

Heritage Impact Assessment

Taung Skull World Heritage Site

Status Quo Report

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Vision for the Taung Skull World Heritage Site¹

To ensure that the World Heritage and other multiple natural and cultural values of the Taung Skull World Heritage Site are understood, conserved, protected, respected and shared by all.

¹ From; The Integrated Management Plan for the Taung Skull World Heritage Site 2010 - 2015.

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Terms, Concepts and Definitions

Authenticity and Integrity	Authenticity and Integrity are aspects of related to the quality of heritage that may be protected within a World Heritage Site or other heritage site. Such heritage may date from a specific period of time relevant to the significance of the site. A site may not be intact, but it could still be authentic. A ruin with most of its fabric missing, for example, may be authentic because it has not been overlaid or distorted by subsequent layers. Memory and documentation can also be authentic (although not necessarily accurate), because it derives from the period under study or from someone who had direct experience of an event. For conservation purposes, neither authenticity nor integrity may be adversely affected.
<i>Australopithecus africanus</i>	The African Ape of Southern Africa, a new name given to the discovery by Dr Raymond Dart in 1924, as a result of the discovery of the Taung Child Skull Fossil at the subsequently named Dart Pinnacle, in Buxton Quarry.
Breccia	A specific kind of rock found within tufa. It is made up of calcrete – a mix of sand, gravel, clay, bones and other material cemented together by calcium carbonate. This rock forms in cavitous areas that occur or occurred in tufa in the past. These holes or caverns are then filled with loose material such as bones, pebbles and sediment and with time become cemented in the same matrix of calcium carbonate. Mineworkers referred to this material as ‘impure limestone’ and the Taung Skull was blasted out of this kind of rock during mine operations in 1924.
Bioturbation	The burrowing by small mammals, insects and termites that disturb archaeological deposits.
<i>Cercopithecus</i> fossils	A fossil grouping related to old world primate fossils linking to the origins of humankind and Apes from Africa.
Chert	A rock type that is a fine-grained silica-rich sedimentary rock that may contain small fossils. It varies greatly in colour, from white to black, but most often manifests as gray, brown, greyish brown and light green to rusty red. Its colour is an expression of trace elements present in the rock, and both red and green are most often related to traces of iron in its oxidized and reduced forms respectively.
<i>Hyracium</i>	Rock rabbit dung deposits that contain valuable information of the past.
<i>Koekepanne</i>	Small rail trolleys used in the mine for the transport of limestone.
Palynology	The study of the fossil pollens.
<i>Paranthropus</i>	A genus of extinct hominids that were bipedal and probably descended from the <i>Australopithecus</i> hominids 2.7 million years ago. Members of this genus are characterised by robust craniodental anatomy, including gorilla-like sagittal cranial crests, which suggest strong muscles of mastication, and broad, grinding herbivorous teeth. However, <i>Paranthropus</i> skulls lack the transverse cranial crests that are also present in modern gorillas.

Phragmites beds	A common reed that grows in river beds and proliferates when water has been nutrient enriched. Also an effective reed when used in the bio-purification of freshwater systems.
Phytoliths	A rigid, microscopic structure made of silica, found in some plant tissues and persisting after the decay of the plant. These plants take up silica from the soil, whereupon it is deposited within different intracellular and extracellular structures of the plant. Phytoliths come in varying shapes and sizes and it commonly refers to siliceous plant remains.
Outstanding Universal Value	Outstanding universal value means cultural and/or natural significance, which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole.
Sangomas	Traditional healers in South Africa that practice traditional African medicine. They fulfil different social and political roles in the community, including divination, healing physical, emotional and spiritual illnesses, directing birth or death rituals, finding lost cattle, protecting warriors, counteracting witches, and narrating the history, cosmology, and myths of their tradition. These healers are effectively South African shamans who are highly revered and respected in a society in which tradition lives and in which illness is believed to be caused by witchcraft, pollution (contact with impure objects or occurrences, recognised in the form of taboos) or through neglect of ones the ancestors.
Speleothems	Cave deposits or formations that are a secondary form of mineral deposit formation in a cave. Speleothems are formed in limestone caves and consist of stalagmites and stalactites, as well as flowstone, for instance.
Stromatolites	Or stromatoliths, a mattress strata or rock, are layered bio-chemical accretionary structures formed in shallow water by the trapping, binding and cementation of sedimentary grains by biofilms (microbial mats) of microorganisms, especially cyanobacteria. Stromatolites provide ancient records of life on Earth within the fossil remains of which might date from more than 3.5 billion years ago.
Toponyms	The study of the history and root associations of place names. Many place names provide insight into the history of a certain place or object, as well as a certain link in time back to a specific event, cultural ritual and/or group of people, for example.
Tufa	Massive deposits formed over millions of years by the precipitation of calcium carbonate rich water flows. Water percolating through the dolomite of the Ghaap Plateau allows it to build up the chemicals necessary for the precipitation of tufa. This process is still happening, and the river provides a modern analogue of tufa formation. It is interesting to note that filamentous algae and mosses growing on the edge of pools are important in facilitating the precipitation process.

Acronyms

DACERD	Department of Agriculture, Conservation and Environment of the North West Province
FHSSA	The Fossil Hominid-bearing Sites of South Africa
HIA	Heritage Impact Assessment
HMP	Heritage Management Plan
IKM	International Knowledge Management
IMP	Integrated Management Plan
LED	Local Economic Development
NHRA	National Heritage Resource Act
OUV	Outstanding Universal Value
READ	Rural, Environmental and Agricultural Development of the North West Province
SAHRA	South African Heritage Resource Agency
SDF	Spatial Development Framework
TSWHS	Taung Skull World Heritage Site
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VIA	Visual Impact Assessment
WHL	World Heritage List
WHS	World Heritage Site

1. Introduction

The Taung Skull World Heritage Site (TSWHS) was inscribed on the World Heritage List (WHL) in 2005, under United Nations Educational, Scientific and Cultural Organisation (UNESCO) Cultural Criteria (iii) and (vi), as an extension to the serial nomination of the Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs. The serial nomination extension also included the Makapan Valley in Limpopo Province, under the extended World Heritage property named 'The Fossil Hominid-bearing Sites of South Africa' (FHSSA).

The Management Authority for the TSWHS is the Department of Rural, Environmental and Agricultural Development (READ) of the North West Province. As a World Heritage Site, the site's Outstanding Universal Value (OUV), Authenticity and Integrity must be protected and maintained when considering development on and around the site, and a carefully conducted Heritage Impact Assessment (HIA), in terms of the National Heritage Resources Act (No. 25 of 1999), will go a long way to ensure that this is the case. Landownership for the TSWHS falls under Batlhaping Da Ga Phuduhucwana Tribal Authority, currently under the leadership of the Paramount Chief Tsepo Mankuroane and local Chief Lekwene.

The FHSSA contain fossils that have enabled the identification of several specimens or early hominids, more particularly of *Paranthropus*, dating back between 4.5 and 2.5 million years, and show evidence of the domestication of fire 1.8 to 1 million years ago. Of prime importance to Taung is the fact that the TSWHS has locality status, meaning it is the first place in the world where a fossil of the species *Australopithecus africanus*, the African Ape of Southern Africa, was found and now known as the Taung Child. The site was occupied by Stone Age people for a fair portion of the past 100 000 or more years, with evidence from over a dozen significant archaeological and palaeontological sites. Some of these sites have yielded fossil human remains, as yet undescribed. Precambrian fossils entombed in the dolomitic country rock are a staggering 2.2 billion years old. Today the site is still used for traditional purposes where local *Sangomas* and *Rastafarians* make use of sacred sites, such as the healing waters of the Blue Pools and Ochre Cave. The site hosts living traditional culture, wide open vistas over an expansive landscape, the Thabasikwa River gorge with soaring Black Eagles and a lively troop of resident baboons. The site is also traversed daily by the local villagers from Tamasikwa on the Buffer Zone edge.

The leading management document for the TSWHS is the Integrated Management Plan (IMP) for 2010 – 2015. The IMP holds the Vision for the Taung Skull WHS being, '*To ensure that the World Heritage and other multiple natural and cultural values of the TSWHS are understood, conserved, protected, respected and shared by all.*' Further work is required to strengthen the management and development of the TSWHS, as defined through the Vision. Further documentation supporting the IMP and effective management of the site, are the Conservation Management Plan 2004, as well as the Cultural Heritage Resources Survey 2003.

Various activities have been related to the discovery, research, management and development of the Taung Skull WHS over time, and Table 1 provides a timeline of key events leading up to the current time of compiling this Status Quo Report.

Table 1: Timeline of Key Events related to the Taung Skull World Heritage Site

Date	Event
1919	Seven or eight small monkey or baboon skulls discovered and sent to the South African Museum in Cape Town.
1920	A paper on these fossils was read before the Royal Society of South African by SH Haughton on 20 May.
1924	In November M de Bruyn, a quarry man, employed at the Buxton Lime works, blasted out of one of the pinkish “impure limestone” deposits, a petrified skull and associated endocranial cast, which seemed to him to be much larger than those of the fossil baboons that he had previously recovered.
1924	RB Young, professor of Geology at the University of the Witwatersrand, brought them to Johannesburg, and handed them to Dr Dart on 28 November. The large endocast and skull fragments, embedded in the pinkish breccia, were a new discovery of a hominid then named <i>Australopithecus africanus</i> .
1925 - current	Since 1925, sporadic research has revealed a wealth of other palaeontological and archaeological deposits, many of which are still unexplored. For a long time little was done to disseminate this evidence more widely, either amongst local people or amongst visitors.
1991 - 2003	A number of specialist studies, relating to cultural heritage resources, legal considerations and tourism were completed. Studies concentrated on the development of the site and its environs, including plans for scientific work, and tourism development.
1992	The Taung Heritage Trust was launched on 10 April.
1992	The Interpretation Master Plan and Taung Monument Redevelopment Proposals were compiled.
1997	The Concept Plan for Sustainable Tourism Development in the District of Bophirima was compiled.
1998	A Strategic Marketing Plan for the North West Parks and Tourism Board was completed.
1998	The North West Tourism Master Plan was adopted.
2000	The North West Tourism Implementation Programmes were established.
2000	The Taung Local Tourism Development Zone was consolidated.
2001	The Development Plan for the Taung Heritage Centre was compiled.
2003	The Cultural Heritage Resources Survey for TSWHS was completed.
2004	The Taung Skull National Heritage Site is established.
2004	The Conservation Management Plan and a Nomination Dossier, proposing the site’s inscription on the World Heritage List submitted to UNESCO.
2005	The TSWHS was inscribed as a World Heritage Site, which took place in Durban in July.
2008	A Business Plan for the Taung Skull World Heritage Site was completed.
2010	The Taung Skull World Heritage Site Integrated Management Plan (IMP) 2010 - 2015 Biodiversity Report, Socio-Economic Impact Assessment, Tourism Marketing Plan, and Water Management Plan were completed.
2010 - 2015	Construction of the access road through TSWHS, the Blue Pools picnic area, the road upgrade to Thomeng, and the replacement of the fence on the border to the site.

In a fast developing country like South Africa, with increasing pressures on land, the task of preserving heritage has become more important than ever – today we have tools to assess and mitigate impacts on heritage and these need to be applied wherever negative impacts may occur, as a result of current and possible future developments, operations and/or other changing

circumstances. Therefore, the Department of Rural, Environmental and Agricultural Development of the North West Province (READ) appointed EcoAfrica Environmental Consultants (Gauteng) Pty Ltd, hereafter referred to as EcoAfrica, to conduct a Heritage Impact Assessment (HIA), including a Visual Impact Assessment (VIA) for the Taung Skull World Heritage Site, in the North West Province of South Africa.

Of critical importance in the management and development of the site is the protection of the visual landscape, intricately linked to the site's OUV. Activities and development within the defined Core Area and Buffer Zone should abide by all legal provisions and be well considered in terms of the requirements of the Integrated Management Plan (IMP) 2010 for the TSWHS. Guidelines for the construction, expansion and maintenance of buildings and other structures in and around the site are also required. Protection of the visual landscape implies consideration of changes in land use both within the Buffer Zone, as well as outside the Buffer Zone – what may be referred to as a transitional area. VIA thus forms an integral part of the HIA, in order that vistas of, and from, the TSWHS are well protected. Such visual linkages will also have to be well defined in the planning guidelines like the Spatial Development Framework (SDF) of the local municipality.

