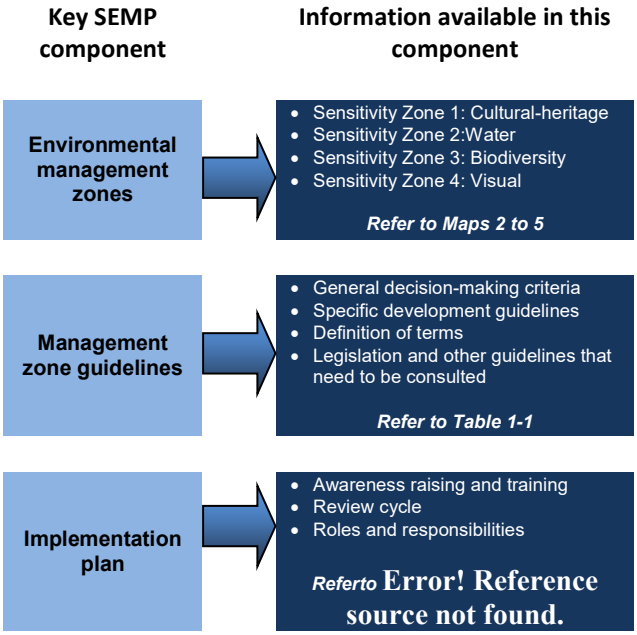
1 Strategic environmental management plan

1.1 Purpose and content of the SEMP

The SEMP is the culmination of a process that collects and integrates baseline information, assesses current policy directives and provides feedback from stakeholders. It consists of the following components:



The main purpose of the SEMP is to set out environmental management zones (EMZs) for the COH WHS geographic area and its proposed new buffer zone (2011) and to indicate the type of development considered desirable or not desirable within each zone.

The success of a SEMP is dependent on the level of information available. This SEMP isbased on information collected during the Status Quo phaseof the EMF process.

1.2 Environmental management zones based on sensitivity

As discussed in Chapter 5, four environmental sensitivity maps were developed depicting cultural-heritage, water, biodiversity and visual aspects (see Maps 2 to 5). Each sensitivity map is comprised of a number of attributes, with a specific sensitivity rating (refer to **Error! Reference source not found.**).EMZs were developed using these maps and overlay areas with highly sensitive attributes (e.g. critical biodiversity areas and rivers). As visual sensitivity is deemed an overarching environmental attribute, each development application will be considered in terms of site specific visual issues.

1.3 Management zone guidelines

Management zone guidelines are linked to each of the EMZs to ensure that future development within the COH WHS and its new proposed buffer zone (2011) takes place in a sustainable manner and does not compromise the authenticity/integrity of the COH WHS and environmental resources. The development guidelines contained in this EMF is primarily aimed at identifying development activities that is considered either desirable or non-desirable based on the sensitivity analysis and environmental attributes identified during the EMF process. This process resulted in the defining of Environmental Mangement Zones based on the attributes and sensitivity of the environment. The primary approach and intention of this development guideline is to strategically guide future decision making through discharging the environmental responsibility and mandate to exercise environmental management powers as provided for in the National Environmental Management Act and Constitution. The Management zones and their respective guidelines are presented in Table 1-1.

1.3.1 General decision-making criteria

Although Table 6-1 provides a preliminary indication of undesirable and preferred development options, it must be noted that regulatory authorities are still obliged to take all relevant factors into account when making decisions on applications submitted for authorisation. A description of the way in which regulatory authorities should interpret and apply these guidelines is set out below. In terms of the application process for development within the COH WHS and proposed buffer zone (2011), the following broad process is recommended:

1. Early consultation with the MA for guidance on all types of development queries or applications including alterations to buildings and structures, consent uses, rezoning and township establishment and services provision.
2. Consultation with the local authority regarding town planning and building control

requirements as well as services provision in terms of town planning and procedural requirements

3. Submission of an application in terms of the EIA Regulations to the relevant competent authority should it be required
4. Submission of an application in terms of NEMPAA to the Management Authority (MA) for consideration and a decision. Should step 3 above be required, then the application to the MA should include information on the outcome of the above EIA process.
5. Submission of town planning application and building plans to the local authority for a decision
6. Commencement of construction once all necessary aprovals have been obtained.

