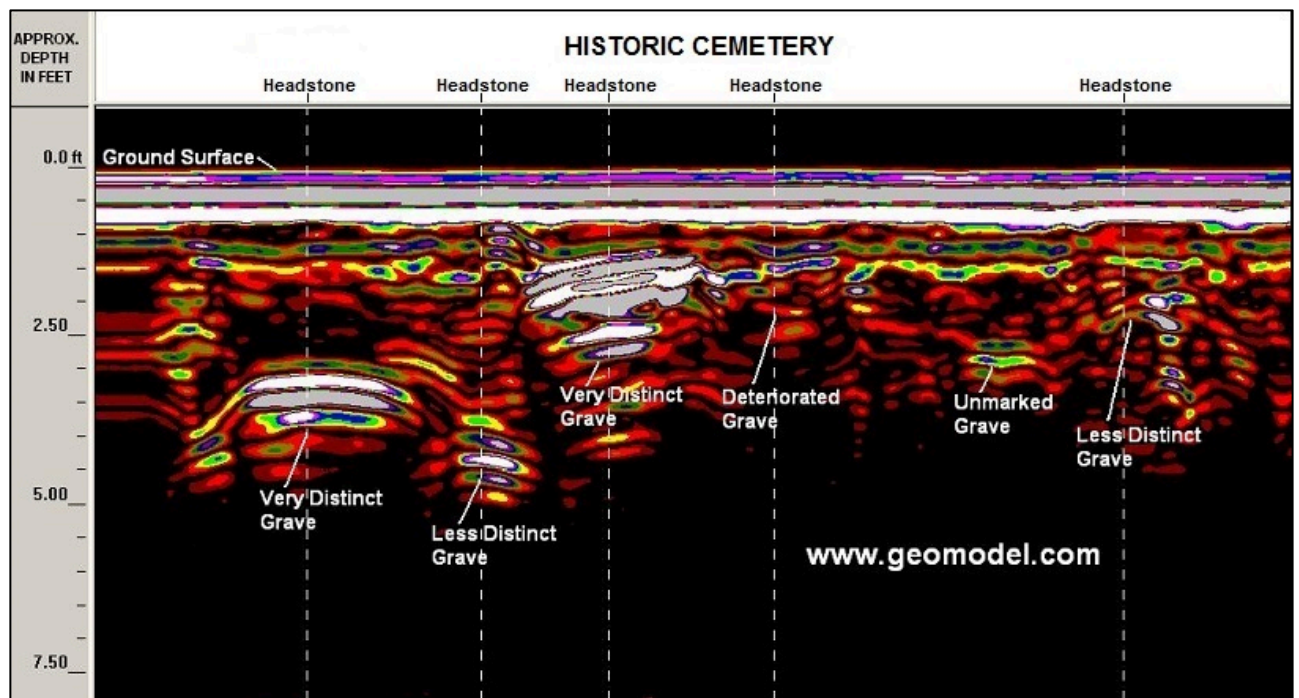


Figure 14. Example of GPR study to find graves

Workshop burials:

These burials were discovered in 1969 when the construction of buildings was planned to precede the reopening of the mine. According to a report by L.H. Drury, dated 26 February 1968, there were two graveyards visible on the property in 1968. These could possibly have been the burial site for the victims of the typhoid epidemic although the graveyard discovered in 1969 was most probably this site.

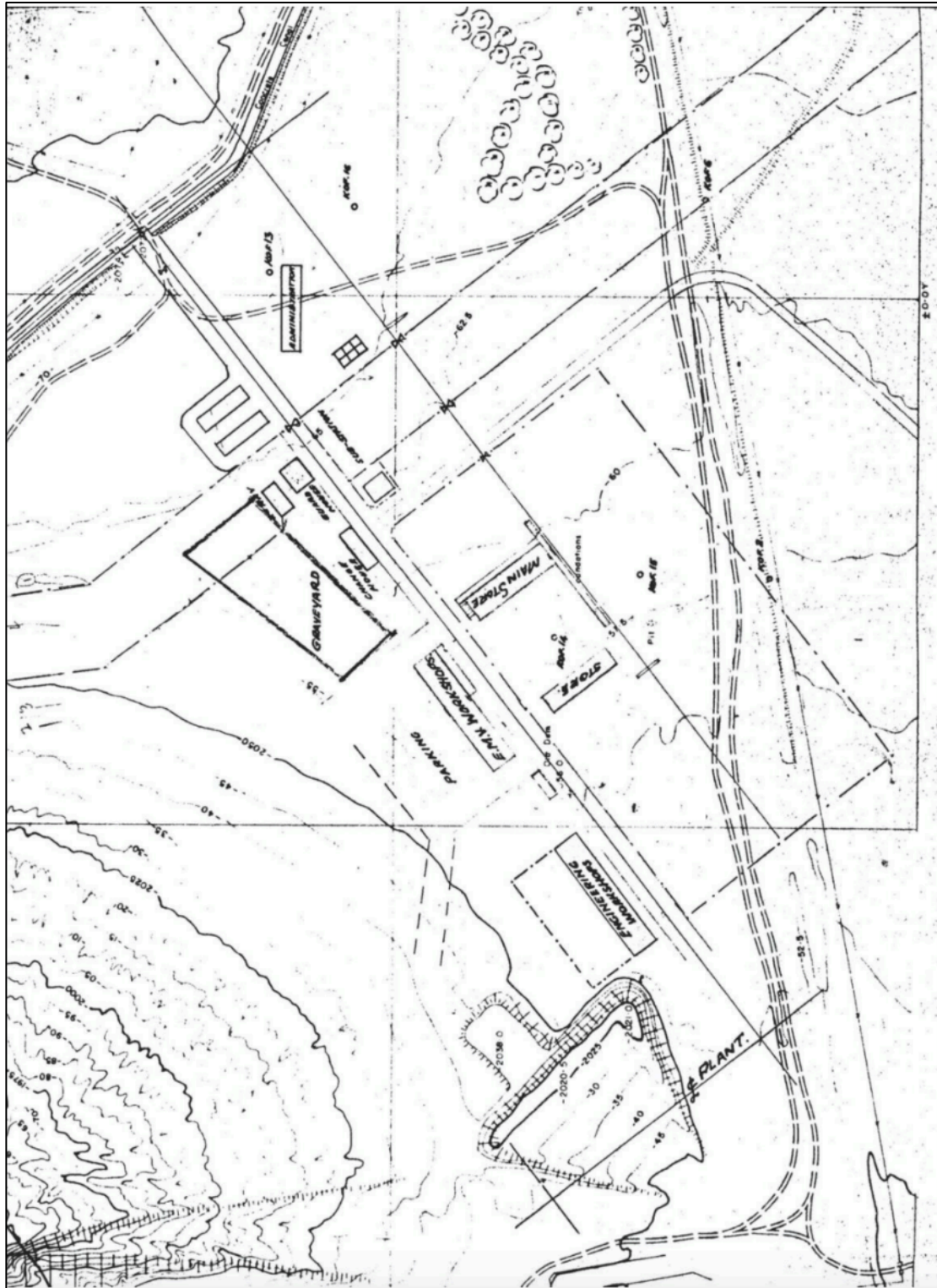


Figure 15. Location of graveyard as of 1968

Management Recommendations

Due to the continuous occurrence of graves during excavations in this area, it is strongly recommended that the location of further graves is determined, a permit for their relocation is applied for (with the associated public participation and stakeholder engagement) and that they are relocated to a formal cemetery. This will see an end to the unfortunate history of the mine with unknown graves, once and for all. The relocation proposal has been submitted to management.

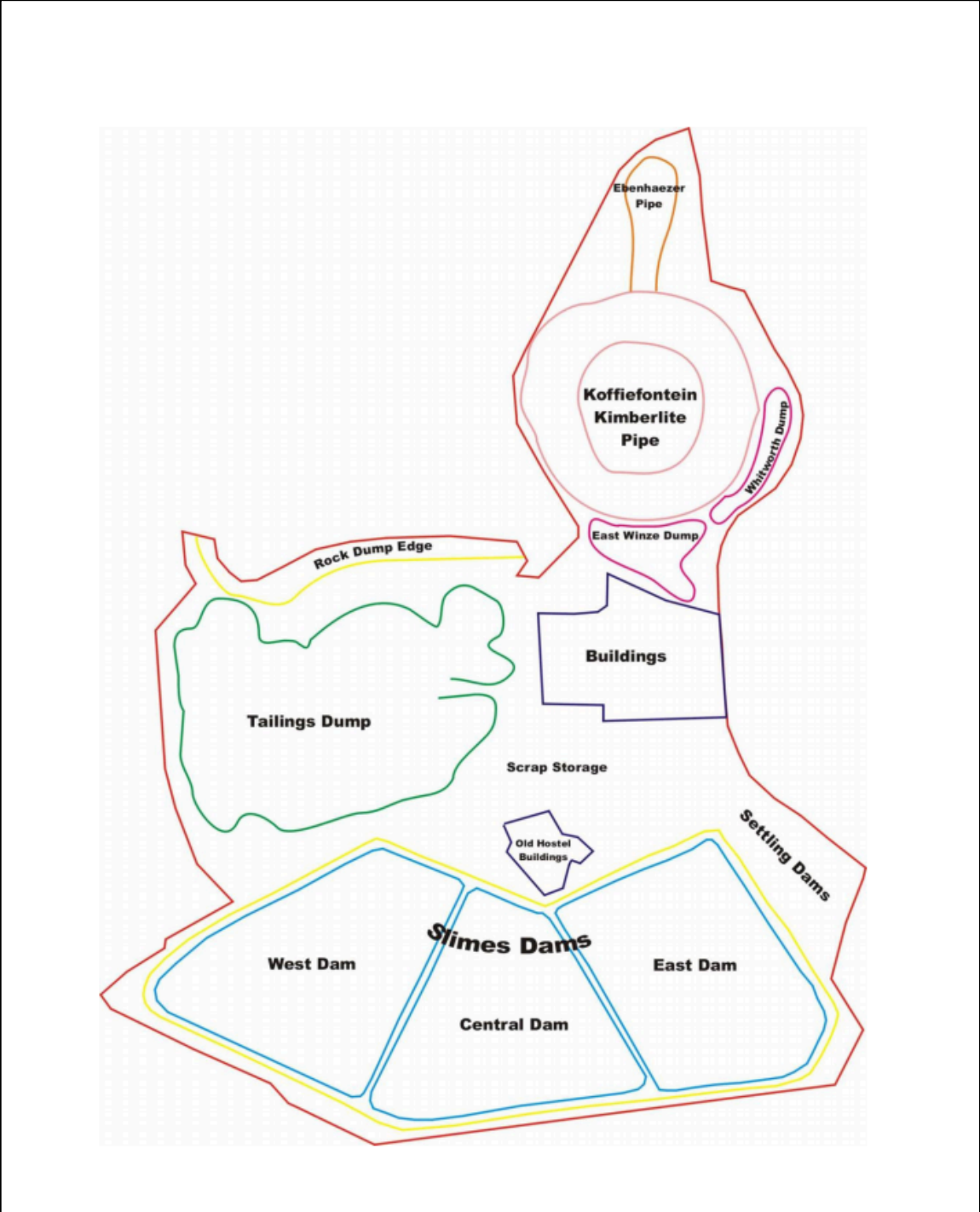


Figure 16. Location of structures mentioned in text

Participants in the Management of Cultural Heritage

All parties participating in this CHMP are listed below.

- Cultural Heritage Monitor
- Environmental Officer
- Mine Manager
- Construction Contractor/s
- Cultural Heritage Coordinator/Assessor
- Site Field Monitors
- Museum or agreed holding place for the Cultural Heritage material found.

The interaction between the parties is shown in *Attachment 1 - Communication Plan for Koffiefontein Mine*. The roles and responsibilities are detailed in section 3.3 *Roles and Responsibilities*. Names of participants and contact details are listed below.