2. Scope of Work

The scope of work and objectives set out in the Terms of Reference, issued by the Department of Rural, Environmental and Agricultural Development (READ) of the North West Provincial Government, requires the following outcomes for this consultation:

- a) **Status Quo Report;**
- b) Heritage Impact Assessment Report (including Visual Impact Assessment); and
- c) Heritage Management Plan (HMP) for Site Development.

The Status Quo Report includes broader considerations of the significance of the heritage resources and attributes of the site, and provides comment on the status of conservation of these resources. These heritage resources and attributes will be introduced in various heritage layers, together comprising a framework for a cultural landscape map of the TSWHS. This Status Quo Report also considers the status quo of planning and development on the TSWHS.

The Status Quo Report is not an exhaustive report. It functions as a process document that points the way to further investigation and analysis that may be necessary in order for a robust Heritage Management Plan to be compiled. Its purpose is to provide a starting point for the current work that will lead to a comprehensive HMP.

'Status quo' refers to the current status of the full gamut of aspects of the TSWHS that have a bearing, indirectly or directly, on the heritage embodied in this site. It is that status quo that will need to be improved upon, and for which mechanisms and tools will be built into the HMP, to ensure that the heritage and the site which contains it, enjoys the maximum protection. It is expected that the understanding of the status quo will deepen as the work progresses, and more relevant aspects to what should be taken into account in the development of a HMP are revealed. It

is therefore a work in progress, the essential contents of which will eventually find their way into the Heritage Management Plan.

The Heritage Impact Assessment (HIA) Report will assess and detail the impact of the proposed development plans on the TSWHS cultural landscape, including impacts on the visual landscape. Alternatives may need to be explored in terms of proposed land uses, the location of proposed plans, alternative design concepts and the approach taken to the development of the site, for instance. Mitigation measures also need to be identified that will reduce negative impacts on heritage resources, as well as ways and means found to enhance positive benefits.

The Heritage Management Plan (HMP) will detail measures that need to be implemented during the pre-construction, construction and post-construction phases of implementation, to ensure that heritage resources and impacts related thereto are optimally managed during development. Avoidance of negative heritage impacts must be sought, or where this is not possible, minimising such negative impacts should be considered if the OUV of the site is not threatened. Site monitoring and reporting is a critical task to ensure the effective implementation of development plans.

The Heritage Impact Assessment (HIA) should consider, *inter alia*, changes in land use (past, current and future land uses), and the impact this may have on the heritage. Physical changes in the landscape, like changes to buildings or addressing light pollution in the nightscape need to be considered. Action needs to be taken; retroactively, if necessary, to remove significant negative heritage impacts and restore the Authenticity and Integrity of the site. A list of such negative impacts that may have occurred since inscription should be compiled and monitored, with intervention proposed where necessary. Densification and the construction of new buildings in the landscape are also factors that need to be taken into account when considering the impacts on the cultural landscape, represented by the TSWHS.

3. Methodology

The methodology for carrying out the status quo study was as follows:

- a) Literature review and site work have been conducted in order to determine the full range of heritage resources and attributes related to the TSWHS. A cultural landscape mapping framework is further clarified through presenting the various heritage layers and values attributed to the site. Such heritage layers can be further mapped over time and in a participatory manner, in order to build cohesion amongst stakeholders, create deeper meaning of the site amongst stakeholders, and strengthen identification with the site and the heritage it holds.
- b) The detailing of the visual landscape attributed to the site will be initiated through identifying critical view points, view sheds and view lines. The visual landscape as documented at this point in time, provides a baseline against which to assess the visual impact of any change in land use, and to manage landscape restoration retroactively, where appropriate.
- c) Site work has been conducted to identify and assess the state of conservation of heritage resources and attributes.

- d) Discussions have been held with the TSWHS Steering Committee and site staff, to assess the status quo of management on the site.

It is well noted that synergies between the Heritage Impact Assessment and TSWHS Support Project, implemented by International Knowledge Management (IKM), are already in play. Similarly to IKM, EcoAfrica will also work hand-in-hand with the Management Authority, stakeholders and the local community.

It is also proposed that at least one person from the Taung area should be included as part of the EcoAfrica and IKM team, and preferably the same person. This is for the purposes of mutual capacity and knowledge transfer, as part of our strategy of leaving behind the necessary capacity, in terms of skills and knowledge that can continue to serve READ, even after the end of the project. There was an agreement between both parties that the local candidates would be sourced by READ, on behalf of IKM according to criteria provided by IKM.

4. Site Locality

The Taung Skull World Heritage Site is located in the south-western part of the North West Province in Ward 12 of the Greater Taung Local Municipality. Situated within the Dr Ruth Segomotsi Mompati District Municipality, the site lies approximately 10 kilometres (km) north of the provincial boundary of North West Province and Northern Cape Province, approximately 15 km south-west of Taung, and approximately 12 km from the N18 National Road (refer to Figure 1).

The TSWHS lies to the eastern side of the village of Buxton and contains a section of the Thabasikwa River valley that drops off the escarpment of the Ghaap Plateau. The closest town is Taung, which is approximately 25 km from the site and is connected to the site *via* the N18, R372 and a rural road. The closest airport to the site is Kimberley, which is approximately 150 km from the site. The provincial capital is Mafikeng which is approximately 240 km from the site.

The TSWHS is in fair proximity to the N18, which links the Northern Cape with Vryburg and Mafikeng in the North West Province, but is not regarded as a national road that is used by many tourists. This emphasises the fact that the TSWHS is *'off the beaten track'*. As such the rural location of the site can also be used as an advantage to escape the rapid pace of modern living and reflect on the origins of humankind.

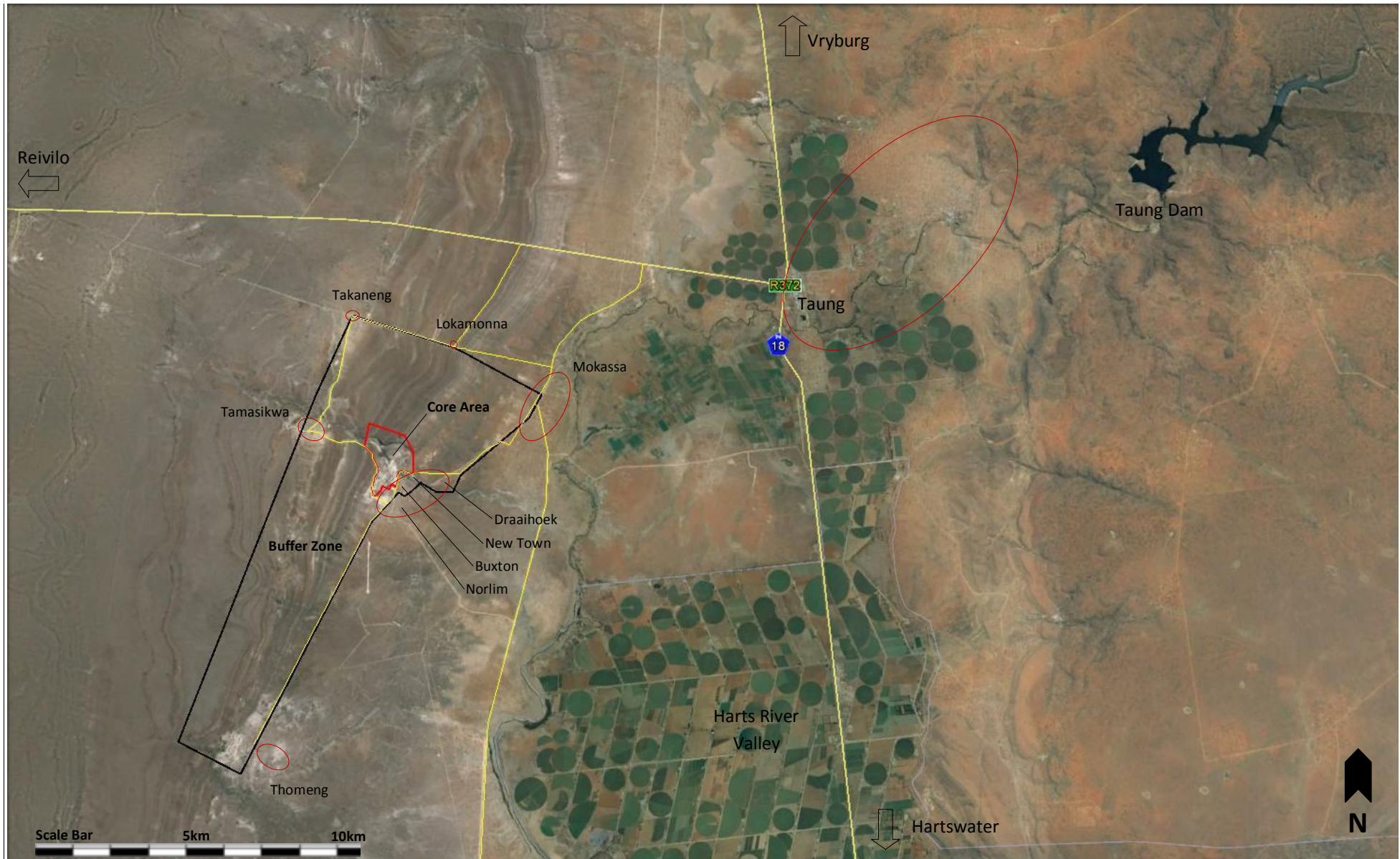


Figure 1: Locality Diagram of Core Area and Buffer Zone with roads to Villages and Taung

5. Current Site Description

The Integrated Management Plan (IMP) for the Taung Skull WHS, for the period 2010 to 2015, is the leading heritage management document for the site, in which the site is described generally and in more specific detail.

General Site Description

The Taung Skull Fossil Site is situated within a vast abandoned limestone quarry (the Buxton Lime Works), excavated into a series of ancient tufa deposits, which have formed along the flank of the Ghaap Escarpment, just west of the Harts River, 17 km south-west of the town of Taung in the North West Province of South Africa. The famous Taung Child Skull, named as a new species at the time, *Australopithecus africanus*, was blasted by Lime Workers from a pink stony breccia fissure filling in the oldest of the tufa deposits, the Thabaseek Tufa, in 1924.

The Core Area boundary of TSWHS includes the entire Buxton Lime Works Area (refer to Existing Site Plan), because there remain numerous other fossiliferous deposits, some of them as yet unexplored, within the fenced area defining the quarry. The diagram of the Proclamation Area and the 41 beacons, defining its outline, are presented on the Site Boundary map. The size of the Core Area is 158.7429 hectares (ha), and includes the full extent of the former lime works, together with the associated lime-burning kilns, industrial buildings and mine compound. The entire Core Area falls within the remainder of the property, Taung 894 HN, and is on state-owned land which falls under the sphere of influence of the Greater Taung Municipality and the local Batlapeng Tribal Authority.

The Buffer Zone surrounding the Core Area is 3,383 ha in extent, and includes other archaeological sites which fall outside the boundary of the Core Area (refer to Buffer Zone Map). The Buffer Zone partly includes New Town, Norlim, Draaihoek, Mokassa, Lokammona, Tamasikwa, as well as other villages in closely proximity, being Takaneng and Thomeng. This Buffer Zone preserves the rural ambience and setting of the Taung Skull Fossil Site by preventing undesirable land use, which may impact on the Integrity and Authenticity of the site, as described through its outstanding universal value. The Buffer Zone is state-owned land which falls under the sphere of influence of the Greater Taung Municipality and the local Batlapeng Tribal Authority.

Detailed Site Descriptions

The sites of palaeontological and archaeological importance have detailed descriptions, while other sites of heritage significance within the Core Area remain to be further described.

Sites of Palaeontological Importance

The Taung Skull Fossil Site at the Buxton Lime Works is best known for the 1924 discovery of the type specimen of *Australopithecus africanus*. The remains of the facial skeleton and endocranial cast of this early hominid child were the first fossils to confirm Darwin's assertions in 1859 that human ancestry probably could be traced to Africa. The discovery inspired 80 years of exploration and

excavation in Africa, yielding hundreds of fossils from southern, eastern, and central Africa that trace the evolution of humans and their ancestors for as much as 6 million years.

The tufa accretions of the Buxton Lime Works are riddled with fossil sites sampling the Pliocene and Pleistocene fauna, dating back several million and hundreds of thousand years. Most of these sites have not been excavated, and thus have potential for future research to investigate long term ecological changes in an area at the edge of the Ghaap Escarpment.