The relationship between culture and environment

The COH WHS was inscribed on the World Heritage List as a "cultural property". This designation has on occasion resulted in some confusion regarding what the composition of the site is and what matters should be considered in decisions on development applications.. In particular, some people have held the opinion that 'cultural' matters are distinct from 'environmental' matters and that the MA's decisions should only relate to cultural matters. These opinions are not supported for a number of reasons which are summarised in the points below.

International definitions and requirements

In order to attain WHS status, a site must be considered to be of outstanding universal value, in addition to meeting at least one of the selection criteria. The "Operational Guidelines for the Implementation of the World Heritage Convention" defines "outstanding universal value" as follows –

> *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 highest importance to the international community as a whole.*

As part of the nomination process for a site, the outstanding universal value – both in terms of description and geographical extent – must be motivated. The nomination documents for the COH WHS that were submitted to UNESCO, the ICOMOS report containing its recommendations on the nomination and the final decision by the World Heritage Committee accordingly all make reference to the COH WHS' outstanding universal value. The extracts below illustrate the perspectives which were taken on the site's universal vale –

- *The Sterkfontein Valley landscape comprises a number of fossil bearing cave deposits which are considered to be of outstanding universal value because they encapsulate a superbly preserved record of the fauna, including an invaluable record of the stages in the emergence and evolution of humanity, over the past 3.5 million years. These sites are valuable also for the study of extinctions of communities of animals and the conditions under which the ancient faunae of Africa have either adapted or become extinct. The cave deposits contain outstanding examples of ecological and biological processes deep in time, and over an extended period of time. In other words, they provide a series of ecosystems, each frozen or fossilised at its moment in time. This succession leads right up to the current, ongoing, ecological processes within the present cave system (where we have bats, lake-dwelling shrimps in the underground lake, owls and other birds that nest in the caves and other extent fauna) and in the ecozone surrounding the cave sites (nomination document).*
- *The area selected for nomination was determined by the topography, both so as to include potential additional fossil-bearing sites and also to ensure that the visual quality of the landscape as a whole is preserved against incompatible or undesirable intrusions. … The entire landscape also has a high level of authenticity and/or integrity … indeed, the landscape supports a domestic fauna in the same way that wild beasts grazed it in prehistoric times. … The nomination refers specifically to the fossil hominid sites. However, ICOMOS feels that the nominated property has another important property. Archaeological investigations have shown that the area was continuously occupied by* Homo sapiens *until around 20,000 BP, that is, from the Lower Palaeolithic to the Neolithic. Much of the contemporary landscape has remained unchanged since that time, and ICOMOS feels that this should*

be given prominence in the public presentation of the site.' (ICOMOS, 1999)

- *The many caves in the Sterkfontein Valley have produced abundant scientific information on the evolution of modern man over the past 3.5 million years, on his way of life, and on the animals with which he lived and on which he fed. The landscape also preserves many features of that of prehistoric man (final decision of the World Heritage Committee, 4 December 1999).*

These extracts show that the value of the COH WHS does not lie solely in the actual sites where fossils have been, or may be found. Part of the value includes the 'sense of place' that is created by the landscape and biodiversity of the area.

Apart from the approach to outstanding universal value, the definitions contained in the "Operational Guidelines for the Implementation of the World Heritage Convention" as well as Article 1 of the World Heritage Convention also indicate that the environment is often inextricably linked with 'culture'. For example, the definition of "cultural heritage" includes the following terms –

> **monuments:** *architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;*
>
> **groups of buildings:** *groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;*
>
> **sites:** *works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.*

The reference to "sites" above and the "combined works of nature and man" is relevant to the COH WHS as the interaction of both works of nature (the environment) and humans have given rise to the particular attributes of the site. For example, it is accepted that the rich fossil remains are present in the site largely due to the existence of surface and subsurface dolomitic limestone formations which preserved the fossils.