<i>PARTICIPANTS NAMES & CONTACT DETAILS</i>				
<i>NAME</i>	<i>COMPANY</i>	<i>POSITION</i>	<i>PHONE NUMBERS</i>	
			<i>OFFICE</i>	<i>MOBILE</i>
<i>Stephan Gaigher</i>	<i>G&A Heritage Properties (Pty) LTD</i>	<i>Cultural Heritage Assessor / Coordinator</i>	+27 (015) 5161561	+27 (0)73 752 6583
	<i>Petra Diamonds</i>	<i>Mine Manager</i>	+27 (053) 2055004	
<i>Stephan van wyk</i>	<i>Petra Diamonds</i>	<i>Environmental Specialist Cultural Heritage Monitor</i>	+27 (053) 2055004	
<i>Site Field Monitors</i>	<i>Petra Diamonds</i>	<i>Site Field Monitors</i>	-	-

Legislative Context

Section 38(1) of the South African Heritage Resources Act (25 of 1999) requires that a heritage study is undertaken for:

- (a) *Construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;*
- (b) *Construction of a bridge or similar structure exceeding 50 m in length; and*
- (c) *Any development, or other activity which will change the character of an area of land, or water –*
 - (1) *Exceeding 10 000 m² in extent;*
 - (2) *Involving three or more existing erven or subdivisions thereof; or*
 - (3) *Involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or*
- (d) *The costs of which will exceed a sum set in terms of regulations; or*
- (e) *Any other category of development provided for in regulations.*

While the above describes the parameters of developments that fall under this Act., Section 38 (8) of the NHRA is applicable to this development. This section states that:

- (8) *The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.*

In regards to a development such as this that falls under Section 38 (8) of the NHRA, the requirements of Section 38 (3) applies to the subsequent reporting, stating that;

- (3) *The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2) (a): Provided that the following must be included:*
- (a) The identification and mapping of all heritage resources in the area affected;*
 - (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6 (2) or prescribed under section 7;*
 - (c) An assessment of the impact of the development on such heritage resources;*
 - (d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;*
 - (e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
 - (f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and*
 - (g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.*
 - (1) Ancestral graves,
 - (2) Royal graves and graves of traditional leaders,
 - (3) Graves of victims of conflict (iv) graves of important individuals,
 - (4) Historical graves and cemeteries older than 60 years, and
 - (5) Other human remains which are not covered under the Human Tissues Act, 1983 (Act No.65 of 1983 as amended);
 - (h) Movable objects, including ;*
 - (1) Objects recovered from the soil or waters of South Africa including archaeological and paleontological objects and material, meteorites and rare geological specimens;
 - (2) Ethnographic art and objects;
 - (3) Military objects;
 - (4) Objects of decorative art;
 - (5) Objects of fine art;
 - (6) Objects of scientific or technological interest;
 - (7) Books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and
 - (8) Any other prescribed categories, but excluding any object made by a living person;
 - (i) Battlefields;*
 - (j) Traditional building techniques.*

A ‘place’ is defined as:

- (a) A site, area or region;
- (b) A building or other structure (which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure);
- (c) A group of buildings or other structures (which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures); and (d) an open space, including a public square, street or park; and in relation to the management of a place, includes the immediate surroundings of a place.

‘**Structures**’ means any building, works, device, or other facility made by people and which is fixed to land and any fixtures, fittings and equipment associated therewith older than 60 years.

‘**Archaeological**’ means:

- (a) Material remains resulting from human activity which are in a state of disuse and are in or on land and are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;
- (b) Rock art, being a form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and is older than 100 years including any area within 10 m of such representation; and
- (c) Wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land or in the maritime cultural zone referred to in section 5 of the Maritime Zones Act 1994 (Act 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which are older than 60 years or which in terms of national legislation are considered to be worthy of conservation;
- (d) Features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found.

‘**Paleontological**’ means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

‘**Grave**’ means a place of interment and includes the contents, headstone or other marker of and any other structures on or associated with such place. The South African Heritage Resources Agency (SAHRA) will only issue a permit for the alteration of a grave if it is satisfied that every reasonable effort has been made to contact and obtain permission from the families concerned.

The removal of graves is subject to the following procedures as outlined by the SAHRA:

- Notification of the impending removals (using English, Afrikaans and local language media and notices at the grave site);
- Consultation with individuals or communities related or known to the deceased;
- Satisfactory arrangements for the curation of human remains and / or headstones in a museum, where applicable;
- Procurement of a permit from the SAHRA;
- Appropriate arrangements for the exhumation (preferably by a suitably trained archaeologist) and re-interment (sometimes by a registered undertaker, in a formally proclaimed cemetery);
- Observation of rituals or ceremonies required by the families.

Table 1. Impacts on the NHRA Sections

Act	Section	Description	Possible Impact	Action
National Heritage Resources Act (NHRA)	34	Preservation of buildings older than 60 years	Possible	CHMP
	35	Archaeological, paleontological and meteor sites	Possible	CHMP
	36	Graves and burial sites	Possible	Relocation
	37	Protection of public monuments	No impact	None

CONSTRUCTION MONITORING

Areas to be monitored

Monitoring to be implemented in any area within the mining lease where work is performed.

The areas will likely be subject to a variety of earthworks. The type of earthworks is likely to be similar to the following:

- Earthmoving
- Mining.
- Road construction.
- Infrastructure development
- Tailings dumping
- Stockpiling

Number of Site Field Monitors

The number and type of machinery operating on site will at all times govern the number of Monitors required. This approach is adopted so that monitoring can be effective, both for management of cultural heritage values, and for the protection of the person undertaking monitoring in conjunction with construction machinery.

The presence of Site Field Monitors in areas of plant operation is hazardous. Therefore, the number of Monitors to be assigned to each work area should be the minimum contingent based on the rate of material movement. The number of Monitors assigned to a particular area will be based on the rate of material movement and should always be the minimum required to safely monitor that material movement. Minimising ground staff will reduce the considerable hazard Monitors face working in the proximity of plant.

The number of Monitors required for mining activities will be as follows:

- Clearing & Grubbing - One Monitor only.*

Monitoring of this actual operation is not possible, because of difficulties of getting close enough to see archaeological material. The clearing and grubbing machine is used to remove vegetation by either breaking it off or by pulling it out the ground. The monitor is to assess the land after clearing and grubbing has been carried out. At this point, vegetation will have largely been removed, and ground visibility would be high, thus allowing for observations of artefactual material if it is on the original ground surface. This can be done once a month during times when this activity is ongoing by the Heritage Consultant appointed.
- Stripping of Topsoil and Mining - One Monitor only.*

For this activity excavators with caterpillar tracks and a large bucket are used. The excavators strip topsoil. Each bucket scoop impacts on the ground to a depth of about 20 – 100 cm. The bucket is the only impacting point of this machine upon the ground.

Monitoring focuses on the new ground surface that is the result of removal of a bucketful of soil. No observations can be made of the material that is in the bucket. Thus, a single monitor is able to work with this component. Monitoring of newly opened areas can be done weekly by the Environmental Specialist.

- *Ground Surface Treatment - as this process involves rapid material movement it should be monitored at least three times a week while ongoing.*

The diggers involved in this type of activity undertakes two types of actions, namely:

- ✚ Ripping of the ground with metal tines thereby impacting to a depth of up to 30 cm. The grader then uses its blade to level off the soil.
- ✚ Blasting of areas with bedrock. Once a month such areas can be checked for fossiliferous materials by the Heritage Coordinator appointed.

The first action will have a direct impact on any archaeological material within the soil that is tined. Archaeological integrity would be lost, but its other scientific values would remain. The new ground surface, and any associated archaeological material is not observable, because of its covering with tined soil.

Opportunities for observation of archaeological material come in both the resorting of soil through tining, and after the grader blade has re-established a new artificial surface.

As the grader moves quickly, monitors have relatively little time to look through tined earth, and at the new surface.

- *Subgrade treatment / removal of unwanted material - One Monitor is required*

For this activity excavators are used.

Weekly inspections by the Environmental Specialist.

- *Stockpiling – Weekly Monitoring*

A backhoe is usually used to distribute soil on the stockpile. In this action, monitoring of the backhoe operations is not possible. However, as the stockpile consists of material removed by an excavator, which also could not be monitored, a Monitor is required to observe soil as it is distributed on the stockpile.

Roles and Responsibilities

For the mining work associated with this project, the Koffiefontein Mine and the Heritage Specialist contracted will work together to protect Cultural Heritage.

Sites, places and landscapes of cultural heritage significance are an important resource to all members of the community. They consist of both:

- Indigenous sites, places and landscapes; and
- Sites, places and landscapes of significance to the shared history of the community.

The protocols outlined below provide guidelines to the responsibilities of all parties involved in the protection of cultural heritage issues within the mining rights area. It is imperative that all parties show respect for cultural heritage issues and understand their particular responsibilities. Guidelines for each party involved in this CHMP are listed below.

Labour Spokesperson (Shop steward) within Koffiefontein Mine Area



The Mine Human Resources Manager is to nominate a Spokesperson for Site Labour to liaise with during this project. The spokesperson for this group is known as the “Labour Spokesperson”. The roles and responsibilities of the Labour Spokesperson will be to:



- Liaise with the Cultural Heritage Coordinator during this project.
 - If needed arrange the nomination of site field monitoring agents (these will be persons already involved in the various activities on the mine who can act as on-site monitoring agents for specific tasks. This will lessen the load on the Environmental Specialist)
- Ensure that all the Site Field Monitors are fully aware of their responsibilities under this CHMP.
- Ensure that all Site Field Monitors are familiar with the paper work in this CHMP that is to be completed while on site (if any).
- Ensure that all Site Field Monitors nominated have undertaken the Health and Safety Induction Program.
- Ensure that Site Field Monitors are able to provide their own transport to and from the site office.
- Provide such information as is required by Monitors or the Cultural Coordinator or other relevant parties to expedite the implementation of the CHMP.
- Comply with provisions of relevant legislation governing Cultural Heritage management such as the NHRA 25 of 1999.
- Not impede the operations of Koffiefontein Mine where they are acting in accordance with the CHMP.

Site Field Monitors

Site Field Monitors are required to monitor development areas.

Other Roles and Responsibilities of Site Field Monitors include:

- Being employed by the mine.
- Undertaking a Workplace Health and Safety Induction Program prior to being nominated for the Monitors Pool Staff.
- Notifying the Site Supervisor or Mine Captain of:
 -  any known medical condition that may be needed to be treated during working hours;
 -  any prescription drugs that may be required to treat that condition during working hours;

-  the name of the doctor and family member that may be contacted in case of emergencies.
- Providing and wearing steel cap boots while on the construction site as per Mine regulations.
- Being present on-site at appropriate times during construction.
- Undergo training by the Heritage Specialist in Initial identification of Cultural Heritage material and sites.
 -  Immediately informing the Site Supervisor of the location and nature of discovered Heritage sites.
- Preliminary determination of the extent of the find and approximate determination of the buffer zone. Guide the construction team on the location of fencing in conjunction with the Environmental Supervisor.
- Provide input into further investigations as required.
- Remaining at their assigned locations. Monitors will not leave their assigned monitoring location except in the event of an emergency.

Koffiefontein Mine (Petra Diamonds)

The roles and responsibilities of *Koffiefontein Mine* (to be implemented by the Environmental Specialist on the mine) will be to:

- Meet all obligations as specified in this CHMP.
- Be responsible for establishing the employment of Site Field Monitors, through their labour program, for the monitoring in the nominated area of mining.
- The Environmental Specialist will arrange accommodation for the Cultural Coordinator when required for site visit.
- Ensure that all Koffiefontein Mines staff associated with this project are fully aware of their responsibilities under this CHMP to protect cultural heritage places in the development area and are also aware of the roles and duties of all other parties involved with the implementation of the CHMP.
- Provide all necessary PPE for monitors.

Environmental Specialist (Koffiefontein Mine)

The Environmental Specialist of their Site Agent Representative will directly undertake, or delegate as required, the following:

- Ensure that all staff associated with this project are fully aware of their responsibilities under this CHMP to protect cultural heritage places in the mining area and are also aware of the roles and duties of all other parties involved with the implementation of the CHMP.
- Follow appropriate procedures outlined for the Environmental Specialist in, 3.6 *GENERAL MONITORING PROCEDURES FOR FIELD SITE MONITORS* and 3.7 *Obligations of "Site Personnel"*.
- To be available if "Stop Work Forms" (refer *Attachment 7 - Stop Work Form*) are activated.