The Taung Skull discovery site comprises two localities near the monument cairn, each of which has multiple deposits. The Hrdlička deposits have yielded primarily *cercopithecoid* fossils, along with a sampling of numerous other species. The Dart deposits are somewhat older, and have been postulated to be the remains of the cave infill from which the *Australopithecus* fossil came.

The main palaeontological sites are Hrdlička Deposits, Dart Deposits, Tobias Pinnacle Deposit, Berger Cave Complex, Lucky Moon Cave, LSN Cave, Innominate Cave, Quinney Cave, Cut-Through Alley, Black Earth Cave, Peabody's Equus Site, Equus Cave, Blom Cave, Satan Cave, Alcove Cave, Oxland Large Mammal Site and Acacia Cave².



Figure 2: North view of Dart's Pinnacle (left) and Hrdlička's Pinnacle (right)

² The Cultural Heritage Resource Survey of 2004 provides a comprehensive list of currently documented and widely known and specific sites within Taung Skull WHS that are currently being research by a variety of institutions, including the University of Witwatersrand, whom were involved in the initial identification and naming of *Australopithecus africanus*, the African Ape of Southern Africa.

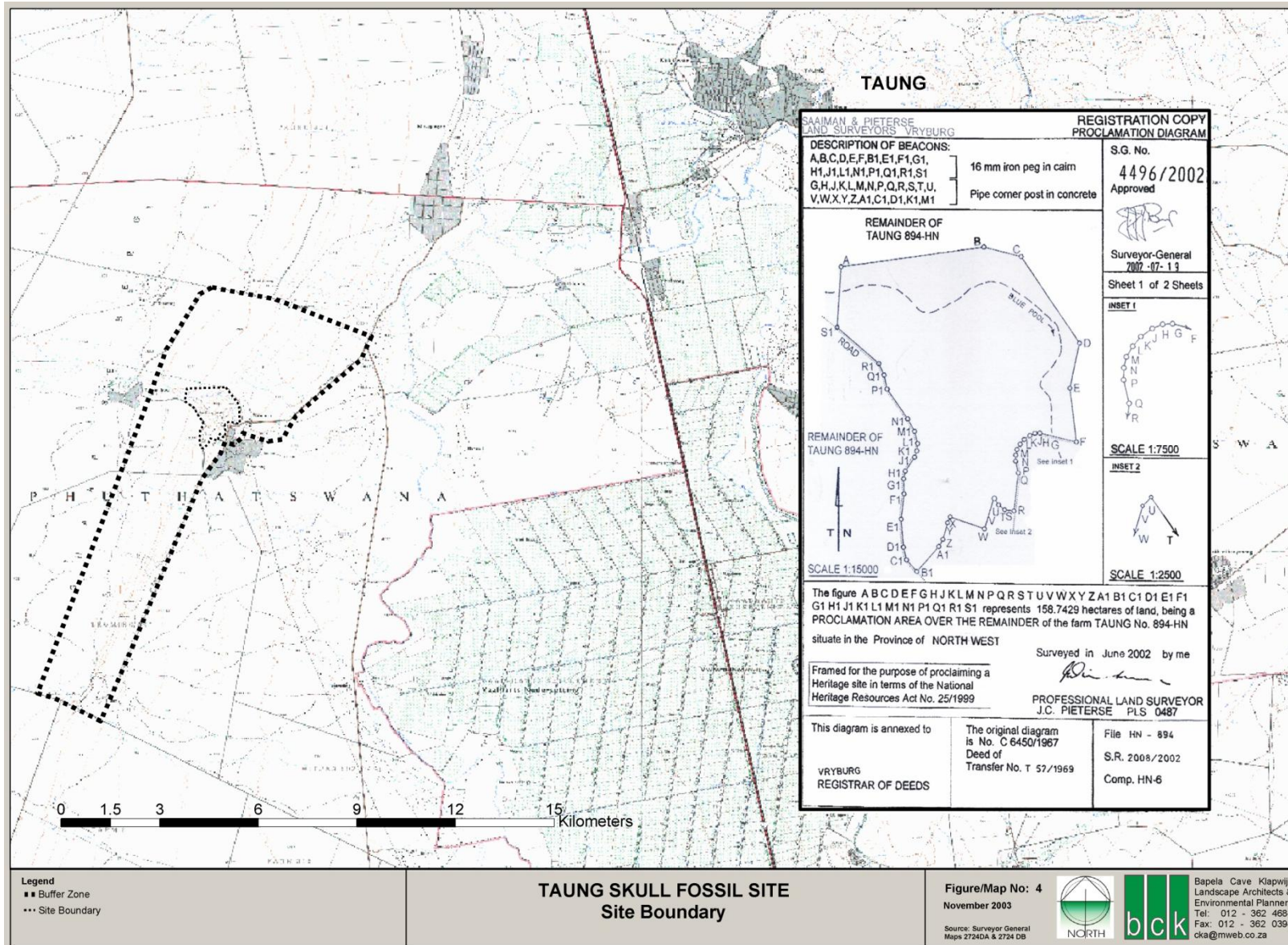


Figure 3: Site Boundary

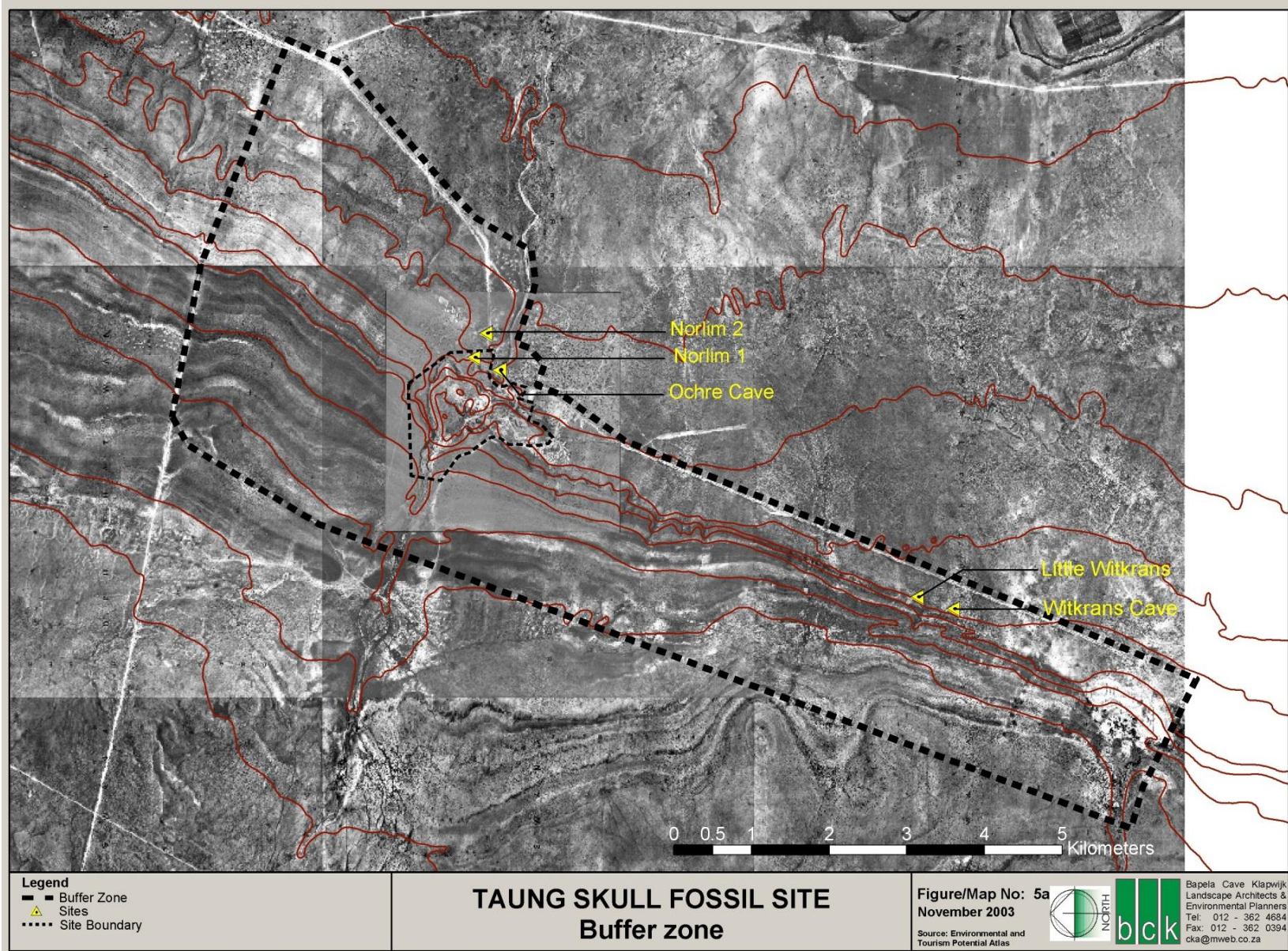


Figure 4: Buffer Zone

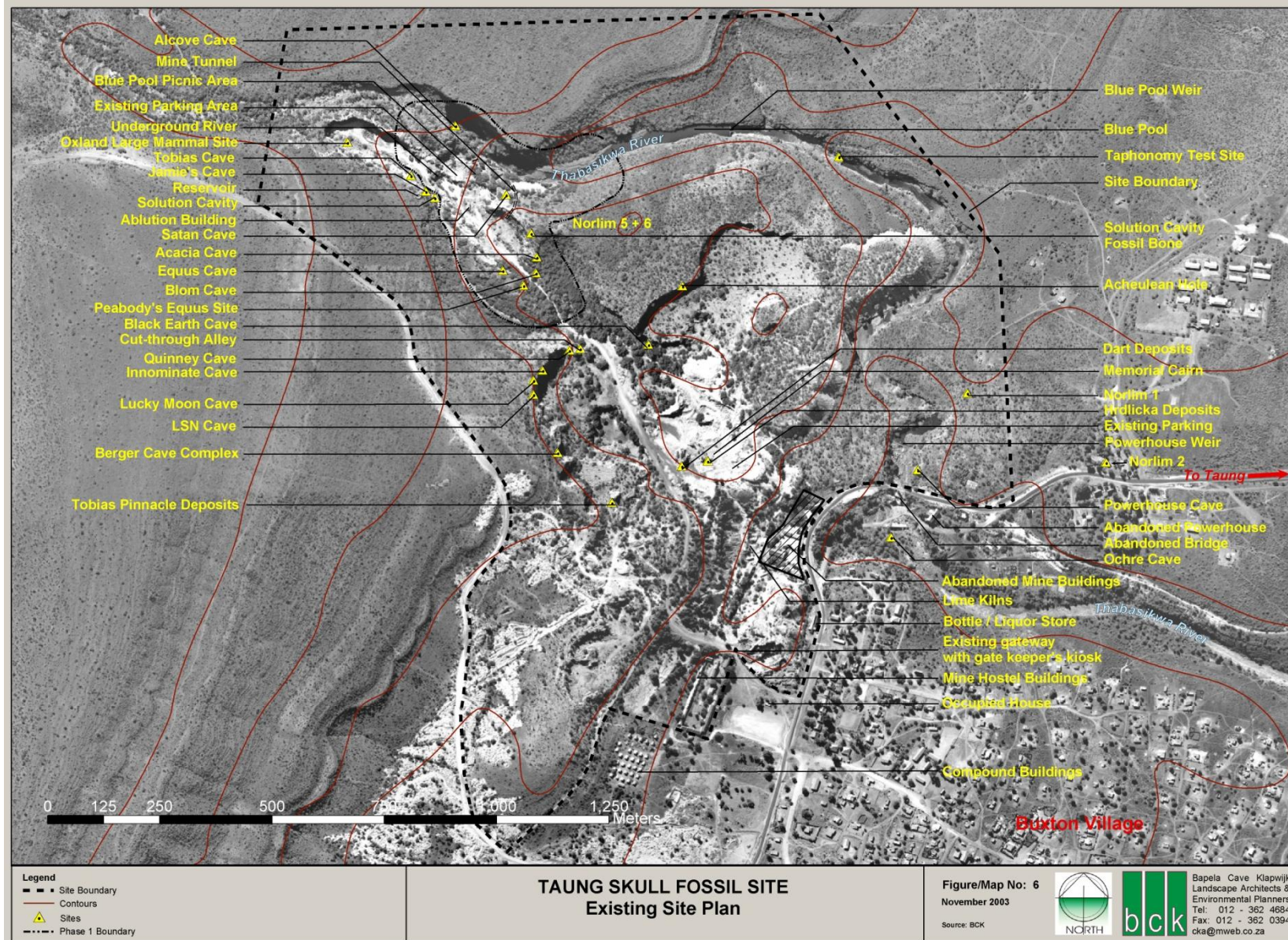


Figure 5: Existing Site Plan

Sites of Archaeological Importance³

Intermittent fieldwork over the past six decades at the TSWHS has shown that it was occupied by Stone Age peoples for a fair portion of the past hundred or more millennia, with arguably the four most important of the dozen known localities there being as follows:

- Witkrans Cave has yielded Middle Stone Age artefacts and associated large mammal bones including two to three undescribed modern human molars, all dated to the last 89 000 years ago. This site falls outside the Core Area of the TSWHS. It is however included in the Buffer Zone.
- Black Earth Cave, where one of the three strata yielded a large fossil mammal fauna including two modern human fragments that may be as old as or even earlier than those of the Witkrans.
- Equus Cave where the deposits produced a vast 30 000 large mammal samples. Identification representing 48 species, including modern human pieces, reflects its use for over 30 millenia as a brown hyena maternity den.
- Power House Cave, where Later Stone Age artefacts and associated large mammal bones relate to an occupation between 3 700 and 2 000 years ago, which may therefore be the age of some schematic paintings on its walls.