Furthermore, the definition of "cultural landscapes" in the "Operational Guidelines for the Implementation of the World Heritage Convention" is as follows –

> *Cultural landscapes are cultural properties and represent the "combined works of nature and of man" designated in Article 1 of the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.*

In addition to the above, the management of WHSs must retain the integrity and/or authenticity of the site. Authenticity is generally ascribed to a heritage resource that is materially original or genuine – as it was constructed and as it has aged and weathered in time. In the COH WHS it is difficult to strictly apply the concept of authenticity as the fossil remains were not "constructed" in normal terms. Scientific studies and methods have, however, largely managed to identify the remains to species level and to assign a time period to the finds. The "authenticity" of the fossil finds can therefore be established to an extent each time new fossil evidence is recovered. "Cultural landscapes" however, recognises the value of interactions between people and their landscape, and the importance of maintaining both cultural and biological diversity. The fossils in the COH WHS represent the evolution of modern man and its associated landscape and the natural landscape is therefore also important for contextualizing development and providing a sense of continued development of man and nature.

Integrity refers to the goal of maintaining all the critical elements of a site intact, i.e. it "is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes" (Operational Guidelines for the Implementation of the World Heritage Convention). For properties nominated under criteria (i) – (vi), the maintenance of integrity requires (amongst others) that the physical fabric of the property and/or its significant features must be in good condition; the impact of deterioration processes is controlled and the relationships and dynamic functions present in cultural landscapes or other living properties essential to their distinctive character is preserved. In the context of the

COH WHS, preserving the integrity of the site means that the natural environment around the fossil sites must also be managed.

National legislation

The relationship between culture and environment is also reflected in domestic legislation. In this regard, the environmental right contained in Section 24 of the Constitution includes a concept of 'well-being'. By implication, cultural considerations fall within the scope of well-being and consequently the environmental right. The definition of 'environment' in NEMA also expressly provides that cultural properties which influence well-being fall within the meaning of environment (Section 1). In addition, the COH WHS falls within the scope of NEM:PAA which has a particular environmental focus.

For the reasons set out above, the MA's responsibilities in protecting the COH WHS extend to the total area of the site and not just the "cultural artifacts" that are present in the site. The MA's decision-making in respect of the COH WHS will accordingly be a consideration of:

- Broader environmental issues that are relevant to the COH WHS' status as a WHS; and
- The implications of cumulative impacts on the universal value and integrity of the site.

In addition, environmental authorities will take cultural significance into consideration in their decision-making processes.

Biodiversity and ecosystem considerations

The COH WHS falls mainly within the Western Bankenveld eco-region, a region that forms a transition between the grassland biome and the savanna biome. This is reflected in the high diversity of both fauna and flora, with species represented from both biomes. This eco-region contains many vegetation types which are poorly conserved in South Africa. The dolomite areas have unique and distinctive features that are currently not included in any state or provincial nature reserves.

Within the COH WHS, there is rich habitat and species diversity, including species typical of grassland, savanna woodland, dry forest and mountains (Drakensberg afro mountain forest elements). In addition, species diversity is enhanced by local topographical variation (including gorges, dykes, sinkholes, north and south-facing slopes, and ridge tops). The COH WHS and surrounding area is also rich in medicinal plants (over 50 species in the area), and rich in attractive flowering plants.

Ecology is particularly concerned with the distribution and abundance of living organisms, and the interactions between organisms and their environment. The environment of an organism includes both its physical habitat, which can be described as the sum of local abiotic factors like climate and geology, as well as the other organisms which share its habitat. In ecology, an ecosystem is a community of organisms (plant, animal and other living organisms) together with their environment (or biotope), functioning as a unit.Much of the existing biodiversity areas and ecological systems represent an example of the vegetation and animal life that once existed within the landscape and which has evolved over many years. It is therefore important that these bio-diverse landscape areas be protected and preserved as they reflect functional and diverse natural habitat and species that forms part of our natural heritage.