- Ensuring that the Cultural Heritage Coordinator is contacted at least fourteen working days prior to work commencing in the areas to be monitored.
- **Ensuring that the Cultural Heritage Coordinator is given a schedule of works that details the type of equipment that will be operating in the areas nominated to be monitored.**
- **To be the Monitors and Cultural Heritage Coordinator contact on site.**
- Ensuring all Site Field Monitors have undergone safety induction and possess appropriate safety equipment prior to entering the work site.
- Ensuring that all construction contractors have received a copy of this CHMP so that they will know what to do if archaeological material is found.
- To inform the Cultural Heritage Coordinator in case of a dispute.
- To inform the Cultural Heritage Coordinator if the Site Field Monitors ask the construction workers to stop (as per the *Stop Work Form*) or temporarily stop work more than three times in one day.
- To be aware of the Site Field Monitors' whereabouts at all times during working hours.
- To check that all the Site Field Monitors' paperwork/collection bags are completed and stored correctly.
- To ensure that the Site Field Monitors Kits (refer 3.5 *MONITORING KITS*) are stocked and distributed to the Monitors.
- To ensure that all Cultural Heritage forms completed on the site by the Site Field Monitors are filed and given to the Cultural Heritage Coordinator. A copy of all these forms is to be given to the Mine Manager on a bi-monthly bases.
- To have a "Master Plan" (i.e. a site plan) of areas to be monitored and to undertake the procedures outlined in *Section 3.6.1 Daily Monitoring Procedure*.
- Contact the Cultural Heritage Coordinator if *Stop Work Forms* are activated.
- To organise the induction sessions referred to in section 5 *CULTURAL HERITAGE INDUCTION PROCESS*.
- To arrange for the locations of known Cultural Heritage sites to be drawn on working plans. The plans are to be displayed in the site office.
- Notifying the Cultural Heritage Coordinator:
 - ▣ Periodically of any finds by Monitors;
 - ▣ Of any finds during construction periods when Monitors were not present;
 - ▣ If skeletal material is found in accordance with directions in *Attachment 8 - Procedures in Relation to Skeletal Material*.

Construction Contractor/s Mine Personnel

The construction contractor/s and Mine Personnel will be responsible for the following:

- Meeting all obligations as specified in this CHMP.
- Ensure that all construction and mining staff associated with this project are fully aware of their responsibilities under this CHMP to protect cultural heritage items and places in the development area, and are also aware of the roles and duties of all

other parties involved with the implementation of the CHMP.

- Ensure that all construction staff associated with this project are fully aware of the potential nature and significance of historical heritage material that may be found in the Koffiefontein Mining Lease area. This is best done through an induction by a suitably qualified Cultural Heritage Practitioner before construction in this area is commenced.
- Providing to the Environmental Specialist an updated weekly works program outlining activities that require monitoring. This should be provided to the Superintendent two (2) week in advance.
- The erection of exclusion zone fencing as directed by the Cultural Heritage Coordinator (refer *Attachment 5 - Procedures in case of a Find for Miners when Field Site Monitors are Present* and *Section 3.3.2 Cultural Heritage Monitors*).
- Complying with the instructions given for monitoring in *Section 3.6 GENERAL MONITORING PROCEDURES FOR SITE FIELD MONITORS* and *3.7 Obligations of "Site Personnel"*.
- Be responsible for monitoring during all activities carried out on the project site, especially when monitors are not present. Procedures to be carried out when a find occurs are documented in *3.7 Obligations of "Site Personnel"*.

Cultural Heritage Coordinator (G&A Heritage Properties PTY LTD)

The Cultural Heritage Coordinator will be responsible for the following:

- To be the South African Heritage Resources Agency (SAHRA) and Northern Cape Provincial Heritage Resource Agency (NBYKB) contact and liaison throughout this mining project.
- Obtaining from the Superintendent/Superintendent's Representative a copy of the proposed construction work schedule so the Site Field Monitors can be contacted when the work is to be undertaken.
- Obtaining the names of the Site Field Monitors from the Environmental Specialist.
- Checking that all Site Field Monitors have undergone a safety induction and possess appropriate safety equipment prior to entering the work site.
- Informing the Mine Manager of who will be monitoring and when.
- Contacting the Mine Human Resources Department when Monitors are required.
- Organise the Cultural Coordinator's accommodation, if required.
- To prepare the Site Field Monitors Kits (available from G&A Heritage) for the Mine Manager's Representative in the first instance. The Site Supervisor will be responsible for maintaining the kits (refer *MONITORING KITS*).
- Keeping the Environmental Specialist informed of all actions relating to cultural heritage in the mining zone. This can include notifying them of:
 - any finds by Site Field Monitors;
 - any finds during construction periods when Site Field Monitors were not present;
 - skeletal material being found, in accordance with directions in *Attachment 8 - Procedures in Relation to Skeletal Material*.
- disputes and issues raised by Site Field Monitors or construction personnel

- To coordinate the processing of any artefacts found.
- To discuss the issue of stopping work if the Site Field Monitors stop, or temporarily stop, work more than three times in one day, particularly if no artefacts are found during these stoppages.
- In the case of a potential significant find or human remains to arrange for the Cultural Heritage Assessor / Coordinator to visit the site.

Environmental Specialist

The Koffiefontein Mine Environmental Specialist will be responsible for the following:

- Contacting the Mining personnel who has an interest in the area of works and explaining to them the terms of this CHMP.
- Seeking approval of this CHMP from the Mine Management.
- Organising a pool of Site Field Monitors from the mine workforce to work on the project. The names of the Monitors are to be given to the Cultural Heritage Coordinator.
- Determining the method of contacting Site Field Monitors, i.e., whether Site Field Monitors are to be contacted through the Shop Steward or directly on a phone number. This information is to be given to the Cultural Heritage Coordinator.
- Being available to assist the Cultural Heritage Coordinator as required.

Cultural Heritage Assessor/s

The Cultural Heritage Assessor/s will be responsible for the following:

- Being on call if a potentially significant find or any bones, which are thought to be human remains, are found.
- Analysing and reporting on any archaeological material found during monitoring.
- Do monthly site inspections and coordinate with the Environmental Specialist.
- In the case of Koffiefontein Mine *the Cultural Heritage Assessor* and the *Cultural Heritage Coordinator* is the same person.

The *Cultural Heritage Assessor* (who may also be the nominated Cultural Heritage Coordinator – as in this case) will be responsible for the following:

- Reporting to SAHRA and NBYKB in regard to potential historical archaeological material.
- Providing an induction talk to mining and construction contractors and other relevant people about the potential nature and significance of archaeological material that may be associated with the Koffiefontein Mine.
- Being on call if a potentially significant find is found.
- Providing a quote to process any historical material collected or excavated during the project to a professional standard that maintains the cultural heritage values associated with that material.

- Analysing and reporting on any historical archaeological material found during monitoring.

EMPLOYMENT OF FIELD SITE MONITORS

- All Site Field Monitors will be required to work in accordance with this CHMP.
- A pool of Monitors will be sourced from the mining workforce.
- A timetable for monitoring will be provided to the Human Resources and Planning Departments at Koffiefontein by the Cultural Heritage Coordinator.
- Koffiefontein Human Resources Department should determine what extra (if any) remuneration selected Site Field Monitors will received on top of their regular salaries. Extra payments to be made directly by the mine.
- Main Roads will pay for reasonable accommodation (if required) for the night prior to the Monitor working the next day.
- Site Field Monitors will be employed on an as-required basis.
- Site Field Monitors will be required to have undertaken Workplace Health and Safety induction training and have a current card as per mine regulations.

MONITORING KITS

Site Field Monitors will receive Monitoring Kits when undertaking their work. It is their duty to ensure that the Monitoring Kits are complete with the required contents each day.

The Cultural Heritage Coordinator will prepare the Monitoring Kits and deliver them to the Environmental Specialist. The Site Supervisor or their representatives will be responsible for issuing the kits and having available in the site office additional materials required for them, if required. It is the Site Field Monitor's responsibility to ensure that the kits have all the required items.

Monitoring Kits will contain at least the following:

- Collection Record Sheets x 3
- Collection Bags x 3
- CHMP x 1
- Daily Check In / Check Out Form
- Stop Work Forms x 2
- Contact Details Form x 1
- Monitors' Flow Chart x 1
- Back pack/carry bag x 1
- Clipboard / ring binder x 1
- Pen x 1
- Marker x 1
- Camera

- Latex Gloves

Field Site Monitors are to ensure that these kits are stocked sufficiently, and that they are returned at day's end in an appropriate state.

Cameras are to be only used for photographing artefacts and the area surrounding the artefacts. At the end of each day, digital photos will be downloaded and uploaded to a shared cloud folder. The Cultural Heritage Coordinator is to attach the processed photographs to the Record Collection Sheets.


GENERAL MONITORING PROCEDURES FOR SITE FIELD MONITORS

Cultural heritage that is unknown consists largely of sub-surface finds. While archaeology can predict where these may occur, Indigenous people are increasingly becoming concerned over the loss of cultural heritage through land use changes. Further, the observance of the *NHRA no 25 of 1999* prohibits the damage, removal or alteration of our cultural heritage. Thus, monitoring by on site workers are used to safeguard cultural heritage against risk or loss.


Daily Monitoring Procedure

A summary of the requirements of this procedure is provided in Monitoring Flow Sheet (refer *Attachment 2 - Monitoring Flow Sheet*).

Site Field Monitors Morning Procedure

- The Monitors are to ask for the Cultural Heritage Coordinator / Environmental Specialist for anything lacking in their Monitoring Kits (refer *Section Participants in the Management of Cultural Heritage*).
- Monitors are to hand in their completed Induction Form (refer *Attachment 13 - Cultural Heritage Officer Pre-start Checklist*).
- **If the Monitors are late on site, work will proceed whether they are present or not.**
- Collect Monitors Kit (refer Section *MONITORING KITS*).
- Fill out Daily Check In/Check Out Form (refer *Attachment 3 - Daily Check In / Check Out Form*).
-  The Site Supervisor (Mine Captain) or their Representatives will arrange for the transport of Monitors between the Site Office and the work site.

On-site Monitoring Procedure

- The Site Supervisor or Superintendent's Representative will inform the Site Field Monitors of the type of work that will be carried out during the day.
 -  Once this has been established, the Site Field Monitors will begin monitoring for artefacts unearthed during the clearing work.
- Site Field Monitors will stay at the designated contract site unless the Site Supervisor is advised or requests otherwise.

- Site Field Monitors will be introduced to the drivers of the earth moving equipment who will be undertaking the work. The driver and Site Field Monitor are to come to a mutual arrangement regarding procedures they will follow (e.g. hand signals) when the Site Field Monitor wishes the driver to temporarily stop so that he can inspect any suspected Cultural Heritage material that may have been exposed.
- When working in proximity to large earthmoving equipment, such as bulldozers, graders or excavators, stringent safety rules are to be observed.
 - ✚ Site Field Monitors must wear prescribed safety equipment
 - ✚ Never walk in front of a moving or operating machine.
 - ✚ Never be close when trees are being felled or pushed or pulled.
 - ✚ Observe at least 20 metres safety zone between the monitor and the machine.

Bobcats can be approached reasonably safely, provided that eye contact is maintained, and the operator is aware at all times of the position of the monitor.

When an Artefact is Found

Refer to sections: *Discovery of Find Procedure*; *Discovery of a Potentially Significant Find*; *Discovery of Skeletal Material*; *Artefact Collection and Storage Procedure*.

Site Field Monitors' Afternoon Procedure

- Site Field Monitors will check-in any artefacts collected during the day's work, along with the Collection Record Sheets, any completed Stop Work Forms and their Monitoring Kits.
- Site Field Monitors are to mark up the “*Master Plan*”.
- The Site Supervisor or their Representative and Site Field Monitors are responsible for marking on “*Master Plan*” (i.e., the site plan of the project showing the areas it has been agreed are to be monitored) the following:
 - ✚ The surface area that has been checked prior to work commencing (e.g. outline these areas in red);
 - ✚ The areas that the Site Field Monitors have witnessed being altered (e.g. lightly colour the areas inside the red lines in blue);
 - ✚ Colour in red dots to show where artefacts were found, as well as writing in the *Collection Record Sheet* number and the *Collection Bag* number.
 - ✚ The areas where monitoring has been completed are to be crosshatched and the signatures of the Monitors and the Superintendent are to be placed adjacent to these areas.