Sites of Mining, Historical or Other Cultural Heritage Importance

The Norlim Quarry at Buxton preserves a number of significant mining cultural imprints, in the form of a mining village *ghost town*, relics of lime-burning kilns and other mining infrastructure. These all add to site ambience and can be used to demonstrate the significance of mining activities in the history of liberating the fossil story from its entombment in the limestone tufas.

The value of the story of Buxton and the discovery of the Taung Child, which was a radical shift in thinking into the origins of humans at the time, can now in terms of UNESCO Criteria vi), bring attention to the living cultural heritage amongst the people of the area, which presents a particular authenticity related to rural living. Other heritage layers and attributes now need further description, and through further research the history of scared sites and oral traditions, for instance, can be further described and incorporated into the site history.

³ The Conservation Management Plan 2004 provides a good reflection of palaeontological and archaeological sites documented at the time. Improved communication with current researches on the site is required in order to establish if any further sites are being researched and if any current information is available to deepen site understanding.

6. Current Site History

It is clear from the current site history⁴, as detailed below that the focus on the mining history as related to the discovery of the Taung Child Skull was what makes this site of universal and outstanding value and is thus inscribed as a WHS. There is a rich diversity to local traditions, pre-mining history and sacred sites like Blue Pools, Thomeng Falls and Ochre Cave, for instance. Now a deeper understanding of the TSWHS needs to be sought together with local stakeholders from Buxton, Norlim, New Town, Draaihoek, Mokassa, Lokammona, Tamasikwa, Thomeng and Takaneng located in, or alongside, the Buffer Zone. The history of the site is best broadened and deepened together with stakeholders.

Early Mining History

The commercial and scientific potential of the limestone deposits at Buxton was not recognised until early in the 20th century. MG Nolan claimed to be the authentic discoverer of the carapaces of limestone tufas at Buxton, even though the Batlapeng of the Taung area must long have known of Buxton's white rocks and the pools on the Thabasikwa River where cattle could be watered. The controversial press announcement of the discovery of the Taung Skull and its naming as *Australopithecus africanus* in February 1925 prompted Nolan to voice his claim as the discoverer of the deposit in an interview with the Natal Advertiser (6 February, 1925:7):

"My brother is the owner of the Nolan Lime Works in Sterkfontein, near Krugersdorp. (The role of HG Nolan in the uncovering of the Sterkfontein caves about 1896-7 has been described by the late Professor C van Riet Lowe, 1947, and by Tobias, 1979, 1983a). He commissioned me, in my wanderings about the country, to keep my eyes open for any considerable deposits of limestone.

Eventually I landed at Taungs, and while looking towards the east (sic) along the Kaap Plateau I noticed a white formation at about seven miles distance. Inquiries among the people living round about revealed the fact that this was dolomite. Knowing of course that dolomite is the mother of all limestone, I came to the conclusion that this white mass in the distance would probably turn out to be the sort of thing I was looking for.

Following a ride on my bicycle, which I left in the charge of friendly natives at a neighbouring kraal, I made my way through dense bush to my goal, and found what I verily believe to be the largest deposit of limestone in the world. I lost no time in procuring a claim licence at Vryburg, entitling me to take over 1,000 acres. Then hastening back to the scene of my find, a spot known to the natives as Thaba Sige (Black Mountain) I found from rough measurements that the area under limestone was approximately the area allowed me under my licence. It was in this vast bed of limestone, at about 50 feet below the surface, that the now famous Taung skull was found. While that unique relic is of enormous interest to the world of science, the great limestone is of more material value, and especially to the gold mining industry of the Rand, limestone being a substance essential to the process of gold extraction."*

The name *Nolan* remained attached to the lime works at Buxton until 1919. Thereafter, the Northern Lime Company, having previously become associated with the Nolan Lime Company

⁴ The history documented here sourced from the Integrated Management Plan for the Taung Skull World Heritage Site 2010 – 2015.

following a merger in about 1917, finally took over. It held the reigns until 1967 after which the mining was undertaken under the name of Pretoria Portland Cement [PPC]. The kilns stopped burning and the mine closed in 1977.

The site preserves remains and relics of almost the whole of the commercial and industrial part of the mining village as well as some of the lime beneficiation infrastructure such as the bases of the lime burning kilns. Unfortunately, after mining operations stopped, *metal harvesting* has resulted in the total removal of the narrow gauge railway track as well as everything else that was made of metal, including crushers and other mining installations. The result is that little sense can be made of the remnant dumps, kilns, ore passes, and the like, and the visitor will gain little insight into the processing of lime. It must be understood that the original site of the discovery it has not been preserved because the entire history of the skull discovery is tied up with the story of lime exploitation on a massive scale.

The history of the exploitation of the site as a large lime-quarry is therefore one of the first things that the visitor should be informed of, and the entrance to the site should therefore be *via* the old mining infrastructure at the foot of the hill. Another element supporting this suggestion is the *sense of arrival* the visitor will experience after rounding the crest of the hill overlooking the Thabasikwa gorge, particularly after traversing the rather bland landscape on the approach to the site from the Mmabatho-Kimberley road.

Historical Events Leading to the Discovery of the Taung Skull

Cavitous areas occurred and still occur at several places within the various limestone tufas at Taung. Some of these became filled with sediment and bones and other surface-derived materials such as ostrich eggshell. In time, the pinkish or reddish patches of sediment became calcified to form rich bone breccias: what the lime workers called *impure limestone*. It was from one such deposit that the Taung fossil skull was discovered. Taung (formerly known as Taungs) is, therefore, the site of the first discovery of the early hominid, *Australopithecus africanus*.

The first recorded discovery of fossilised bones at the Taung site was in 1919, when seven or eight small monkey or baboon skulls were sent to the South African Museum, Cape Town. On 20 May, 1920, a paper on these fossils - very rare on the African continent - was read before the Royal Society of South African by SH Haughton. Even at this early stage, Haughton suggested that these extinct baboons "*may extend back in point of time to a level contemporaneous with the early and possibly pre-Pleistocene of Europe*". Then in November 1924, M de Bruyn, a quarry man employed at the Buxton Lime Works, blasted out of one of the pinkish *impure limestone* deposits a petrified skull and associated endocranial cast, which seemed to him to be much larger than those of the fossil baboons of which he had previously recovered. The lime works manager, AE Spiers, saved the specimen along with additional fossil baboon skulls.

A week or two later, RB Young, professor of Geology at the University of the Witwatersrand, visited the Taung Quarry as a consultant to the Northern Lime Company, and arrived in Spiers' office, where the fossil in question was serving as a paperweight, according to one version of the story. Young had been alerted to the presence of fossilised monkeys and baboons at Taung by Professor Raymond A

Dart, Professor of Anatomy at the same university, and a specialist in skulls and brain morphology. Dart, in turn, had had his enthusiasm ignited by his only female medical student, Josephine Salmons, who had shown him a well-preserved fossil Taung baboon skull from the Taung quarry which she had obtained from Pat Izod, son of EG Izod, at the time a director of the Northern Lime Company. Young made a selection of fossils to take back to Dart, fortunately choosing the endocranial cast and the related piece of breccia which enclosed part of a skull and mandible. These he brought back to Johannesburg, handing them to Dart on 28 November, 1924. The large endocast and skull fragments embedded in the pinkish breccia proved to be part of the hominid *Australopithecus africanus*.

Dart set to work on the embedded skull with unconventional tools, such as sharpened knitting needles and dental picks. After about a month, Dart managed to extract the precious fossil from the cement-hard encasing breccia which enclosed it. He was able to recognise that the brain cast, skull and jaw embodied an unprecedented blend of manlike and apelike features. Because of these features, he was obliged to make the specimen the *Type* of a new genus and species - and family (later subfamily) - which he named *Australopithecus africanus*, *the southern ape of Africa*. He asserted that the Taung Child (the fossil sported a full set of milk teeth) was an ape-like higher primate with rudimentary human-like anatomical features. Dart claimed that his new species was ancestral to the genus *Homo*, and that it vindicated Darwin's 1871 prediction in the book *The Ascent of Man* that Africa, and not Asia, was the cradle of humanity. It, therefore, filled the role of a *missing link*. It must be noted that only this single ape-man or hominid fossil had been found in the entire area of the huge limestone quarry at Taung, and that it is believed that it was a stroke of luck that it found its way into the hands of Professor Dart, who was perhaps one of only two or three people in the whole of South Africa at that time who were able to appreciate and give expression to its uniqueness. The universal significance of the Taung Skull World Heritage Site is vested primarily in this single unique specimen.

Subsequent History

Since 1925, sporadic research has revealed a wealth of other palaeontological and archaeological deposits, many of which are still unexplored. It became evident that the site was occupied by Stone Age people for much of the past hundred thousand years. Although the Taung Skull has an entrenched niche in the history of palaeo-anthropological thought and ideas on humankind's most distant ancestry, for a long time little was done to disseminate this evidence more widely, either amongst local people or amongst visitors.

Further history of the site can be documented and more deeply understood by the Management Authority and stakeholders involved in the planning and the management of the site. Of importance is to remain focussed on how local people can help manage, as well as benefit from the TSWHS.

7. Review of Management Documents

Many documents related to the Taung Skull site and surrounding heritage resources have been compiled, from research papers and dissertations, to management plans and tourism development plans for the site. Table 2 lists and summarises the current management documents for the TSWHS.

Table 2: Summary of TSWHS Management Documents

	Document Name	Description of Document
1.	Cultural Heritage Resources Survey (CHRS) for the Taung Skull National Heritage Site 2003	This document provides a well-annotated inventory of the full spectrum of cultural and natural heritage resources of the Taung site and environs, from geological and Precambrian fossil resources to the present. Natural heritage resources, both botanical and zoological, have also been included. Surviving aspects of 'Living Cultural Heritage', such as oral traditions, and indigenous knowledge systems such as ethno-botany, have likewise been recorded. Gaps in the current state of knowledge have been identified for all heritage components. Specialists have commented on the heritage significance, on the scientific and educational potential of heritage elements, and their possible value to envisaged future tourism. Existing threats and risks to the sites have been identified, and suggestions made as to how these might be managed. Finally, the site and all its heritage resources have been assessed for its future possible tourism potential. Since it is the conservation of site significance which drives the Conservation Management Plan, the information contained in the Cultural Heritage Resources Survey forms the crucial frame of reference for the Integrated Management Plan 2010.
2.	Conservation Management Plan (CMP) for the Taung Skull National Heritage Site 2004	This document provides an extended and elaborate list of management issues, with strategies and outcomes required to improve the conservation of heritage resources. The key management issues identified include: <ul style="list-style-type: none"> • Protection of World Heritage Values and meeting Convention obligations; • Compliance with National Heritage Status and World Heritage Status requirements; • Heritage Site Boundary and Fencing; • Link management of TSWHS to existing structures and previous initiatives; • Heritage Assets – protection, presentation and management issues; • Management of Biodiversity; • Site Specific Protection and Maintenance; • Management of Research; • Access Route; • Water Resource Management; and • Waste Management.
3.	Business Plan for Taung Skull World Heritage Site 2008	This document presents operating plans and costs and provides financial projections, measures for monitoring performance and a risk assessment. Three priority areas are identified for development, for which area sketch plans have been included, being the picnic site area, the entrance and parking area, and the monument area.
4.	Taung Skull World Heritage Site Integrated Management Plan (IMP) 2010 - 2015	This leading document provides an integrated approach to management, planning and implementation. The Implementation Plan identifies priority areas of intervention including: <ul style="list-style-type: none"> • Determine research priorities; • Install competent Human Resources Capacity to execute management functions; • Upgrade infrastructure such as roads, water reticulation and site safety; • Finalise trails and pathways linking elements of the site; and • Conduct safety assessment and ensure risks are eliminated or mitigated.