In view of the established rich biodiversity in the COH WHS and the need to protect and preserve the ecosystems that support the rich biodiversity, decisions regarding development in the COH WHS and new proposed buffer zone (2011) will reflect the need to prevent any further development that will have an unacceptable negative impact on biodiversity and ecosystem functioning.

Landscape considerations in the management of land-use

The landscape of the COH WHS is an important factor which requires careful consideration in applications for development. The present day landscape of the COH WHS and buffer zone contains rich and varied examples of human intervention in the landscape from almost 4 million years ago to the present. The landscapes of the COH WHS shows evidence of human existence from relatively undisturbed cave sites and fossil contents to modern buildings and supporting infrastructure representing existing cultural practices. The landscape character (i.e. the quality that makes one tract of countryside readily distinguishable from any other) include patterns of land-use and settlement, subdivision, patterns of movement, relationships between rural elements and surrounding areas, topography, buildings representing various time periods, density and scale of development, architectural

style and materials as well as the form and function of structures and spaces.

In view of this, every potential development site includes a legacy from the past – not only in terms of the built environment, but also the human topography where present day patterns reflect the way of life in the past. There are many areas in the COH WHS where the landscape is intact, although there are areas where historical development has resulted in some inappropriate and undesirable development.

When applying landscape considerations to decisions on proposed developments, the following approach will be adopted:

- The landscape contributes significantly to the outstanding universal value and integrity of the COH WHS and facilitates a contextualised understanding and appreciation for the time-depth of the site.
- The landscape of the COH WHS should not be viewed as being static in time – changes may be permitted where they do not undermine the elements from the past that are important and that need to be preserved for future generations.
- Developments which are not compatible with the landscape of the wider area in which it is to be located will generally not be supported.
- Whilst landscape considerations must include an assessment of site specific issues, they must also include a consideration of the development in relation to the character and function of surrounding areas, i.e. the information provided in support of an application must address the impacts of the proposed development beyond the site or property on which it will take place.
- The cultural-heritage zone is highly sensitive to visual disturbance especially related to structures and infrastructure due to the intact natural character of the area. In terms of visual sensitivity both the visual impact of the proposed development on the site and its immediate structural elements as well as the visual impact of the proposed development within its immediate viewshed and region especially views from access roads and facilities that support the outstanding universal value of the COH WHS must be investigated. New developments or additions to existing buildings will generally not be supported where they are not confined to areas where the development will not detract from the existing cultural and natural landscape values. In exceptional cases where the proposed development does not conform with the above, mitigation measures such as screening may be considered where placement and structural element design options cannot be exercised due to physical constraints such as property shape and size. Applications must be supported by a visual impact assessment, unless waived by the MA.
- In the water zone visual sensitivity is mainly focused on the surface water elements, i.e. watercourses and associated floodplains and river valleys. Urban areas to a large extent have lost the visual link with watercourses owing to insensitive development of properties along watercourses as well as substantial flood attenuation structures and elements that largely resulted in the disappearance of watercourses in culverts, channels and storm water pipelines. Best practice dictates that other options be investigated and implemented.
- Areas in the biodiversity zone which represent predominantly natural vegetation with associated rich animal diversity tend to be highly sensitive to visual elements that are not considered natural. In general, most man-made elements are not considered natural and hence usually are highly visible within natural landscapes. Substantial parts of the grassland and biodiversity hotspot areas are located within the cultural-heritage and hydrology zones and hence share common visual sensitivities. Parts of the biodiversity zone are however located adjacent to the cultural-heritage and water zones and accordingly require special attention. In these areas non-natural elements are generally undesirable.
- The key visual experience in secondary zone 2 is linked to the use of the road networks and associated views of the surrounding landscape. The Protea Ridge forms an important visual landmark in the southern part of this area and acts as a visual barrier shielding any development located to the south of the ridge from views along the N14 road and properties within the COH WHS.
- The entire secondary zone 1 is considered to be highly sensitive to visual impacts due to its topography and generally low levels of transformation. The key visual experience in the