When all areas that are to be monitored are crosshatched and signed off the monitoring for this component is completed.

- All of the Site Field Monitors' completed sheets are to be given to the Environmental Specialist. Copies of all forms will be made and forwarded to the Cultural Heritage Coordinator.
- Any issues raised throughout the day should be noted to the Site Supervisor or their

Representatives and resolved as soon as possible.

- Any sheets or bags used during the day should be replaced and signed for before the next morning's work.

Raising Issues

- If the Site Field Monitors wish to raise any issues, or report incidents or accidents that may have occurred while they were monitoring that day, they should contact the Site Supervisor.

3.4.1 Discovery of Find Procedure

The correct procedures are to be followed whenever potentially significant artefacts and/or skeletal material are found during the course of clearing, mining and excavation activities.

Discovery of a Find

Response to the discovery of a heritage site will be at the discretion of the on-site Site Field Monitor. The monitor will immediately signal the operator/s to cease work and inform site personnel, who will assist in contacting and informing the Site Supervisor of the find if it is considered potentially significant after the initial inspection. It is the responsibility of the Site Supervisor to ensure works cease in the immediate area of the find and are redirected. A flow chart outlining the procedure undertaken by the Monitors is presented in *Attachment 4 - Procedures in case of a Find for Site Field Monitors*. A flow chart outlining the procedure undertaken by the Site Supervisor is presented in *Attachment 5 - Procedures in case of a Find for the Contractor or Miner when Site Field Monitors are Present*.

Site Field Monitors' responsibilities in the discovery of a find are as follows:

- Any Site Field Monitor discovering a find is to notify machinery operators in the vicinity of the find that work should be halted temporarily.
- If the find can be immediately collected, it should be.
 - ✚ If the find cannot be collected immediately or whether it will require further investigation inform the Site Supervisor. Follow the procedures listed in the section *Discovery of a Potentially Significant Find*.
- If the find can be collected then the Site Field Monitors are to record, in as much detail as possible, information about the site area in which the artefact was found on the *collection record sheet*. The *collection record sheet* should be filled out as follows:
 - ✚ Insert the reference number on *Collection Record Sheet* and then place the same reference number on the collection bag in which the artefact is stored (refer *Attachment 6 - Collection Record Sheet*). The Number is to be in 3 parts – the date, the Site Field Monitor's Initials and a number (start at one, and follow in ascending order during the day), e.g. for the first artefact collected on the 12 August 2018 by Joe Jones the reference number would be "12818.jj.1", the second artefact would be "120818.jj.2".
 - ✚ the number of photographs and the relevant picture number e.g. 5 photos taken, the first of the area to the north of the artefact, the second the artefact itself, ...the fifth the artefact turned over;
 - ✚ sketches of the find and its location;

- ✚ what the Monitors thinks the artefact is and what it was potentially used for;
 - ✚ at what depth the artefact was found and where it was found within the soil profile;
 - ✚ surrounding environment e.g. if it is near a creek bed or near some trees;
 - ✚ if the artefact was found in an area that is believed to be imported fill;
 - ✚ how many artefacts were found in the immediate area surrounding this site;
 - ✚ any other relevant site environment information.
- Once the find is collected appropriately, the Site Field Monitor will notify the Site Supervisor that work can recommence.

Discovery of a Potentially Significant Find






If the find is considered potentially significant then the responsibilities are as follows:

- The Site Field Monitor, in consultation with the Site Supervisor, will determine if further investigation of the find is required.
 - ✚ To fill out a *Stop Work Form* if the find is considered potentially significant.
 - ✚ The Monitor will then ensure that the affected area is clearly marked, e.g., by stakes and tape.
 - ✚ Stop Work Forms (refer *Attachment 7 - Stop Work Form*) must be completed by the Site Field Monitors and distributed to the Site Supervisor.
 - ✚ The Stop Work Form (refer *Attachment 7 - Stop Work Form*) will detail the nature and location of the finds and any management actions taken. The Site Supervisor Representative and the Monitor who initiated the stoppage will sign off the Stop Work Form.
- If warranted, the Cultural Heritage Assessor can be called upon to give an opinion on the find, and the Assessor may then assist with the collection and identification of the find.
- The Cultural Heritage Assessor will arrange for a GPS device to be used to record the precise location of the significant find.
- The area of the find is to be declared an exclusion zone. Exclusion zones are areas that have been assessed as having *high cultural heritage significance* and shall be fenced off. Entry into these areas by plant and all personnel (other than those assessing the Cultural Heritage Site) is strictly prohibited.
- The Cultural Heritage Assessor/ Cultural Heritage Coordinator/Monitor will recommend to the Site Supervisor if any further action is required and when work can recommence in the area of the find.
- When the work is to recommence *Section C* of the *Stop Work Form* is signed. This form should be copied and issued to the Site Supervisor to indicate that work can continue in the area of the find. The Site Supervisor should file the original *Stop Work Form*.

Discovery of Skeletal Material

If the bones are human remains then arrangements for handling human remains are, in part, governed by legal provisions as laid down in the various Acts and policies. However, in all cases suitable dignity is required in handling issues such as this. A flow chart outlining the procedure involved in the treatment of the discovery of unidentified burial remains is presented in *Attachment 8 - Procedures in Relation to Skeletal Material*. The primary intention of this strategy is to avoid the unnecessary removal or disturbance of human remains, and to allow each “Group of Indigenous Persons” the final decision-making powers if the remains should prove to be those of an Indigenous person.

Where human remains are found work is to cease and the area is to be fenced off. The Police are to be notified immediately. The discovery site shall be deemed to be a crime scene and Koffiefontein Mine Personnel will be subject to police direction. Procedures to be followed upon the *Discovery of Skeletal Material* are as follows:

- The Site Field Monitor is to notify machinery operators in the vicinity of the find that work should be stopped.
 -  The Site Field Monitor will then inform the Site Supervisor or their Representatives that a work stoppage has occurred.
- Stop Work Forms* are to be filled out by Site Field Monitors.
- Under no circumstances should bones be disturbed. They must remain in-situ until they can be properly identified.**
 -  The Site Supervisor will formally notify operators that work must stop in the affected area. Operations can continue outside of the area.
 -  The Site Supervisor and Environmental Specialist will then ensure that the affected area is clearly marked e.g., by pegs and tape.
 -  The Superintendent/Superintendent’s Representative will contact the Cultural Heritage Coordinator to make him/her aware of the find.
- If the bones are **not** clearly of human origin, then Cultural Heritage Assessor should be contacted to determine the origin of the bones. If the bones are not human, then work can continue.
 -  If the bones are considered to be human remains, then the Environmental Supervisor will contact the Police.
- The Cultural Heritage Coordinator will notify the Department of Health and SAHRA as well as NBYKB.
- The grave will be relocated under the blanket permit discussed for the project.

Artefact Collection and Storage Procedure

Site Field Monitors will collect, and salvage artefacts found during monitoring activities. Site Field Monitors will be required to store and manage collected artefacts in an orderly manner. The Environmental Specialist of Site Agent is to supervise and check the storage and record keeping of all artefacts.

Carrying Out Monitoring Work

- Site Field Monitors will report to work and carry out their duties as outlined in the Daily Monitoring Flow Sheet (*Attachment 2 - Monitoring Flow Sheet*). Monitors will remain alert and observant and will seek to salvage artefacts if appropriate.
- The Site Field Monitors should not undertake artefact collection outside the designated monitoring areas.

Collecting Artefacts during Monitoring

- The artefact is to be photographed *in situ*.
 - ✚ All collected artefacts are to be placed in numbered collection bags and a record entered on a *Collection Record Sheet* (refer *Attachment 6 - Collection Record Sheet*) indicating the nature of the find and its location. The Environmental Specialist of Site Agent will ensure that sufficient labelled bags are available for each Site Field Monitor at the beginning of each day's work and that the Site Field Monitors fill in *Collection Record Sheet* correctly.
- If an artefact is found, its location is to be recorded. In some cases, it will not be feasible to log the location of each individual artefact. Instead, the location of the main density of artefacts should be recorded. In all instances notes should be made of the surrounding landscape where sites are located. Notes should be recorded in the logbooks provided

Collection Record Sheets

- An example of a completed Collection Record Sheet is provided in *Attachment 6 - Collection Record Sheet*.
 - ✚ The number of the *Collection Record Sheet* is to be recorded on the “*Master Plan*”.

Storing Cultural Heritage Paperwork and Artefacts Collected during Monitoring work

- The Environmental Specialist or Site Agent will ensure that collection sheets are filled out for the artefacts found and this information is recorded on the “*Master Plan*”.
- The Environmental Specialist or Site Agent is to have 4 (four) ring-folders in the storage cupboard for the Site Field Monitors’ completed sheets. Each folder is to be clearly marked to hold the following completed sheets:
 - *Construction Rosters*;
 - *Collection Record Sheets*;
 - *Stop Work Forms*;
 - *Check-In / Check-Out Forms*.
- ✚ The Monitors are to place all the completed sheets/forms in the correct folders and store appropriately.
- The Environmental Specialist or Site Agent will store the “*Master Plan*” in a secure place.
- The Environmental Specialist or Site Agent will ensure that *Collection Record Sheets* are filled out for the artefacts found and are to be place in the collection bags with the

artefacts.

- It is the Environmental Specialist or Site Agent's responsibility to check that the *Collection Bags* are labelled correctly as well as filed and stored in an appropriate manner.
 - Artefacts are to be filed by site and date in chronological order and locked in cabinets.
- The Environmental Specialist or Site Agents will check that the storage of the artefacts in the lockable cabinets is in an orderly fashion.
 - When the photographs of the artefacts have been uploaded to the shared Cloud file their references should be attached to the relevant *Collection Record Sheet* and placed in the *Collection Bags*.
- Should a large number of artefacts be collected, the Environmental Specialist or Site Agent will organise a vehicle to safely transport them to the Site Office.

Obligations of "Site Personnel"

Anyone associated with Koffiefontein Mine projects must be aware of their obligation to always look out for cultural heritage material, so it can be protected and managed.

If any site personnel find an item believed to be cultural heritage material then they are to follow the procedure listed below to protect the item from damage.

Discovery of Find Procedure

The correct procedures are to be followed whenever an artefact and/or skeletal material is found during the course of clearing and excavation at the project site.

Discovery of a Find

If an item is found by the mining team that is suspected to be an artefact or historical material, then the Site Supervisor is to ensure works cease in the immediate area of the find. A flow chart outlining the procedure undertaken by the Site Personnel, when Site Field Monitors are **not** present, is given in *Attachment 9 - Procedures in case of a Find for the Contractor or Miner when Site Field Monitors are NOT Present*.

Procedures for discovery of a find by the Miners/Contractor/s are as follows:

- The Miner/Contractor/s discovering a find are to notify machinery operators in the vicinity of the find that work should be temporarily halted.
- The person, who discovered the find, will then inform the Site Supervisor that work has ceased.
 - The Site Supervisor will notify the Environmental Specialist or Site Agent
 - The Environmental Specialist or Site Agent will formally notify operators that work must stop in the affected area. Operations can continue outside this area.
 - The Environmental Specialist or Site Agent is to contact the Cultural Heritage Coordinator/Cultural Heritage Assessor.
 - The Cultural Heritage Assessor/Monitor sent to the site will follow the Site Field Monitor's procedure for a find or a significant find (refer *Attachment 4 - Procedures in case of a Find for Site Field Monitors*).

- ✚ If the find can be immediately collected it should be, by either the Site Field Monitor or Cultural Heritage Assessor. Once the find is collected appropriately, the Site Field Monitor or Cultural Heritage Assessor will notify the Site Supervisor that work can recommence.

Discovery of Skeletal Material by Site Personnel

If bones are found the Cultural Heritage Assessor / Coordinator should be contacted to determine if they are human or otherwise. If the bones are not human, then work can continue.