	Document Name	Description of Document
5.	Biodiversity Report (as part of IMP 2010 - 2015)	<p>Certain management issues have been raised and these need to be turned into practical, action-orientated projects. These projects are identified and prioritised for the site and are listed below:</p> <ul style="list-style-type: none"> • Stabilise and make safe: unstable and loose areas need to be stabilised to make them safe for fauna and flora to colonise. A specialist will need to be appointed to plan, design and implement the construction of gabions and other structures to stabilise and make the site less hazardous for humans and other biota. • Fencing: it is crucial for the site to be fenced entirely and that this fence is patrolled continuously along with the removal and restriction of domestic animals from the Core Area. This should also help to control the extent of fuel-wood harvesting in the Core Area. • Introduce water points for domestic stock outside the Core Area and away from the river: it will be necessary to put watering points in place before erecting the fence. • Monitoring system for riparian conservation: <ul style="list-style-type: none"> - Red Data species - population census of <i>Rennera stellata</i> or the Daisy; - Common reed beds - map of river structure and extent of current Phragmites beds; - Water quality - a range of sites to be established by a specialist to monitor water quality; and - Loose material stabilisation - construction of gabions to contain loose material and monitoring the extent of river bank vegetation recovery (this includes establishing habitat and if necessary to transplant cuttings of the endangered species into appropriate places). • Monitoring system for terrestrial conservation: <ul style="list-style-type: none"> - Alien clearing - alien clearing should target the Pepper trees (<i>Schinus molle</i>), for eradication. In the CHRS, it is suggested that it be preserved as part of the mining history. The wood is hard and durable and could be used for carving, making furniture or as firewood. Its use could be seen as an alternative to harvesting the indigenous trees from the site as is currently the case. - Recovery of unstable and disturbed areas - there are various methods that can be adopted for stimulating the recovery of unstable and barren areas. These should use manual labour if possible. On flat barren areas it is advised that the surface is loosened to make small one metre diameter shallow depressions in the soil scattered on the surface and that brush from the pepper trees is stacked on the ground in an attempt to add organic matter to the soil. This will increase the chance of various plants establishing in these places. • <i>Bio-prospecting</i>: Neighbouring communities have for many years been collecting fuel and medicinal plants from the TSWHS. It is essential that the Management Authority takes a decision on whether or not the continuation of this practice is allowed. From the biodiversity report, this is seen as an unsustainable practice and therefore it should either be stopped or controlled.

	Document Name	Description of Document
6.	Socio-Economic Impact Assessment Report (as part of IMP 2010 - 2015)	<p>The population in the vicinity of the Taung Skull World Heritage Site is rural in nature, with villages concentrated along the Thabasikwa River as well as scattered into the outlying areas. Altogether, there are over 100 villages consisting of more than 80 000 households and an estimated 250 000 people living in the Greater Taung Municipality. The community in the immediate surroundings of the Taung Skull World Heritage Site is an example of a rural community that is vulnerable to poverty, unemployment and destitution. An opportunity to develop the region arose through the discovery of the skull in 1924. The economic, social and human resources elements of the study area are therefore in desperate need of intervention and upliftment. Unemployment in the study area confirms this, with a high level of 57.8% of the sample population.</p> <p>Developmental initiatives are therefore required to effect the transformation of the region from a state of poverty and destitution to a state of livelihood sustainability. The study area in question is poor and rural in nature, and is characterised by:</p> <ul style="list-style-type: none"> • High unemployment; • A high proportion of income-poor households with high dependency levels; • A population with a low educational and skills base; • More than half (56.5%) of the sample population do not have access to transport, and reach their daily destinations on foot; • About 13% of the sample households do not have access to telephones; and • More than half (50.8%) of the sample households earn a maximum of R1000 per month, and 18.5% have no income at all. <p>The age profile statistics indicate a relatively young population, clustered between the 0-4 and the 25-29 age bands. With an overall economic growth rate in the region remaining very low, but with the population growth of economically active people, active efforts to enhance economic growth opportunities are needed in order to prevent increased vulnerability to poverty in this region.</p>
7.	Tourism Marketing Plan (as part of IMP 2010 - 2015)	<p>This document serves as a vehicle to analyse current tourism related developments and trends in and around the TSWHS, through site visits and research of primary and secondary resources. Based on this research and site visits, recommendations were be made on the various tourism related aspects which will support the development and implementation of an IMP for the TSWHS. Discussions with various government officials with an interest in the site have identified opportunities through the site which can be summarised as follows:</p> <ul style="list-style-type: none"> • The development of a second economy through tourism; and • The establishment of public private partnerships.

	Document Name	Description of Document
8.	Water Management Plan (as part of IMP 2010 - 2015)	<p>This document provides a framework for sustainable water resource management for the Taung Skull World Heritage Site. The WMP also ensures compliance with the relevant legislative framework, primarily comprised of the Water Management Act and the National Environmental Management Act, and is designed to be embedded within the existing water resource management framework of the Water Management Authority (WMA) within the Dr Ruth Segomotsi Mompati District Municipality. The interaction and cooperation between the various role players in delivering a reliable and sustainable water supply to the site is clearly indicated.</p> <p>The site lies on a major Dolomitic zone, which makes it a favourable location for groundwater supply. Data from boreholes in the region indicate relatively high flow rates, in many cases exceeding five litres per second. Specific water quality concerns have been raised in the WMP, with certain water quality constituents measuring above acceptable levels for particular water uses (as per the Water Quality Guidelines of the Department of Water Affairs). These will need to be monitored with requisite interventions, as indicated in the WMP.</p> <p>Currently, the site is supplied from the same source that supplies the Buxton village, <i>via</i> a water supply tank situated on the site. The additional estimated future demand of ten cubic metres per day (m³/day) by the site is not expected to impact on the current demand by the Buxton village households (estimated at 98 m³/day). At the same time, the WMP presents options for improving the water supply system, in view of improving the reliability and security of the water supply to the site. These options have been translated in capital projects for implementation (as part of the Water Services Plan of the WMA). In addition to these capital projects, other cost items relate to associated human capital development, as well as monitoring and maintenance of the water supply system.</p>

These documents provide adequate measures to manage issues that have been identified to date. The recommendations and actions proposed in them are in various stages of implementation, and the HMP will identify and assess those that may impact directly on heritage.

Further management considerations required are policies and strategies that address the issues related to the proposed and steady increase in visitation and usage of the site:

- i) Safety Strategy and Emergency Strategy;
- ii) Interpretation Strategy;
- iii) Built Landscape Management Strategy;
- iv) Research Policy Strategy; and
- v) Visitor Management Strategy.

A revised Action Plan for the above will put further effort to an already identified list of tasks to be completed.

8. The Cultural Landscape

A cultural landscape⁵ is a landscape designed, improved or at least affected by human activity, whether deliberately or not. In other words, a cultural landscape refers to tangible human modifications of a natural environment and the intangible meanings associated with that modified landscape, like memories, traditions and stories.

The *Application for Inclusion on the World Heritage List* describes the Taung Skull Fossil Site as a cultural landscape that encapsulates not only remains from proto-human *Australopithecine* times over three million years ago, but from various segments of the Earlier, Middle and Late Stone Ages to the present. Cultural landscapes typically tend to be layered, reflecting a range of activities over time and the connection of ‘*past, present and future are seamlessly connected*’ (O'Hare 1997:47). The TSWHS is no exception and provides rich layered tapestries of people, objects, events and times that provides a specific texture and weave to this cultural landscape.

Examination and appreciation of the different heritage layers and their interrelationships ultimately brings a deeper understanding and appreciation of the universal significance of the Taung Skull WHS. The palaeontology and archaeology of the site has tremendous value and also provide a profound context for the practice of local belief systems, rituals and traditions, by local Tswana and Xhosa villagers.

The TSWHS can be represented through a framework of various interconnected tangible and intangible heritage layers, as listed in Table 3 below, with a variety of interpretive themes related to each.

Table 3: Heritage Layers comprising an Interpretation of the Cultural Landscape

	Heritage Layers	Interpretative Theme
1.	Palaeontology and Palaeo-anthropology	The Southern African Ape and the origins of humankind.
2.	Archaeology and African Origins	The common genetic root all people have with the aboriginal Khoisan people of Southern Africa and the origins of modern humans.
3.	Geology and Geomorphology	Interesting geological formations related to limestone deposits and natural freshwater rivers.
4.	Natural Habitat	The value of the natural environment and the need to use sustainably and rehabilitate the habitat.
5.	Mining History	How miners came to Buxton for the commercial mining of limestone for the gold mining industry in the Witwatersrand.
6.	Architectural Setting	Varying living patterns in the landscape from organic rural settlement patterns and building methods of Norlim, Draaihoek, Mokassa, Lokamma, Thomeng, Tamasikwa and Takaneng, to colonial and industrial buildings that have been built in Buxton and New Town.
7.	Visual Landscape	Predominant and wide open views at Dart's Pinnacle and the Hrdlička's Pinnacle, as well as other views in or bordering on the Core Area and Buffer Zone.
8.	Local Legends, Rituals and Traditional Practices	Living local traditions and practising <i>Songamos</i> and local village people make daily use of the site and surrounds and have done so for a very long time.

⁵ A **cultural landscape**, as defined by the World Heritage Committee, is the ‘cultural properties [that] represent the combined works of nature and of man.’

The current narrative related to the TSWHS, is the story of the Taung Child and the fossilised skull found here in 1924. The palaeontological and archaeological aspects of the site have been well documented and researched. There is however much more to explore in the TSWHS and many more discoveries to be made. The interesting and rich geology of the site provides a specific point of interest amongst all people interested in rocks and fossils, and these resources must be carefully guarded and protected. The link to the mining history of the town has been documented, yet requires more attention, and including focus on the intricate linkages to urban design, architecture and visual landscape. Further research relate to the site would ideally be done through creating local opportunities for local people to be trained and conduct research and documentation.

Tangible heritage like the pinnacles at the fossil discovery site, the caves and sites with old fossils, the natural setting and river, the rocks and buildings constructed, and many more, are all linked to a stories that provide meaning to the physical heritage symbol. Through understanding the story or narrative about the specific object, the site and/or object gathers further meaning for and value to the visitor. All the heritage layers have been well identified in the IMP 2010, and now require further research, management and development.

9. Status Quo on Heritage Resources and Attributes

The various tangible and intangible heritage layers contain a multitude of heritage resources and attributes, all intricately linked, and providing an interpretation of the history and value of the TSWHS. These are catalogued in Table 3. The heritage resources and attributes are grouped according to the proposed heritage layers, which can inform the mapping of the cultural landscape by stakeholders. These layers can be mapped individually or in a multi-layered manner, to deepen understanding and interpretation of the TSWHS. Table 3 presents the various heritage layers, together with a list of tangible and intangible heritage resources and attributes, understanding that all are ultimately intricately linked and integrated.