zone is linked to the use of the road network and associated views of the surrounding landscape which is characterised by a wide open valley as well as well defined ridges with low levels of transformation. The views from the Maropeng Interpretation centre, in all directions, are important for the experience of the centre and COH WHS in general. Developments which impact on these views will generally not be supported.

1.3.2 Specific development guidelines

This section of the SEMP provides the next level of guidance to prospective property owners, property owners, planners, developers and officials indicating in principle the basic types of activities commonly encountered in the COH WHS and the implications of proposed uses on the COH WHS and new proposed buffer zone (2011) identified during this EMF process.

Policy statements regarding development within the COH WHS and new proposed buffer zone (2011)

The COH WHS and proposed new buffer zone (2011) is primarily a rural area with pockets of historic and organic development and supporting infrastructure, some of which is essentially "out of place" in view of the present status of the site as a WHS. The sense of place of the WHS is largely made up of layers of "time" revealed by the present landscape; some elements are immediately visible while other elements require skill and experience to detect. The COH WHS and new proposed buffer zone (2011) is hence not uniform in function and appearance and this guideline reflects this diversity.

The principle of "cluster in space" is considered the overriding principle in terms of the spatial composition of development options in general. This principle dictates that the least sensitive part of any development site or land parcel be identified and that development options be clustered together within this least sensitive part, rather than it being spread out through the entire site or property. This principle should further be applied both on land that has been developed as well as land that has not been developed. On land that has been developed, additional development in terms of this guideline should be clustered with existing development except in instance where the original development was poorly placed in terms of sensitivity and the placement of additional elements will just exacerbate the original bad practice. In view of the above, the placement of all additional units on a farm portion should preferably be located within the immediate area (farmhouse precinct) already transformed by the dwelling house and associated structures.

Due mainly to the substantial geographical overlap of the cultural heritage, water and biodiversity sensitivity areas in the central part of the proclaimed COH WHS, it makes sense to present this "primary area" as a single consolidated geographical entity in this guideline. These zones, including a policy statement and a brief indication of the desirable and undesirable development options, form the essence of this guideline.

Supporting infrastructure

Development activities are intrinsically linked to the provision of essential and supporting services to ensure adequate and proper functioning of development activities. In general, the availability of bulk services should be one of the primary considerations leading to a decision to apply for increased development rights. Unfortunately, recent approaches by developers resulted in a number of instances where developers demand rights to develop in areas not yet serviced by bulk infrastructure. This approach to development is not supported by the MA. Development applications submitted for land located within the COH WHS and new proposed buffer zone (2011) should clearly indicate the existing availability of bulk services, the route and alignment of link services to the proposed development as well as the alternative services provision options that have been investigated during the EIA process. Alternative options for services provision with a focus on more sustainable and "greener" options should be investigated as a matter of principle.

Use of the development schedule

The development guidance schedule consists of a schedule (Table 1-1) indicating the sensitivity zones with an indication of the type of development activity option which is either considered "desirable" or 'undesirable" based on the sensitivity of the project site. The schedule only provides general guidance and the "definition of terms" section should be consulted to obtain further detailed information regarding the actual development options. These zones are presented in order of their importance based primarily in terms of the contribution it makes to the outstanding universal value of the COH WHS and proposed new buffer zone (2011). All of these zones are considered important in terms of the overall functioning of the WHS; however,

the cultural-heritage and closely associated water zone are considered the fundamental geological and hydrological building blocks of the COH WHS that provides for the preservation of fossil material. The biodiversity zone represents habitat elements that display a rich biodiversity due to the underlying geological and hydrological systems and limited human intervention in the recent past. The above three sensitivity zones (cultural-heritage, water and biodiversity) show a high level of overlap and have been combined into a zone referred to as the "primary zone". The remaining area contained within the proclaimed COH WHS which retains important elements of the outstanding universal value has been identified as secondary zones 1 and 2. Secondary zones 1 and 2 represent areas that provide substantial supporting functions to the primary zone due to its proximity to the primary zone and sensitive elements contained in these zones.