If the bones are human remains then arrangements for handling human remains are, in part, governed by legal provisions as laid down in the Human Tissues Act of 1968 and the NHRA no 25 of 1999. However, in all cases suitable dignity is required in handling issues such as this. A flow chart outlining the procedure involved in the treatment of the discovery of unidentified burial remains is presented in *Attachment 8 - Procedures in Relation to Skeletal Material*.

Where human remains are found work is to cease and the area is to be fenced off. The Police are to be notified immediately. The discovery site shall be deemed to be a crime scene and Koffiefontein Mine Personnel and any Construction Contractors will be subject to police direction.

Procedures to be followed upon the *Discovery of Skeletal Material* are as follows:

- The Miners/Contractor/s who make the discovery are to notify machinery operators in the vicinity of the find that work should be stopped.
- That person will then inform the Site Supervisor that a work stoppage has occurred.
- Construction workers are to follow their stop work procedures.
- Under no circumstances should bones be disturbed, and they must remain *in-situ* until they can be properly identified.
- The Site Supervisor will formally notify operators that work must stop in the affected area. Operations can continue outside of this area.
- The Site Supervisor will then ensure that the affected area is clearly marked by pegs and tape.
 - ✚ The Site Supervisor will then notify the Environmental Specialist or Site Agent of the find.
- If the bones are not clearly of human origin, then the Cultural Heritage Assessor should be contacted to determine the origin of the bones. If the bones are not human, then work can continue. This determination can only be done by the Heritage Coordinator and can be done through photographs.
- If the bones are considered to be human remains, then the Environmental Specialist or Site Agent will contact the Police.
 - ✚ The Environmental Specialist or Site Agent will contact the Cultural Heritage Coordinator to make him/her aware of the find.
- The Cultural Heritage Assessor will notify the Department of Health, SAHRA and NBYKB.

PROCESSING OF COLLECTED ARTEFACTS

Artefacts are to be left in their numbered bags, until monitoring of construction is complete. All artefacts will be stored by the Environmental Specialist or Site Agent at the site office until monitoring is completed. At that point, all artefacts, with associated recording sheets, should be delivered by the Environmental Specialist or Site Agent to the Cultural Heritage Assessor for analysis. Reporting on this analysis (including a list of all artefacts found) will be provided by the Cultural Heritage Assessor to SAHRA and NBYBK.

At the end of analysis, all artefacts should be lodged by the Cultural Heritage Assessor in appropriate form, with the museum agreed upon for safe-keeping (refer *Participants in the Management of Cultural Heritage*). Koffiefontein Mine is responsible for any costs incurred in keeping artefactual material in the selected museum.

In the case of historical heritage material, the Cultural Heritage Assessor will advise on requirements for processing and accessioning material.

CULTURAL HERITAGE INDUCTION PROCESS

Prior to the commencement of work all mining and construction personnel will undergo a cultural heritage induction as part of the general induction provided by Koffiefontein Mine. This induction will include, but will not be limited to, the following:

- A brief outline, given by the Cultural Heritage Coordinator/Assessor, of the responsibilities of construction and mining personnel under this management plan and under relevant legislation.
- A general awareness session on cultural heritage is to be given by the Cultural Heritage Coordinator. This is preferably given by the Site Field Monitors on a one on one basis to all the workers they meet on site.
 - A Cultural Heritage Induction paper is to be issued to all site workers at the “tool box sessions” (refer *Attachment 11 - Cultural Heritage Induction Paper*).
- As part of the ongoing education of the construction workers, Cultural Heritage Posters (refer *Attachment 12 - Cultural Heritage Posters for use on Construction Sites*) are to be reproduced and placed on the site office walls or in other areas when site workers gather e.g., the lunch room. Electronic copies of the posters are available from the Cultural Heritage Coordinator.

DISPUTE RESOLUTION

Amendments to this document can be negotiated between the Koffiefontein Mine and the Cultural Heritage Coordinator. These will be treated as variations to the plan.

It is envisaged that this CHMP is sufficiently detailed to cover most contingencies which may arise during the construction and mining phase of his project. However, disputes may occur in the course of operations, and could include issues involving third parties who are not represented but who can influence the implementation of the CHMP (such as next-of-kin of graves uncovered). The following shall occur in the event of a dispute:

- Where possible, issues will be negotiated directly between the Site Field Monitor and

the Cultural Heritage Coordinator and Environmental Specialist or Site Agent. If no solution is reached within 48 hours, an on-site meeting will be convened between members of the Koffiefontein Mine Management, any Contractors and the Cultural Heritage Coordinator.

Each party will continue to perform their roles and responsibilities in accordance with this CHMP despite the existence of a dispute.

The above arrangements do not preclude any recourse to legal avenues for resolution, but they should be exhausted before such recourse to law is made.

Any costs and/or delays as a result of a dispute caused by a breach of the CHMP by Koffiefontein Mine or any of its agents or representatives, will be the responsibility of Petra Diamonds.

CONTACT DETAILS

Listed in section *Participants in the Management of Cultural Heritage* are the details of appropriate stakeholders for the CHMP of this project.

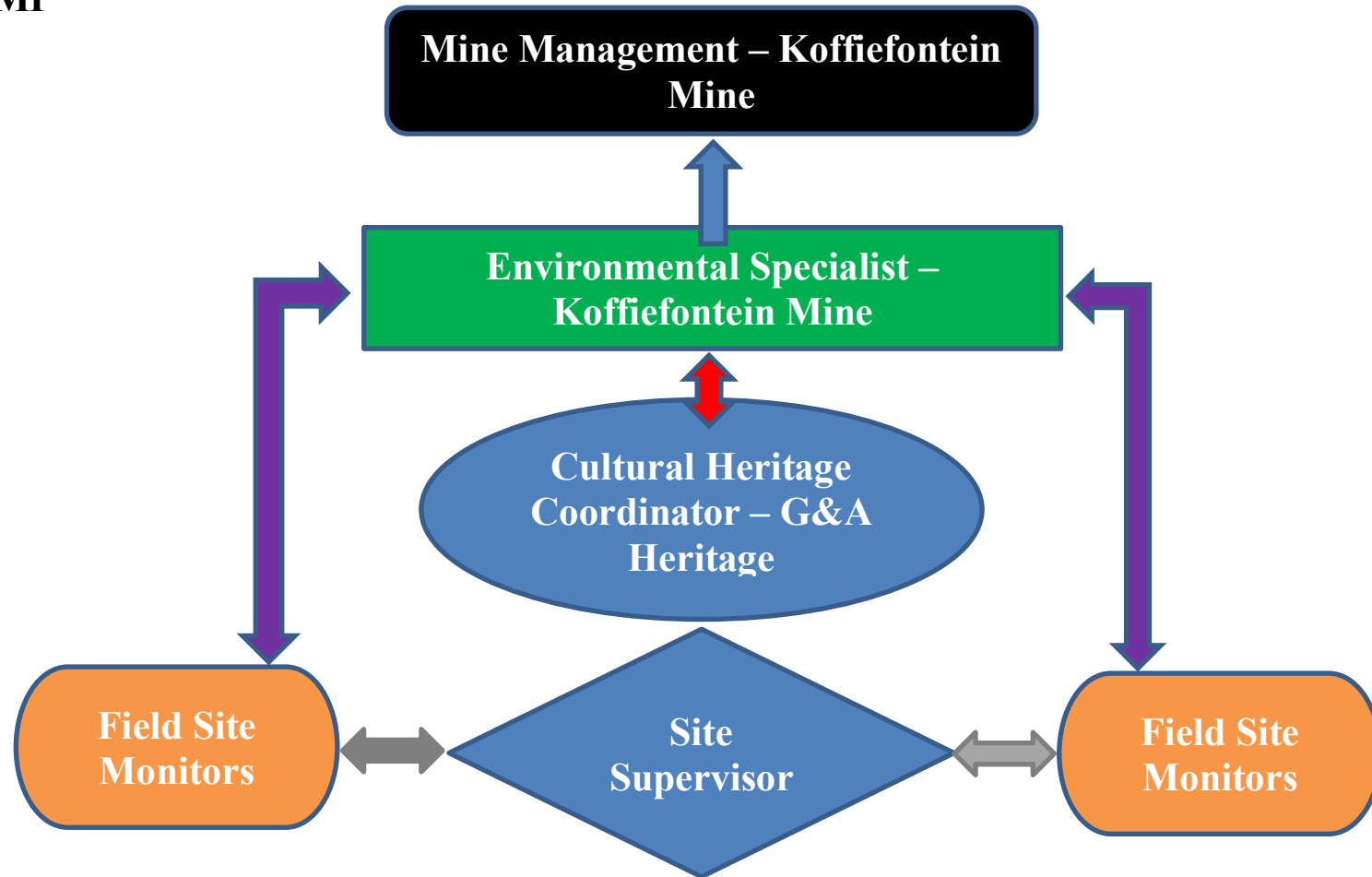
In the case of a find occurring, when Monitors are not on site, all reasonable effort will be made by the Cultural Heritage Coordinator to contact the next available Pool Monitor. If the monitor cannot be contacted, or is not available, then the Cultural Heritage Assessor will be called out to inspect the find.

VARIATIONS TO THIS CULTURAL HERITAGE MANAGEMENT PLAN

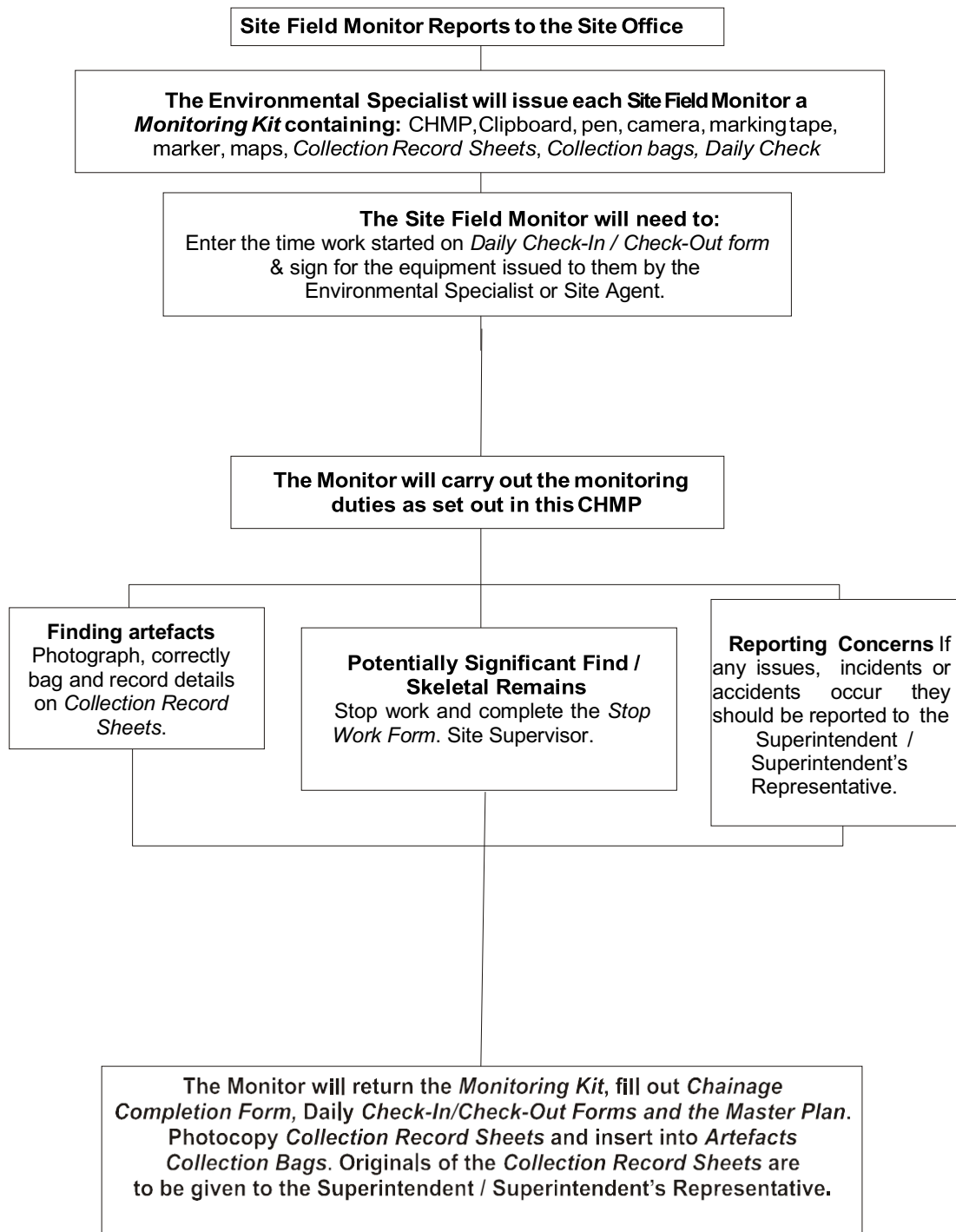
No variation of the terms of this Cultural Heritage Management Plan shall have effect unless there has been appropriate consideration / deliberation of the variation and all participating parties agree upon it.