Table 4: Status Quo on Heritage Resources and Attributes

	Heritage Resource/Attribute	Status Quo
	Heritage Layer: Palaeontology and Palaeo-anthropology	
1.	Taung Skull Fossil and Site	<p>1.1 The Taung Child Skull is currently being kept at the University of the Witwatersrand.</p> <p>1.2 The deposits at Dart Pinnacle and the Hrdlička's Pinnacle are secure, yet can be improved for safety and interpretive quality.</p>
2.	Precambrian Fossils	<p>2.1 Very little coverage has been given to the fascinating Precambrian palaeontology of any of the fossil hominid sites. The dolomites which host the cavern sites or which have provided the limestone from which the travertine deposits of Taung have been accreted, is the source of unimaginably fossils of over 2224 million years old, which provide insights to some of the earliest preserved life forms on earth. They also provide evidence into the evolution of the atmosphere, and its gradual acquisition of all-important oxygen, vital to the existence of life on earth.</p> <p>2.2 Precambrian resources of the site require further academic study, as well as field study in order to identify good examples to serve as viewing stations. Samples need to be collected both for scientific study and as examples for the heritage museum, in order to recognise a very significant part of the site significance.</p> <p>2.3 Dolomite slabs have been used as seats in the picnic area. They provide a useful and almost indestructible construction material.</p> <p>2.4 Dolomite stripping (such as occurs in the Cradle of Humankind) is a likely problem in the area. This certainly should be monitored in order to determine the risk - it is very often the chert- and stromatolite-rich pieces that are removed because of their interesting surface patterning.</p>
3.	Fossilised Pollens	<p>3.1 Palynology is the study of the fossil pollens, which in the case of the site are preserved in a small portion of the Equus Cave deposit, where both the sediment itself and fossil coprolites yielded significant results. This, and the potential for further study, make site protection for this locality a top priority, for it is in a particularly vulnerable state.</p> <p>3.2 The field of palynology has recently been expanded by the study of phytoliths – these may become incorporated into deposits and are fossilised. It has been established that the breccias of the site contain abundant phytoliths, and most of the <i>Tufas</i> and sediments of important sites, like Equus Cave, are expected to have excellent potential for phytolith analysis. Scientific reportage on this exciting new aspect of palaeontology is eagerly awaited.</p> <p>3.3 Deposits of Hyrax dung, or <i>hyracium</i>, are also important because such deposits can build up over a period of thousands of years, trapping pollens and phytoliths as they accrete, which are very valuable, and steps should be taken to establish whether or not any are present within the Hyrax habitats that exist along the escarpment edge and within the quarry itself.</p> <p>3.4 Speleothems, i.e. stalagmites, stalactites other flowstone formations can provide fossil pollen, as well as isotopic information used in dating deposits, and no further destruction of these potential sources of information should be allowed, such as still occurs at the 'underground river'. The protection of the remaining undisturbed landscapes and patches of vegetation is an essential comparative element in studies such as these, and as such, they should be conserved as an integral component of the cultural landscape.</p>

	Heritage Resource/Attribute	Status Quo
	Heritage Layer: Archaeology and African Origins	
4.	Archaeological Sites	<p>4.1 Some of the archaeological sites fall outside the proposed heritage boundary. Such sites include the Witkrans Cave, Norlim 1, Norlim 2, Little Witkrans Shelter and the Ochre Cave. These are protected by the Buffer Zone surrounding the proposed Core Area of the Taung Skull World Heritage Site. Although the above sites fall outside the Core Area, they require regular inspections.</p> <p>4.2 Many of the specific heritage sites within the Core Area are stable and secure, as long as their whereabouts remains relatively undisclosed. Here, non-disclosure can function as a temporary management tool. Care should be taken as to which sites are located on maps and presented in information panels for site visitors, particularly those where scavenging of artefacts and fossils is possible. Attention should not be drawn to the following caves, because of a risk of scavenging of fossils:</p> <ul style="list-style-type: none"> - Quinney Cave - disclosed location - Black Earth Cave - restriction of access proposed, with seating and information signage - Equus Cave - restriction of access proposed, with seating and information signage outside of the site, and visitation only with an archaeologist - Satan Cave - disclosed location - Oxland Large Mammal Site - guided access to visitors proposed, with seating and information signage - Witkrans Cave - disclosed location - Norlim 1 - disclosed location, unless visitors accompanied by a guide - Little Witkrans Shelter – disclosed location - Powerhouse Cave – put protections and guided visitation in place - Ochre Cave – put protections and guided visitation in place <p>4.3 The most vulnerable site by far is the Equus Cave. This is a site of substantial heritage significance and important residual research potential. It is situated on the main access route to the Blue Pool picnic area, and is easily accessible for the public. Loose fossil bones and teeth are eroding out of the deposit everywhere, and the deposits are unstable and cascading. Trampling of the deposit not only damages the fossils, but causes disturbance to the sediments. The witness section is unstable and unroofed, which allows rainwater to seep through the deposits. This affects the reliability of dating results. Bioturbation (burrowing by small mammals and insects, termites, etc) also causes mixing of the deposits.</p>
5.	Khoisan Heritage	<p>5.1 Attention should be drawn to the fact that the original inhabitants of the TSWHS and environs were the Khoi and San, as attested by the Ceramic Later Stone Age archaeological remains at Norlim 5 and Norlim 6 within the site and the even more impressive stone ruins near Dithakong, a short distance to the north.</p> <p>5.2 The existence of residual original Khoi toponyms, for example ‘Ghaap’ and !Xabasiqua, should be flagged. This could be done by providing a panel in the interpretative museum and by incorporating the ruins in an interpretation hiking trail. The local community has requested the recognition of traditional Khoi Khoi geographical toponyms, and this should now be done.</p> <p>5.3 Little is documented about the former presence of the Khoi and the San as related to the TSWHS, and this gap needs to be filled.</p>
6.	Tlhaping Heritage	There is currently no history of the Tlhaping that has been documented on the site. This can now being addressed through the TSWHS Support Project.

	Heritage Resource/Attribute	Status Quo
	Heritage Layer: Geology and Geomorphology	
7.	Geology and Geomorphology	<p>7.1 None of the geological or geomorphological formations are at risk at present, except perhaps from defacement with graffiti, and the visual impact on views and vistas, caused by structures erected outside the site.</p> <p>7.2 Good vantage points from which to view the geology and geomorphology should be incorporated into an interpretive hiking trail through the site. This could be conducted by a trained heritage site guide, or as a self-guided trail with interpretation panels at key viewing stations.</p> <p>7.3 Good viewpoints over the valley of the Harts and of the Ghaap Escarpment need to be identified. Some such stations could include:</p> <ul style="list-style-type: none"> - Dart and Hrdlička’s Pinnacles; - Upper Quarry view site (view over the Harts Valley, down the gorge of the Thabasikwa, changing watercourse); - Blue Pool Tufa and waterfall (origin of tufas, fossil leaves, algal mats, water-eroded cavities and shelters); - Dolomitic plateau above the Blue Pool Area (stromatolites); - Contact of the tufas with the Schmidtsdrift shales (opposite Powerhouse Cave); - Contact between the Schmidtsdrift shales and the overlying dolomite in the south-west part of the quarry excavation; and - Oxland Tufa and the relict channel alluvium at the Channel Alluvium Site. <p>7.4 The latter need to be protected at all costs as the only authentic vestiges of an analogous deposit to the original discovery site which was been mined away.</p> <p>7.5 The ‘underground river’ and ‘Old Mine Shaft’ should be subjected to inspection and reporting by a professional Mine Safety Officer prior to their use for tourism.</p> <p>7.6 The potential of the geological and geomorphological assets of the site to provide enriching educational experiences, and protection of the scavenging of fossils and limestone formations.</p> <p>7.7 No further removal or re-sculpturing of the mine dumps should be allowed as they form part of the cultural imprint of the site.</p> <p>7.8 The core area consists largely on a massive deposit of tufa (commonly referred to as the “Thabaseek Tufa”) as a result of millions of years of formation by the precipitation of calcium carbonate rich water flowing down the Thabasikwa River. The tufa deposit was the target of the mining operation that operated from 1907 until 1977. Water percolating through the dolomite of the Ghaap Plateau allows it to build up the chemicals necessary for the precipitation of tufa. This process is still happening, and the river provides a modern analogue of tufa formation. It is interesting to note that filamentous algae and mosses growing on the edge of pools are important in facilitating the precipitation process.</p> <p>7.9 Breccia is a specific kind of rock found within the tufa. It is made up of calcrete – a mix of sand, gravel, clay and other material cemented together by calcium carbonate. This rock forms in cavitous areas that occur or occurred in the tufa in the past. These holes or caverns are then filled with loose material such as bones, pebbles and sediment and with time become cemented in the matrix of calcium carbonate. Mineworkers referred to this material as ‘impure limestone’ and the Taung Skull was blasted out of this kind of rock during mine operations in 1924.</p>

	Heritage Resource/Attribute	Status Quo
	Heritage Layer: Natural Habitat	
8.	Flora	<p>8.1 A total of 129 species of flora are present in the TWHS. The site is on the edge of the Grikwaland West Centre of Endemism, and this fact should be promoted in the hiking trails and in panels in the interpretative museum. Named species of plants are featured along the hiking trails.</p> <p>8.2 There are a number of issues that have been identified in previous documentation, including:</p> <ul style="list-style-type: none"> - The lack of a fence permits free-ranging grazing of the site by numerous cattle, donkeys, goats and sheep. This has given rise to overgrazing, and grazing-induced bush encroachment is occurring. Overgrazed areas are prone to rapid soil erosion. A livestock grazing plan needs to be negotiated with the communities, to limit grazing to a sustainable level, and on areas of veld that have the carrying capacity; - Sustainable levels of wood harvesting must be determined and a system of regulation developed before uncontrolled harvesting destroys reserves; and - The best shade tree within the quarry, the lime-loving pepper tree, is a potential alien invasive. Pending its declaration, the management plan will have to consider its control or possible replacement.
9.	Fauna	<p>9.1 There are 13 mammal, 74 bird, 8 reptile and 4 amphibian species that occur in TSWHS. There is a need for further research into the bat species present.</p> <p>9.2 The cliffs above the Blue Pool support a breeding pair of Black Eagles.</p> <p>9.3 There is a looming problem with baboon-human interactions, with baboon-proof rubbish bins being put in place, and prohibitions placed on feeding of baboons.</p> <p>9.4 The consequences and impact of a fence on the local fauna communities will require consideration.</p>
10.	Ecological Biomes	<p>10.1 The Ghaap Escarpment biome and Thabasikwa riverine biome show elements of Kalahari Thornveld vegetation, this showing two interrelated yet distinct natural habitats that fall within the Core Area.</p> <p>10.2 The TSWHS provides a habitat for Red Data Species, considered rare and threatened.</p> <p>10.3 These biomes need to be carefully managed in order to reduce ecological impacts from the various current and proposed land uses.</p>
	Heritage Layer: Mining History	
11.	Living Mineworkers	Former mine workers are still resident in the area and have vital knowledge of the early history of the Lime Works and information needs to be gathered with them and documented.
12.	Lime Workers' Graveyard	The lime workers' graveyard alongside the Core Area is still regularly visited and needs to be further understood, documented and protected.
13.	Quarry	The quarry itself reflects a rather harsh and significant message to the amount of effort gone into mining, and the luck that occurred in 1924, through discovering the treasured Taung Child Skull. It bears testimony to how miners came looking for limestone, and found something of far greater value to humanity.