Koffiefontein Mine will be responsible for maintaining this CHMP.

**Attachment 1 - Communication Plan for Koffiefontein
Mine CHMP**



Attachment 2 - Monitoring Flow Sheet



Attachment 3 - Daily Check In / Check Out Form

Daily Check In / Check Out Form

To be completed by the Site Field Monitor		
Name		Signature
Any known medical conditions		Signature
Prescription Drugs required for above		
Doctors Name & phone no	Name.....	Phone No.....
Emergency contact for today	Name.....	Phone No.....
Time & Date Work Commenced	am/pm / /03	Signature
Time & Date Work Completed	am/pm / /03	Signature
Location of Monitoring Work		Signature
Monitoring Kit Issued (this can be weekly as well)	yes / no	Signature
Monitoring Kit Returned	yes / no	Signature

Day Debrief

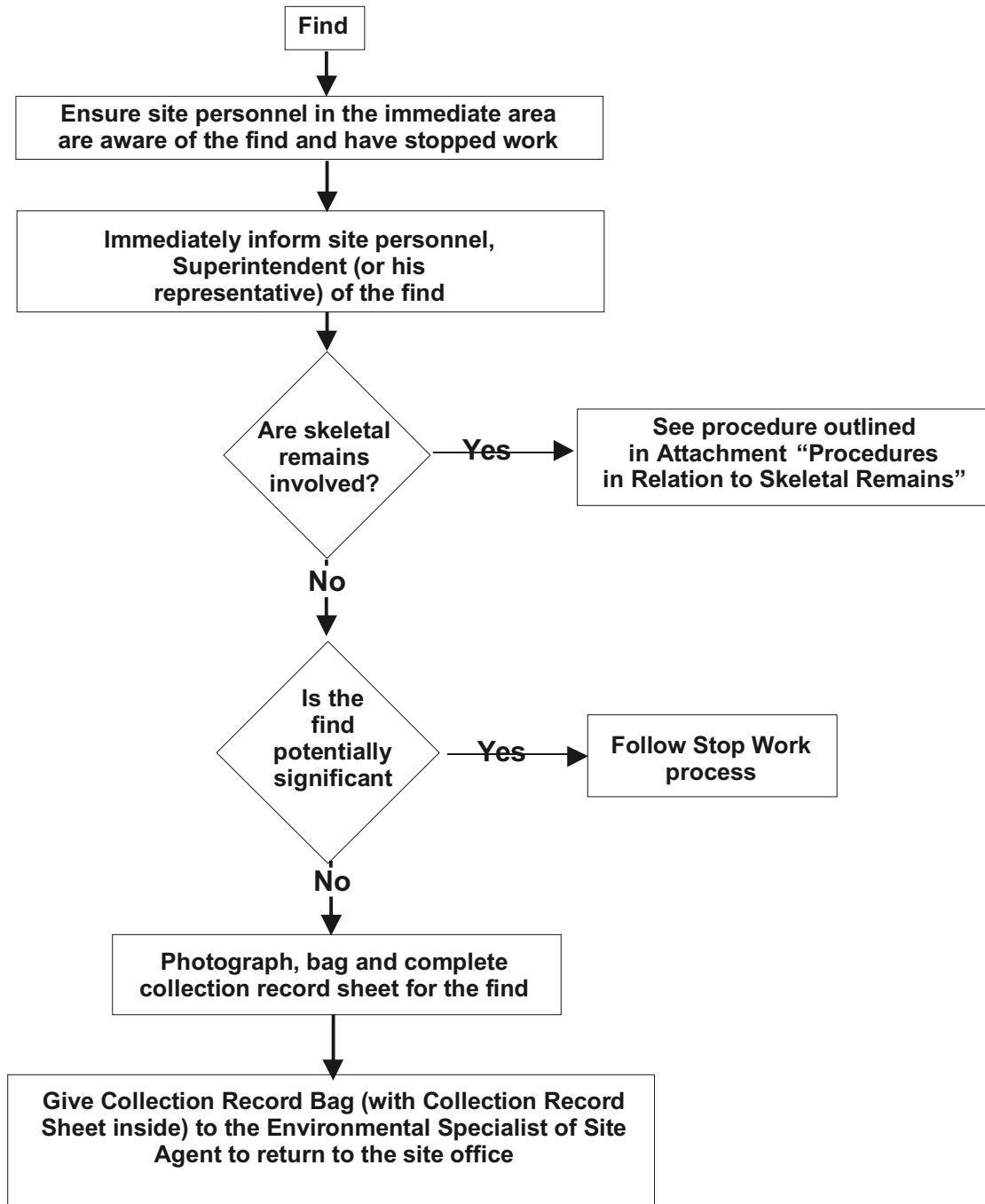
Following return to the site office, a debrief of the day activities is to be undertaken with the Site Field Monitor and Site Supervisor if finds were made
Issues
Findings
Information that should be passed on to: Environmental Specialist
Koffiefontein Mine
Site Field Monitor
Site Supervisor

Specific Issues (Complete Weekly)

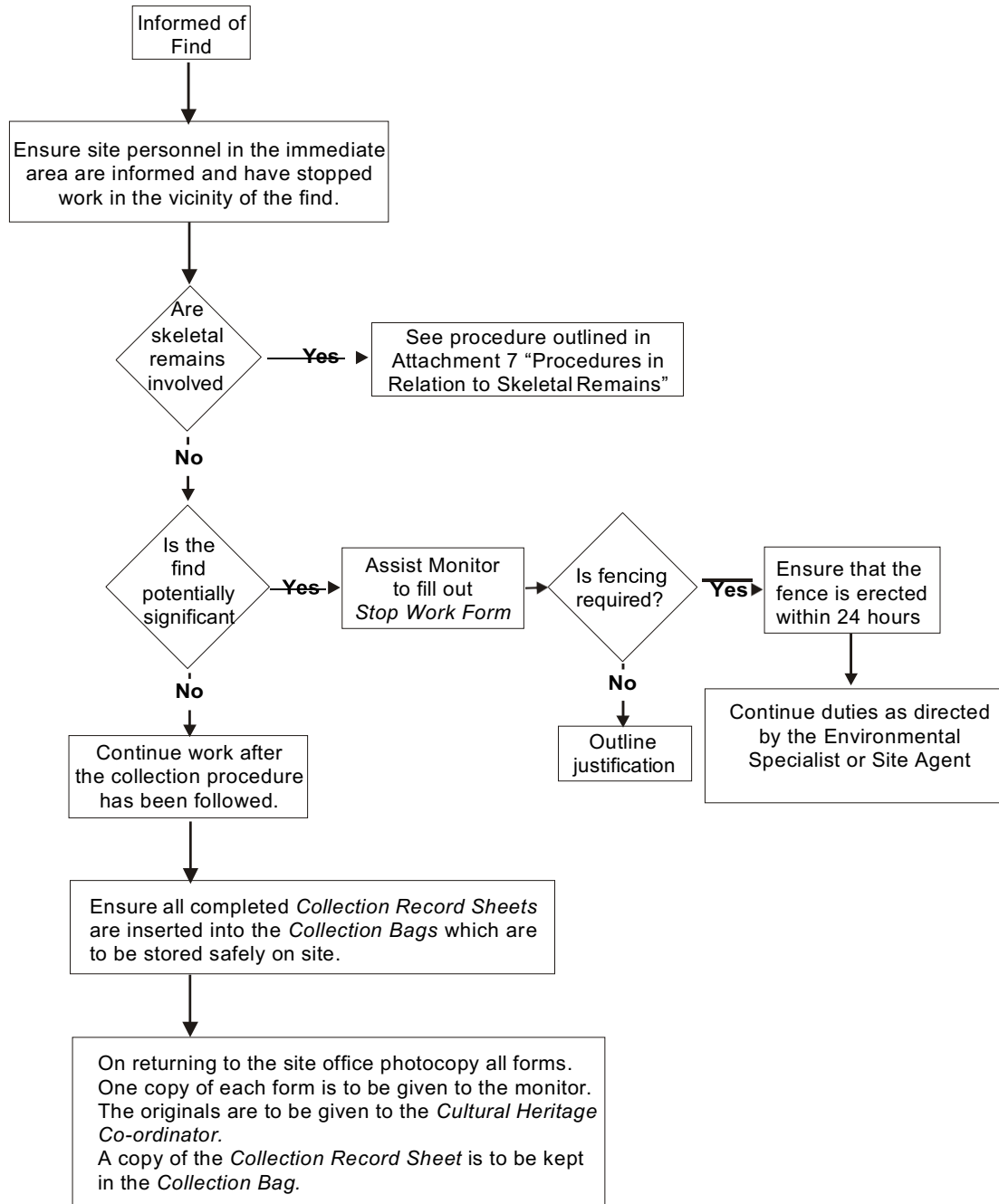
To be completed by the Environmental Specialist

Issue	Addressed		Comments	Action Required
	Yes	No		
Did the Cultural Heritage Monitor report to work on time?				
Did the Monitor raise any equipment issues?				
Did the Monitor raise any incident or non-compliance issues?				
List any performance issues that need to be discussed with the Cultural Heritage				
Has the “ <i>Master Plan</i> ” been filled in and signed off?				
Have the <i>Collection Record</i> and <i>Stop Work Forms</i> been returned?				
How many times did the Monitor request the work cease for this week?				
How many bags and artefacts were handed in?				

Attachment 4 - Procedures in case of a Find for Site Field Monitors



Attachment 5 - Procedures in case of a Find for the Miner when Site Field Monitors are Present



Attachment 6 - Collection Record Sheet

Collection Record Sheet	
SHEET NUMBER*	date.initials.number
BAG NUMBER*	date.initials.number
Monitors Name	
Monitors Signature	
Date	
Location of Find	
Description of Artefacts	
Description of Environment	
Number of Photos taken & reference	

*The Number is to be in 3 parts – the date, the Monitors Initials and a number (start at one, and follow in ascending order during the day), e.g. for the first artefact collected on the 12 August 2018 by Joe Jones the reference number would be “12818.jj.1”, the second artefact would be “120818.jj.2”.

Attachment 7 - Stop Work Form

STOP WORK FORM	
SECTION A - Monitor to fill out this section	
Name of the Monitor	
Site Name	
Date	
Have the machinery operators been notified to temporarily stop work? YES <input type="radio"/> / NO <input type="radio"/>	Date Time..... am/pm.....
Has the Site Supervisor or his/her representative formally notified the machinery operators in the affected area that work must cease? YES <input type="radio"/> / NO <input type="radio"/>	Date Time..... am/pm.....
Name of Site Supervisor Contacted	
Has the Site Supervisor been notified that a work stoppage has occurred and the extent of the stoppage? YES <input type="radio"/> / NO <input type="radio"/>	Date Time..... am/pm.....
Has the affected area been clearly marked (e.g. with pegs and tape)? YES <input type="radio"/> / NO <input type="radio"/>	
Description of the nature and location of the find	Did the find contain skeletal remains? YES <input type="radio"/> / NO <input type="radio"/> If yes have the police been notified? YES <input type="radio"/> / NO <input type="radio"/> If No explain why.....
Does the find require further investigation? YES <input type="radio"/> / NO <input type="radio"/> <input type="radio"/> If yes, go to Section B , continue completing the form. If no, go to Section C work can recommence.	
SECTION B - Monitor to Notify Relevant Personnel	
Has the Environmental Specialist been notified of the find? YES <input type="radio"/> / NO <input type="radio"/>	Date Time..... am/pm.....
Has the Cultural Heritage Coordinator been notified? YES <input type="radio"/> / NO <input type="radio"/>	Date Time..... am/pm.....
Does the Cultural Heritage Coordinator need to contact the Cultural Heritage Assessor (if not the same)? YES <input type="radio"/> / NO <input type="radio"/>	Name of Cultural Heritage Assessor contacted
If the Cultural Heritage Assessor was contacted was it determined that the find was significant? YES <input type="radio"/> / NO <input type="radio"/>	If so, what further actions were required?
Does SAHRA and NBYKB need to be notified? YES <input type="radio"/> / NO <input type="radio"/>	If yes, when where they contacted. Date Time..... am/pm.....