	Heritage Resource/Attribute	Status Quo
14.	Mining Buildings and Infrastructure	<p>14.1 As far as the on-site mining history is concerned, many of the original mining buildings and some of the related infrastructure are still intact, although falling into a state of disrepair. The mine site and environs likewise preserves interesting industrial buildings and infrastructure. Of note are the Stone-built Power House, the old steel girder rail bridge over the Thabasikwa River and several other interesting mine buildings. These structures all form part of the cultural imprints on the TSWHS and should not be allowed to decay to the point that they are non-restorable. Many of the buildings form part of the history of Taung and should be stabilised, with a view to possible future restoration. Theft of usable building material is a problem.</p> <p>14.2 Metal harvesting after the mine closed caused much of the mining technology to be removed from site, including the private branch railway line laid in 1936 from Taung to Buxton, and on to the smaller lime quarry at Thomeng. The lime-burning kilns were destroyed, probably in order to recover the refractory brick, made by the Cullinan Brick Factory near Olifantsfontein.</p>
15.	Lime Dumps	<p>20.1 The mine dump formations have a significant presence on the site and give testimony to the vast amounts of material that was moved from the quarry during mining operations.</p> <p>20.2 The mine dumps are unstable and need to be monitored and secured. They provide a significant safety risk and hazard and should not be ventured onto.</p>
16.	Heritage Objects	<p>16.1 <i>Koekepanne</i> have been recovered from community and are displayed at the current entrance to the WHS.</p> <p>16.2 Working utensils have been recovered from community and are also on display.</p> <p>16.3 A Fire Extinguisher has been found on a farm in Amalia Area, and has been documented photographically.</p>
	Heritage Layer: Architectural Setting	
17.	Various Architectural Styles	<p>17.1 The Buxton Village adjacent to the Norlim preserves several noteworthy architectural features, including an attractive stone church, rural 'fossil' post office, and several stone-built miners' cottages which are worthy of restoration. This attractive townscape is worthy of being incorporated into a broader-based tourism product and offers economic opportunities to local residents. Tea shop, a general dealer and tourism shop to supply visitors are possibilities.</p> <p>17.2 Although influenced by the establishment of mining, the village of Buxton and Norlim retains a strong rural feel and settlement pattern that brings significance to the setting and experience of the site.</p> <p>17.3 The settlement pattern of the village, as well as surrounding villages, varies in pattern and is far more organic making use largely of local materials, with a strong dependency on concrete and brick in places. This rural urban setting also requires protection and research, and management requirements must be well adapted to meet local means.</p> <p>17.4 Stone building methods are particularly prevalent and have been well incorporated into the development of the site at both the current entrance and the upgraded picnic area at Blue Pools.</p>

	Heritage Resource/Attribute	Status Quo
	Heritage Layer: Visual Landscape	
18.	Views	<p>18.1 A Buffer Zone around the Core Area will place management controls on the erection of structures which might impinge on the visual appreciation of geological, geomorphological and other scenic views, such as TV towers, power lines, cell phone towers and the like.</p> <p>18.2 The route could be used to showcase traditional vernacular architectural styles and traditional farming practices, although it is understood that most people would prefer an RDP type of house. Any modern densification of the Mokassa rural residential area may affect the sense of travelling through a traditional rural district, which, because of the distance from the tarred road, adds to the visitor experience.</p> <p>18.3 The Buffer Zone incorporates the portions of the villages of New Town, Draaihoek, Mokassa, Lokamonna, Takaneng, Tamasikwa and Thomeng and management of the landscape with these villages would go a long way to promote appropriate and sustainable land use options.</p> <p>18.4 It is significant to note that the original discoverer of the Buxton limestone tufas had to struggle his way through thick bush all the way from Taung to the escarpment - an area which today is almost totally devoid of trees and shrubs. This provides a vector of change to be introduced into the landscape and how environmental change and adaption are already part of the way of living. The visual landscape of the Core Area itself and the surrounding Buffer Zone needs to be documented in order that the visual landscape is protected and well managed. The documentation of critical view points, view sheds and view lines is being conducted as part of the HIA study. Predominant views identified include the Dart and Hrdlička's Pinnacles, Monument viewpoint over Buxton village and the Harts Valley, the Buxton village approach, the Norlim village approach, the Thabasikwe River valley, the mining works from the road and wide open scenic landscape views over the extent of the Buffer Zone.</p> <p>18.5 Specifically, the views around the Dart Pinnacle and the Hrdlička's Pinnacle must be preserved at all costs, as they provide the only 'authentic' element to the now non-existent discovery site.</p>

	Heritage Resource/Attribute	Status Quo
	Heritage Layer: Local Legends, Rituals and Traditional Practices	
19.	Legend of the Snake at Blue Pools	Local legend has it that the snake emerges from the Blue Pools at noon every day, it being dangerous to be around the pools at that time. This snake legend is linked to initiation rites amongst young maidens in Bantu related traditions, when they are called to become <i>Sangomas</i> . <i>Sangomas</i> make use of the Blue Pools to communicate with the snake, which also assists in healing rituals. Mythological stories related to the Great Snake of the Orange River and other significant bodies of water in the region, can be well linked into the living mythology associated with the TSWHS, and rooted in the belief and practice of traditional African belief systems, within a contemporary context.
20.	Sacred Sites: Healing waters of the Blue Pools and Thomeng Falls	20.1 The water of the Blue Pools and the Thomeng Falls hold healing powers and these are still used today for ritual purposes. The traditional healer who operates in the Buxton-Thabasikwa area, who utilises the resources of the TSWHS provides valuable Traditional Knowledge that needs to be recorded. 20.2 The Blue Pools and Thomeng Falls are used for baptisms and other traditional ritual purposes and are recognised as sacred sites. 20.3 Other local rituals and traditions need to be researched and documented.
21.	Blue Pools Original Name	The original name of the Blue Pools currently remains unknown and requires further research.
22.	Sacred Caves	Ochre Cave and Powerhouse Cave are used by the <i>Rastafarians</i> for ritual purposes. These caves may also be used by others for traditional practices, and such needs further investigation and protection.
23.	Oral Traditions	There is a need to tap local Oral Traditions in order to preserve the history of the 20th century before it disappears. There is a need to collect such stories, as can now occur through the TSWHS Support Project.
24.	Ethnobotanical Knowledge	87 Ethno-botanically important species occur on the site. There is a considerable residual ethnobotanical knowledge in the local communities that can be documented and developed.
25.	Liberation Struggle	An important element of recent history is to record the significant role that local communities played in the Liberation Struggle. In this regard, the history of the nearby Tigerkloof Mission School needs to be recognised and documented, as it was here that many of today's prominent politicians received their training.
26.	Traditional Dancing	Local residents do practice traditional dancing, which needs further investigation, recognition and supported.

10. Site Zonation and Conceptual Development Plan

It is well recognised that the development of the site is essential for the effective use and enjoyment by all visitors, leaving not only a positive experience, but also a lasting learning experience. As such the site has been planned and zoned for different uses. A master plan exists for the site showing different uses in different areas (refer Figure 6).

Development plans that have already been implemented, or are currently being implemented include:

- a) Establishment of green, yellow and brown walking trails and basic signage (complete);
- b) Access road from the current entrance to Blue Pools picnic area (complete);
- c) Upgrade of Blue Pools picnic area (near complete);
- d) Changes to ablution block at Blue Pools picnic area (in progress);
- e) Upgrade of road to Thomeng (in progress); and
- f) Core Area boundary fence (in progress).

The remainder of the development plans currently under consideration are detailed in the Site Analysis and Conceptual Development Plan, or Master Plan. Detailed Area Sketch Plans available have been included into Appendix 2.

Components requiring further planning attention, as documented from discussions on the site include:

- a) Construction of a new entrance and related parking area;
- b) Upgrade of monument site, including the construction of lookout point and boardwalk and information signage at Hrdlička's deposit;
- c) Establishment of a museum/interpretation centre;
- d) Restricting access to Black Earth Cave, seating and information signage;
- e) Restricting access to Equus Cave, seating, information signage and weather protection; and
- f) Providing access, seating and information signage at Oxland Large Mammal site.

The Master Plan for the sites was compiled in 2003 and may need to be reviewed and consolidated to reflect the current ideas and intentions of the Management Authority. Such a revised development plan would be best consolidated through conducting an intensive workshop on the site, together with key and local stakeholders.

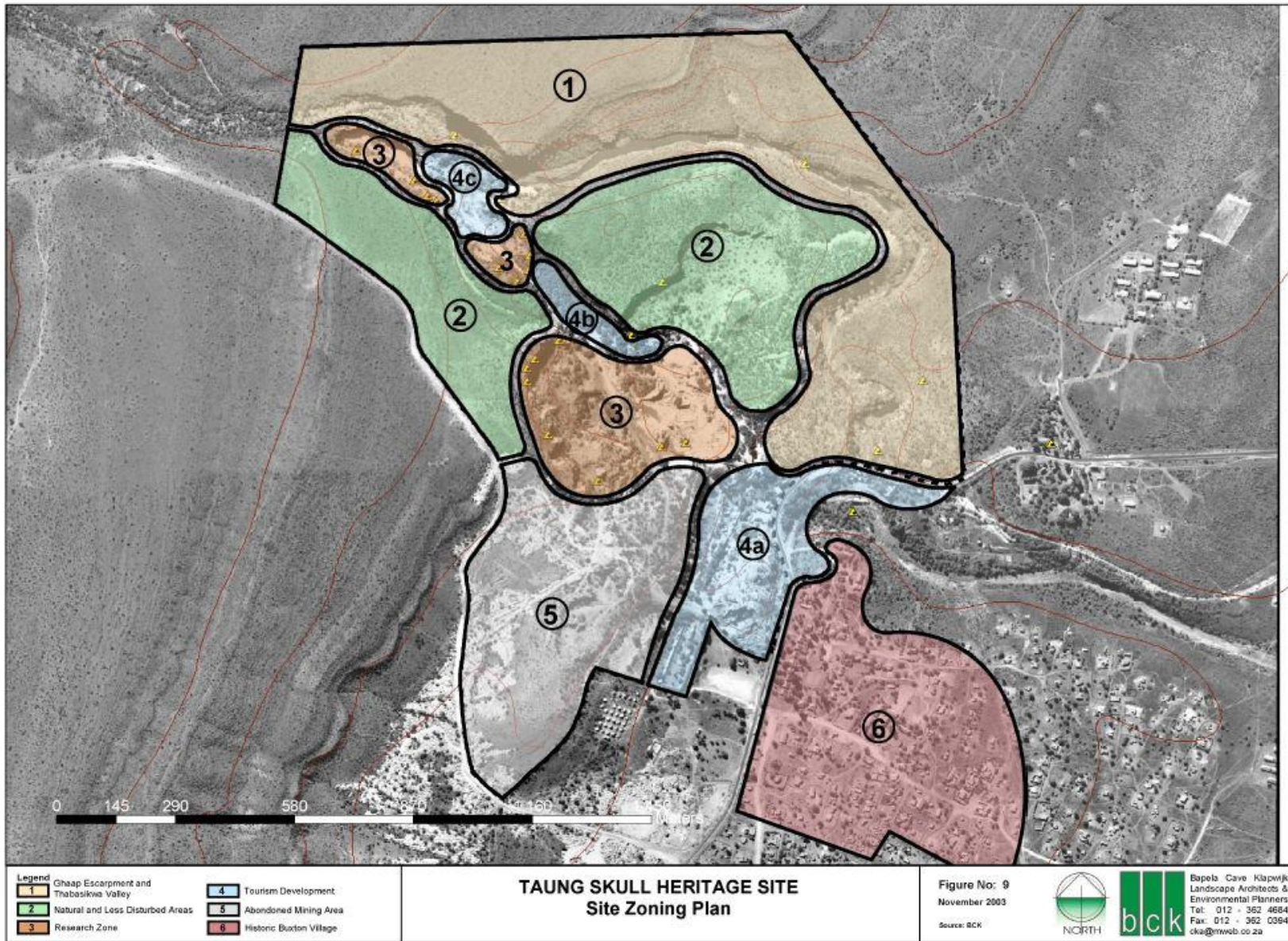


Figure 6: Site Zoning Plan

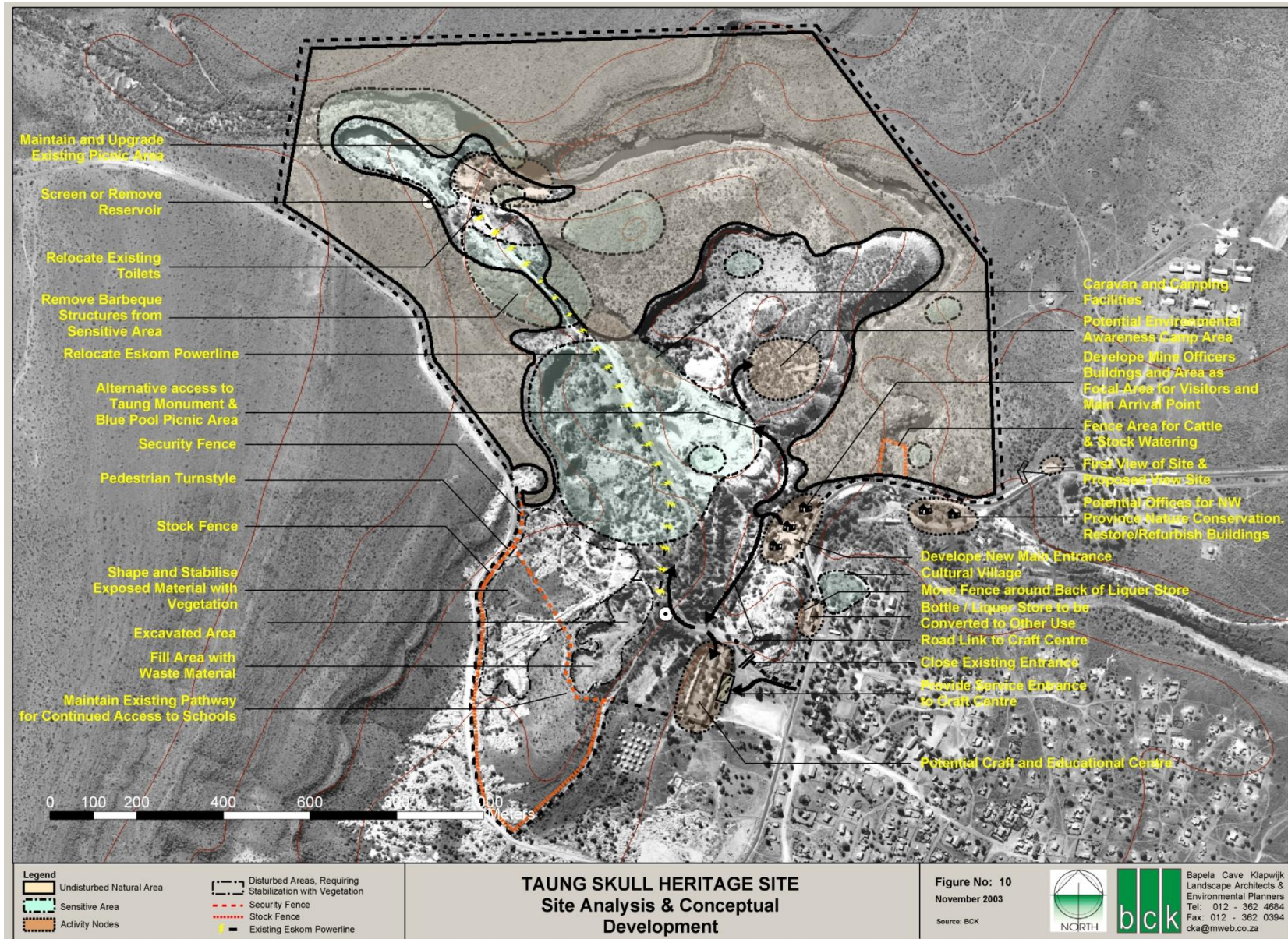


Figure 7: Site Analysis & Conceptual Development

11. Status Quo Remarks

The status quo remarks bring attention to pertinent and current issues at the TSWHS. The actions required to address the points can be taken up in further detail in a revised action plan. The status quo study of the TSWHS reveals the following points:

Implementation

1. Development on the site is underway and the road across the site, terminating at the Blue Pools picnic site, has been constructed in a manner that blends well into the natural environment, strengthening the experience of the sense of place. The use of natural stone in these developments provides a sound foundation that can inform further design and construction on the site.

Heritage Management

2. Heritage management is the primary function of the Management Authority, and the leading document on the management of heritage at the TSWHS is the Integrated Management Plan 2010 – 2015. Appointments need to be made for all the staff positions identified in the IMP.
3. The site is rich in heritage with multiple and interrelated layers and dimensions. Some heritage layers are well known, yet are not well protected, e.g. palaeontological and archaeological sites like Equus Cave and Black Earth Cave, for instance. Other layers exist, are not well known, and are not well protected, e.g. local stories and traditions, and the buildings on the site, for instance.
4. The use of cultural landscape mapping has not yet been fully applied to the site. The current emphasis and attention on palaeo-anthropology and archaeology has been necessary to inscribe the site as at WHS. Now is the right time to highlight further heritage layers, like anthropology and traditional knowledge for instance, to further enhance the value and meaning of the site. The development of a cultural landscape map will go a long way to providing a better understanding of the site to a broader group of stakeholders, especially the local communities of Buxton, New Town, Norlim, Draaihoek, Mokassa, Lokammona, Tamasikwa, Takaneng and Thomeng residing in or alongside the Buffer Zone and making daily use of the site and surrounds. Such an exercise of cultural mapping yields the best results when done in participation with stakeholders, thus embedding a Vision for and ownership of the site.

Site Planning and Development

5. Planning on the site is well progressed, with detailed planning and implementation completed for the road to the picnic site at Blue Pools. Construction of the Blue Pools picnic site is near complete. Other development components on the site require closer scrutiny and detailed planning, like the proposed museum and entrance node at the Mine Manager's House, for instance. An intensive workshop on the site with all stakeholders will go a long way towards consolidating the Site Development Plan/Master Plan, providing the opportunity to update the

plan and focus stakeholders on completing the establishment of the site to being fully operational. A specific implementation plan with clear milestone dates will ensure the effective realisation of these plans, which have been in the making for many years.

6. Capital investment into the site may need to be considered as related to the benefits that can be gained from the development of the site over time. A cost-benefit analysis may be very well placed at this stage of the planning and development process. It would provide a realistic measure of what benefits may come from the site, and provide a necessary reference point against which to discuss and debate local expectations created to date. A crisp and honest look at the benefits will help to bring stakeholders to a realistic position of what can and should be done to optimise the use and protection of the site.
7. A likely trap in planning is to replicate similar developments on other heritage sites, like Maropeng for instance, expecting similar visitation, revenue and results. The unique value of the TSWHS and particular rural sense of place and sense of community are of paramount importance to the site. These should be kept central to designing a site that may attract the right people. Original thinking rooted in the local reality is of critical importance to ensure the unique and responsible development of the site, which ensures local benefit, local learning opportunity and enriched visitor experiences. Such development needs to enhance the specific heritage attributes of the site, which can be better and more deeply understood by stakeholders and visitors all around. Visitor numbers and revenue generated need to inform planning and design.
8. Baseline documents that need to be compiled in order to effectively conduct the HIA are a Critical View Point Analysis, as well as the compilation of a Building Catalogue for the Core Area, providing information on the state, past use and future potential of the structures.

Research Management

9. There have been ongoing struggles related to research on the site. Researchers have not yet been able to include local community members in their activities. Safety and security issues around conducting research on the site are also well known, and may well stem from the exclusionary approach in which research has been conducted on the site for many decades. The management and permitting of research on the site can certainly be improved through the development of a research policy that clearly defines, in part, the need that research information is returned to the site, and that researchers take responsibility for the dissemination of information. Inclusion of local community members in research activities is also crucial to the protection of heritage on the site and will certainly improve relationships between researchers, the local community and the Management Authority.

Knowledge Management

10. Access to information about the site and what is planned for the site can certainly be improved. It is fully recognised that resources are currently limited and such impede more effective access to and dissemination of information. This matter will however be improved through the implementation of the Support Project whereby the Management Authority has obtained assistance to further improve and strengthen the implementation of research and development

on the site. Local learners and young people can also have increased access to library materials and other interesting heritage information about the site.

Visitor Management

11. Currently the site has many safety issues and the current safety study is critical to the effective and safe use of the site by visitors. Currently the primary use of the site is for recreation and harvesting of resources, and these need to be very well managed in order to protect the OUV, Authenticity and Integrity of the site. Visitor management is also crucial to managing the safety on the site, and a site safety strategy can be given immediate attention and be implemented. Such a strategy can be revised over time, as safety measures on the site change and improve, together with site development.

Interpretation

12. Current interpretation activities on the site are ongoing with the Youth Ambassadors from Buxton and many groups of learner's visiting the site on an annual basis. The current READ staff on the site can be commended for their efforts, despite the lack of resources and struggles faced in terms improving interpretation efforts. Signage is evident on the site, yet can be improved through making heritage information more available. A well thought out and planned interactive interpretation centre and well trained heritage guides would go a long way to making a visit to the site far more interesting. These ideas and concepts have been long discussed and planned for the site.

Local Community Involvement

13. The TSWHS has been inscribed on UNESCO Criteria vi), which states that 'The site should be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance'. The local community must therefore not be viewed as a stakeholder alone, but also as a heritage resource in which a rich tapestry of stories and traditional practices exist, and who by their very location and cultural use of the site, are inextricably linked to the OUV, Authenticity and Integrity of the site.
14. The Johannesburg Declaration 2002 on heritage management highlights that communities should be empowered to remain at the centre of heritage management.⁶ This declaration thus provides further impetus for the management of TSWHS to be well rooted and linked into the local community, their daily activities and aspirations for the future.
15. There are ongoing activities involving local community members and much opportunity exists to strengthen such involvement through the recognition and documenting of local stories and traditions, as they are strongly related to the site, both in the past and current day reality. Participation of local community members in this research and documentation is a critical approach towards accruing local value and meaning to the heritage of the site, and the opportunities than can be created through that over the long term.

⁶ UNESCO Johannesburg Declaration, 2002.

12. Way Forward

The information gained thus far and encapsulated in the current Status Quo Report provides many good points for discussion. The report in its current draft form should be distributed to the Steering Committee for further input and consideration. It may be useful for READ to prioritise actions and 'burning issues' from amongst those identified in the report, during the next SC meeting, if members will study it beforehand. The information may also inform an overall implementation planning chart for use by site management. It could also form the basis for a 'Where are we now' type of progress chart, so one can understand the status quo of the site at a glance. An important use of the information is to inform the development of the HMP and certainly the revision of the Implementation Plan, which is due later this year.

A look at the status quo of the TSWHS quickly reveals that there are things on the go, and that this site 'is happening'. A significant amount of conceptual and detailed planning has occurred and time has been spent detailing recommendations related to the better management of the site. Further action is now required. Strengthened participatory planning will help all stakeholders to better understand the site and work more closely together to strengthen the management of the site. Attention can also be given to the living heritage and local people that can become more involved in the management, through the existing Stakeholder Forum, for instance. The management of heritage resources and attributes in TSWHS is all about the management of how people use the site, and there is no better way of management than by managing together with these users. It is thus essential that further focus now be placed on the management staff and the local people involved in using the site, to see what support can be given to strengthen management through their ongoing activities. This requires local capacity development and time.

The local community of Buxton and surrounding villages has a World Heritage Site as a local asset, and if backed by united local support and continued local effort, this WHS can certainly stimulate the local economy. The scale of benefit is directly dependent on the level of local interest, effort and motivation. For well planned local economic development, New Town, Buxton, Norlim and Draaihoek specifically need a Local Economic Development (LED) Plan that includes linkages to the surrounding villages of Mokassa, Lokamonna, Takaneng, Tamasikwa and Thomeng. Here is an opportunity for a local community to show South Africa and the world how local action can ignite enduring local economic development that is well linked into the management and use of the TSWHS. As such, the full value of the heritage resource at hand, would need to be harnessed, and requires attention on making Taung Skull WHS a success.

The TSWHS also shows sustainability features, used as its potential to be developed into a major educational asset for the country. It can also become an example of how the conservation of heritage can help to support the local community, though this is not yet reflected in the status quo (although a start has been made with the sewing project). Not many World Heritage Sites in Africa have achieved the dream of heritage benefitting communities in tangible ways, and the TSWHS can be one of them. The economy of scale is favourable here: the numbers of people living around the site are not high, and considering that it is an economically depressed area, every little bit will help.

It is proposed that funding be sought so that the status quo of community livelihood be captured soon, so that there is a baseline against which to measure the anticipated future successes. The TSWHS Support Project could possibly be engaged here.

At the same time, the TSWHS should be an example of how development can occur while striving for a light footprint at the same time. Sustainability considerations are a central issue. Already the sparing use of water, reuse of local materials, and local and community initiatives that stimulate the local economy are linked to the WHS. Stronger and diversified relationships can be further explored, with strong relationships to learners and young people in Buxton being a top priority.

Participatory approaches to planning, mapping and development, conducted in a transparent manner, can best support the long term success of the TSWHS Support Project. And there are no better stakeholders that need to be involved than the young people, since it is they who will be involved in the site well into the future.

The TSWHS project must continue to remain adaptive to changing needs and circumstances. The management of the site must also continue to look for ways to include a broader group of stakeholders willing to participate. As such a stronger group of people all working towards a focused plan and united in a common effort can ensure the successful establishment and operation of the TSWHS.

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Appendix 1: Status Quo Photographs



Photograph 1: Old Powerhouse, road and limestone stockpile in Buxton Quarry



Photograph 2: Ruins of the former Buxton Lime Works from the proposed Entrance



Photograph 3: The local shop in the TSWHS



Photograph 4: Stone building at current Entrance.



Photograph 5: Taung Child Skull Fossil Site in the quarry, guarded by Dart's Pinnacle (left) and Hrdlička's Pinnacle (right)



Photograph 6: Limestone formation, or dolomite, typical of tufa deposits and typically yielding many fossils.



Photograph 7: Young men on a donkey cart towards Buxton.



Photograph 8: Sacred healing waters at Thomeng Falls.

Appendix 2: Area Sketch Plans