SECTION C - Work to Recommence by recommendation of the Monitor	
Has the Environmental Specialist been notified that work can recommence? <p style="text-align: right;">YES <input type="radio"/> / NO <input type="radio"/></p>	
Were SAHRA or NBYKB contacted? <input type="radio"/> YES <input type="radio"/> / NO <input type="radio"/> If "YES": have SAHRA or NBYKB given formal notification that works can recommence? <p style="text-align: right;">YES <input type="radio"/> / NO <input type="radio"/></p> Name of SAHRA officer	
Signature of Monitor	Date Time.....am/pm.....

Declaration:

I.....*the Environmental Control Officer*
hereby declare that work can recommence in the area listed above.

Signed

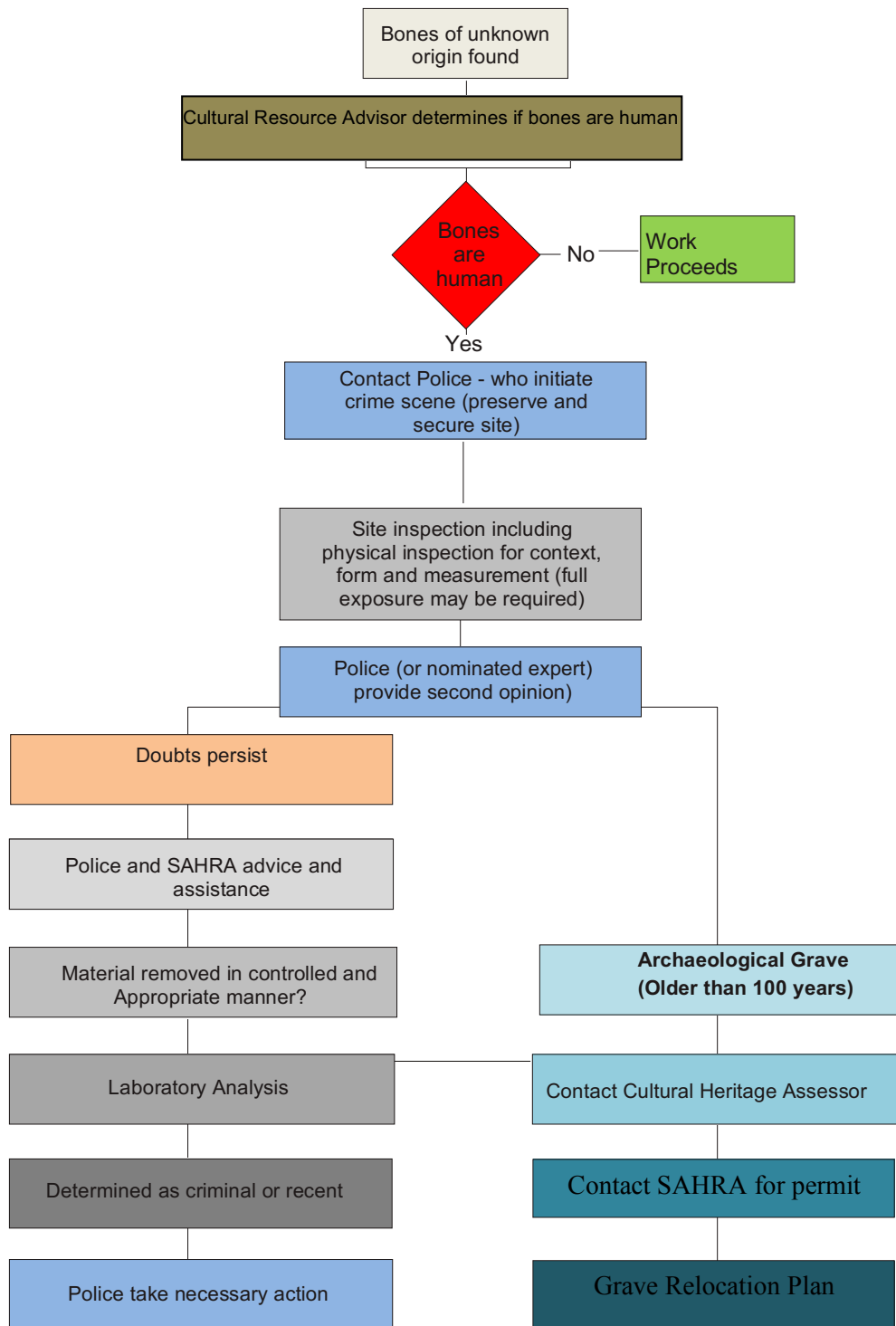
Date

Note:

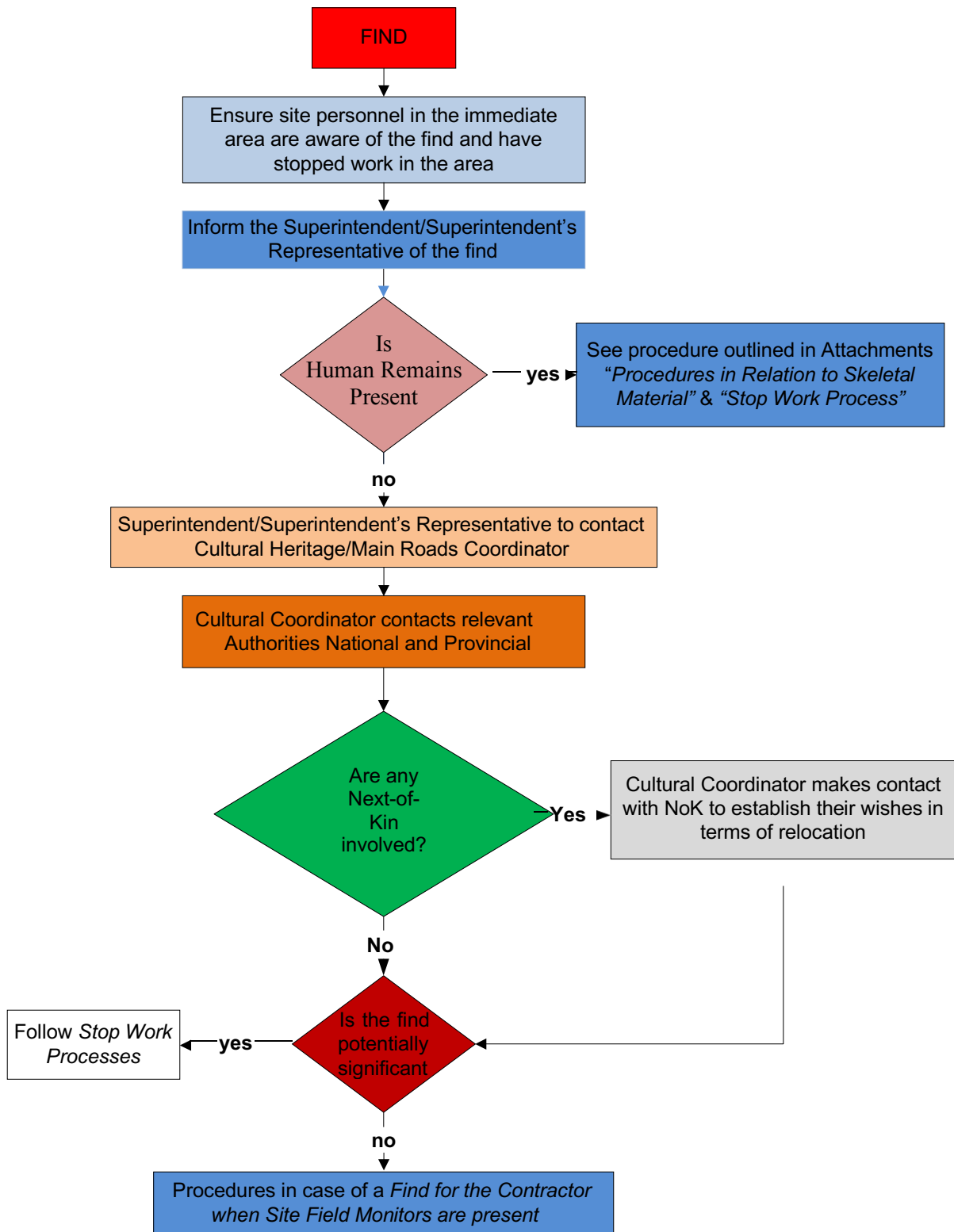
Copies of this Declaration are to be given to the Cultural Heritage Coordinator.
 A copy is to be placed on file.

Attachment 8 - Procedures in Relation to Skeletal Material

FLOW CHART ON PROCEDURES IN RELATION TO EXPOSURE OF SKELETAL MATERIAL



Attachment 9 - Procedures in case of a Find for the Contractor when Indigenous Monitors are NOT Present



Attachment 10 - Definitions

“**Archaeologist**” and “**Anthropologist**” mean professional people working in their respective fields of expertise with necessary qualification/s from a tertiary institution.

“**Buffer Zone**” means a designated no-go zone around a find. Diameter of a Buffer zone cannot exceed 50 metres.

“**CHMP**” means 'Cultural Heritage Management Plan'.

“**Clearing and Grubbing**” means:

- Removing trees shrubs and overhanging branches.
- Demolishing buildings and other artificial obstructions to ground surface or as specified.
- Disposing cleared materials.
- Removing stumps and roots (including any subsequent regrowth) to a depth not less than 300 mm below ground surface.
- Removing other vegetable matter from the ground surface (including any subsequent regrowth).
- Removing abandoned services to a depth not less than 300mm below ground surface.
- Disposing grubbed material.

“**Cultural Heritage Assessor**” means suitably qualified archaeologists or anthropologists, or an authoritative person.

“**Cultural Heritage Management**” means the protection and preservation of Indigenous sites during construction through:

- Adequate site identification of material and assessment of site significance.
- The erection of suitable barriers during construction or the removal and/or relocation of artefacts and/or making project staff and contractors aware of the possibility that sensitive Indigenous sites may be recovered during construction.

“Find” means an Indigenous site, item (artefact) or an area which possesses unidentified human remains.

“Human Remains” does not include:

- Human remains buried under the authority of the law
- Human remains in or from a place recognised as a burial ground for interment of remains buried as referred to in paragraph (a).

“Indigenous Cultural Heritage” includes sites, objects, and works of art in accordance with Indigenous tradition, including historic association and contemporary cultural importance. The aforementioned objects can exist above, on or below the surface of the ground.

“Indigenous Site” is an area exhibiting one or more attributes of Indigenous Cultural Heritage, as defined above.

“Monitor” means a nominated worker on site who will be responsible for identifying any possible sites of heritage significance and employ the relevant mitigation measures.

“Monitor Pool” means the group of Monitors representing workers who have undergone a safety induction, have been employed by an employment agency and are able to work on site when required.

“Work Operation” means any activity that requires monitoring.

Attachment 11 - Cultural Heritage Induction Paper

Cultural Heritage Induction Program

Introduction

This cultural heritage induction package has been developed by the G&A Heritage Properties (Pty) LTD for use on this project. The primary aim of this induction package is to increase general awareness of cultural heritage issues within mining teams.

LOCATION OF IDENTIFIED SITES

All mining works should be limited to areas which have been previously cleared for mining works to proceed. All mining personnel should consult with the site supervisor prior to undertaking any activities outside the cleared area.

Heritage Sites

The most common inland heritage sites are stone artefact scatters, and along the coastline, shell middens. Stone artefact scatters can be the remains of camp sites where Indigenous people have lived for extended periods of time, usually on a seasonal basis, and have left stone tools and the remains of tool making. Other organic material such as bone, charcoal or fibres are very rarely found because they do not last as well. Remains of camp fires such as concentrations of charcoal, burnt rocks and burnt clay, may also be found. Such sites are usually located close to water, such as the banks of a river, under rock shelters or in caves, or

on high vantage points. Shell middens represent sites where people cooked and ate shellfish from either ocean shores or lake and river banks. The discarded shells accumulate over time, sometimes including other artefacts, and charcoal. Similarly, the remains of cooking fires where clay was made into balls, or stones where collected to make a fireplace have formed mounds containing artefacts. These sites are more commonly found on flood plains or marshy ground where the drier mound was occupied year after year.

PROCESSES TO BE FOLLOWED DURING MINING

The Cultural Heritage Management Plan prepared for this project should be read by all workers on the site. Particular attention should be paid to the section covering “Obligations of “Site Personnel”. This section outlines procedures for workers to follow if Cultural Heritage material is found on site when Cultural Heritage Monitors are not present.

Appendix A Formal Tool Types

Artefacts which conform to pre-determined forms for use as tools such as scrapers, backed blades, anvils, axes.

Grinding Stones:

Stones used for grinding up roots or seeds and recognized by a flat stone with an oval depression and a roughly round stone used as a pestle. Grooves in natural rocks were also made by grinding stone axes. These are often found close to water such as streams which was used to lubricate the grinding process.

Hammer Stone:

A piece of stone, often pebble, which has been used to detach flakes from cores by percussion. It is usually recognised by the pitted or crushed striking face.

Knapping:

The process of flaking chips or flakes from a core in order to produce stone pieces suitable for fashioning into tools.

Percussion:





The act of hitting the core with a hammer stone for shaping the tool or to prepare a cutting edge.

Striking platform:

The surface of the core which is struck by the hammer stone to remove flakes. A portion of the striking platform is often visible on the resulting flake.

Use Wear:

Breakage or smoothing of the cutting edge of an artefact caused during use, sometimes combined with a patina or residue from the substance being cut.

	<p>Figure 1: Stone axe heads at various stages of production</p>
	<p>Figure 2: Stone axe heads - Side view</p>
	<p>Figure 3: Spear tip - side view</p>
	<p>Figure 4: Spear tip - top view</p>

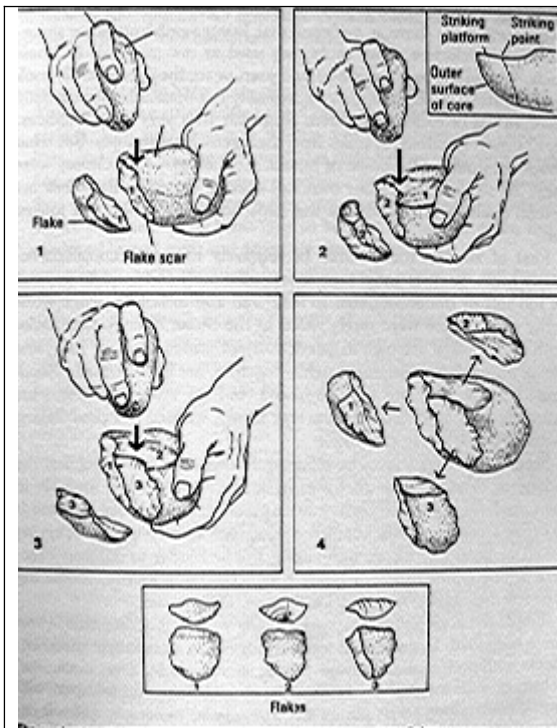
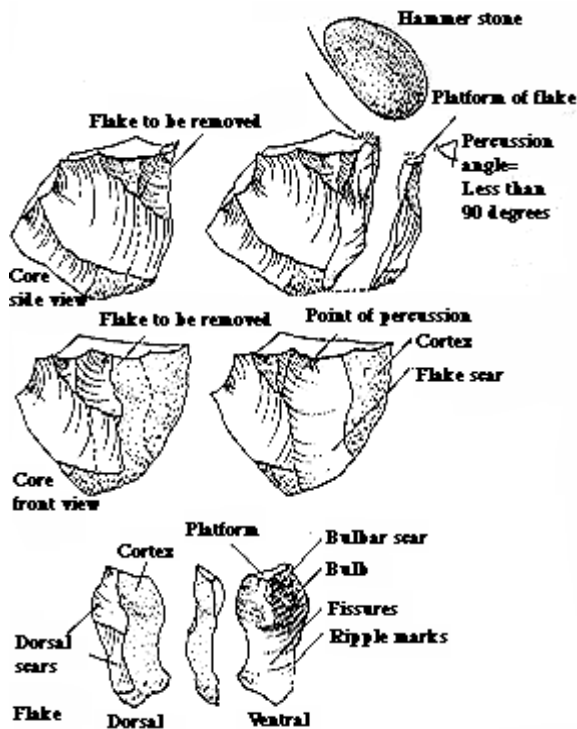


Figure 5 Profile and inner face view of a blade and a core. Key elements for the identification of these artefacts are demonstrated.



Appendix B - Types of Indigenous Sites

Artefact Scatter:

Artefact scatters often represent the place where people have camped, prepared and eaten meals, and manufactured tools. Sometimes these sites may include other material such as bone, charcoal or ochre.

Burial:

A burial site is usually a pit or grave containing human remains and sometimes associated artefacts. Sometimes remains have been burnt before burial, and so the burial site may be quite small.

Contact Site:

A contact site is one which shows evidence of Indigenous people using European or non-Indigenous materials or ideas. This may include sites containing non-traditional materials such as glass or metal, sites closely associated with and contemporary with European settlement, or sites with an historical context such as mission sites, protectorate stations or provisioning points.

Debitage

Waste stone chips resulting from stone tool manufacture.

Isolated Artefact:

An isolated artefact is an occurrence of fewer artifacts than an artefact scatter, usually a single artefact found on its own. Such sites may be the result of tools discarded or lost during travel, or the only visible material from a larger, but buried or obscured site.

Midden:

A shell midden is a site composed of discarded shellfish from Indigenous camp sites, sometimes with artifacts and other cultural material such as charcoal or ochre. Middens are usually located close to rivers, lakes and most commonly on sand dunes along the coast. Ash and animal deposits are also referred to as middens.

Mound:

A raised area of earth formed from clay used in hearths and artefact material, generally found on flood plains near streams or water sources.

Stone Construction:

Any of a number of structures built of rocks or stones erected for functional purposes, such as fish traps in streams or huts and shelters. Other materials such as wood, bark and animal skins are known to have been used but these have not survived in the archaeological record.

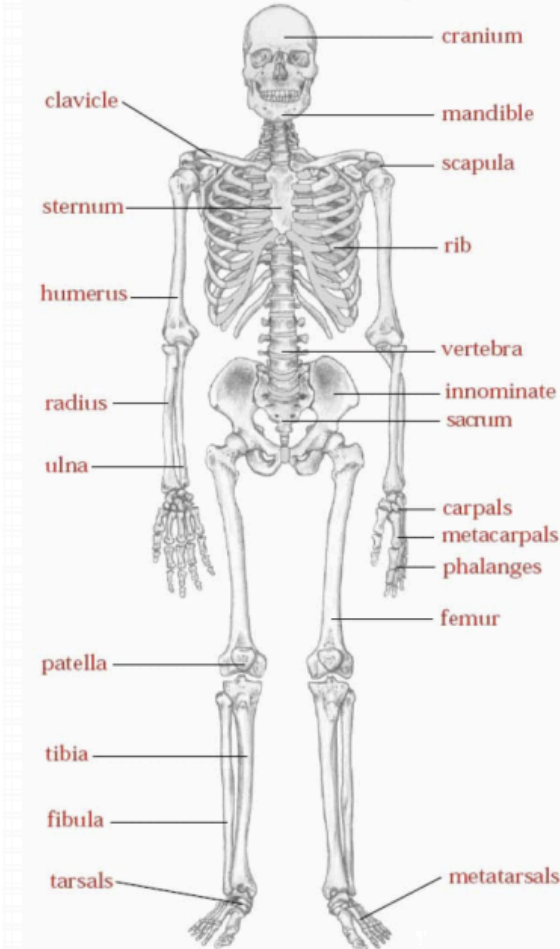
Attachment 12 - Cultural Heritage Posters for use on Construction Sites

Skeleton Sheet

British Archaeological Jobs Resource

Mark the bones that were recovered

Skeleton Num:



Labels on the left side of the skeleton:

- clavicle
- sternum
- humerus
- radius
- ulna
- patella
- tibia
- fibula
- tarsals

Labels on the right side of the skeleton:

- cranium
- mandible
- scapula
- rib
- vertebra
- innominate
- sacrum
- carpals
- metacarpals
- phalanges
- femur
- metatarsals

Neonate?

Juvenile?

Adult?

Male?

Female?

Preservation	Good	Moderate	Poor
Retrieval	Good	Moderate	Poor
Further treatment:			

Record sheet based on MoLAS recording system record sheet based on MoLAS recording system

Introduction

The discovery of human remains on sites undergoing development is a common occurrence. Developers may feel that this may be problematic in terms of work schedules. However, with the correct information to hand and the involvement of professional field osteoarchaeologists from an early stage, the recovery of human remains can be dealt with efficiently and appropriately.

An experienced osteoarchaeologist will be able to implement the necessary procedures to ensure that human remains are excavated, recorded, removed as required and in addition, that post-excavation handling and eventual storage or reburial complies to standards recommended by the Institute for Archaeologists (IfA) and English Heritage.

These standards cover areas such as Health and Safety Regulations, Legal Requirements and Ethical Issues.

What should be done if human remains are unexpectedly found on site?

If human remains are uncovered on site that is not currently undergoing an evaluation or excavation carried out by an archaeologist, then work on site should stop immediately and the police should be contacted. In this case, the human remains may be modern and continuation of work may remove vital information that could potentially be used as evidence in court. Once the police have been informed, a representative of the Coroners Office and also, in many cases, a forensic osteoarchaeologist will attend the scene to confirm that the remains are human and to determine whether they are modern or archaeological.

Human remains that are discovered within an archaeological context should only be excavated and removed once it has been decided that the remains will contribute towards further scientific understanding; if this is the case then a coroner's licence must be obtained from the Ministry of Justice before any remains are disturbed. It is illegal to remove human remains without this license. A coroner's license can be obtained promptly via telephone/fax if it is necessary to remove the remains urgently.

It is a general recommendation that human remains are not removed if discovered during an archaeological evaluation of a site. In this case, the potential scientific value of remains is not seen as outweighing the importance of retaining an ethical approach to the disturbance of human remains laid to rest. However, evaluations may be carried out in a variety of contexts. The decision to remove human remains from an evaluation trench should be made according to the particular circumstances of the archaeological evaluation and the nature of the human remains.



Attachment 13 - Cultural Heritage Officer Pre-start Checklist

IMPORTANT NOTE: *All Cultural Heritage Officers are to read this Induction Form and sign prior to arriving at the Project Site Office.*

General Contact Details:

Project Site Office Location:	
Site Office Phone Number:	
Site Office Fax Number:	
Cultural Heritage Coordinator:	
<name of Accommodation>:	
Superintendent	
Construction Contractor Details:	

What you need to bring to the Site Office:

The following items must be brought with you to the site office for “Check In” at **07h00**

Items	✓ or ✕
Steel cap safety boots/Long sleeve shirt	
Induction Card (issued by Main Roads)	
Details of any prescription medication	(details recorded to be on Attachment 3)
Emergency contact details	(details recorded to be on Attachment 3)
Lunch and water	

What you need to know:

- Steel cap safety boots, hard hats and safety vest are to be worn onsite at all times.
- No one is allowed on site who is under the influence of or has alcohol or drugs.

I hereby acknowledge that I have read this form and accept terms as outlined in the Cultural Heritage Management Plan dated 16 May 2003.

Name: _____
 Signature: _____ Date: _____