Each section further contains a policy statement that provides general policy approaches defining the context within which the more detailed "desirable and undesirable" development options should be considered. It should further be noted, that a range of development options as "desirable" is merely suggesting a preferred option in terms of the general sensitivity of a particular zone. Even development options indicated to be "desirable" may require substantial investigation and supporting studies including the need to follow the EIA process in instances where activities are "listed" in terms of the relevant EIA Regulations. Further, even though proposed activities may not be "listed", supporting evidence may well be required by the MA to fully motivate the application considering the sensitivity of the entire site.

It should further be noted that the development options indicated are not defined according to strict town planning definitions as these guidelines are based on environmental factors. This guideline is primarily concerned with the potential impacts commonly associated with certain development types and its implications for the COH WHS, rather than a detailed description of the land use type as is required for planning and land use purposes in terms of Town Planning Schemes. These guidelines should be used by all decision makers as a first line strategic guidancein reviewing development applications.

The guidelines make provision for a range of development options to be submitted for consideration. It is the responsibility of the applicant / Environmental Assessment Practitioner to choose from the available options, the most appropriate development option and to provide supporting motivation for the application. Not all options (desirable development) can be exercised on any property at any given point in time. This guideline provides an option to owners of multiple large properties to consolidate development options on parts of properties where it is both desirable and environmentally feasible with the intention to exclude development from more sensitive parts of their properties.

The sense of place experience in the COH WHS and associated new proposed buffer zone (2011) is substantially influenced by the visual picture made up of natural and cultural landscape forms and shapes. Visitors and tourists should be able to identify the area and its unique qualities almost by sight and experience rather than guidance supported only by road signage. For this reason, it is obvious that the manner in which the visual senses are guided should play a very important role in the management of development options within the COH WHS and new buffer zone (2011) area. The complexity of the various levels of visual sensitivity makes it almost impossible to make provision for a "visual zone" per se and hence the most important visual aspects have been addressed in the body of this report.

Existing lawful development and infrastructure within the COH WHS and the new proposed buffer zone (2011) may be maintained and managed according to existing approvals and requirements provided that it does not result in any unacceptable direct or indirect negative impact on the outstanding universal value of the COH WHS. Any further upgrading or amendment to existing use and zoning rights should be undertaken in view of this guideline and its requirements. In instances where existing lawful development on a property already exceeds the provisions of this guideline, any applicant should carefully consider the merit of a new application and should provide substantial supporting reasons and motivation for any such application. It should be noted that the development options provided in the "Development guidance schedule" requires choices to be made by the applicant/developer in terms of the extent of development envisaged on each property. The schedule

provides a proposed range of options and does not imply that all options can be applied for at any given time. The options provided are subject to consultation, the submission of the relevant application documents and information and a positive decision by the MA.

It should be understood that the COH WHS and new proposed buffer zone (2011) is unique and hence requires careful consideration before development should be approved.

Non compliance to legal provisions and application requirements will certainly result in delays in decision making or negative decisions failing the use of correct procedures by the applicant. Further, non compliance with conditions contained in the approval process is viewed as a serious offence. In instances of failure by the owner or applicant to fully comply with conditions or statutory requirements, the MA will be obliged to take the necessary steps to secure compliance.

Development guidance schedule

Table 1-1presents the development guideline schedule for the environmental sensitivity areas represented in **Error! Reference source not found.**, which is a consolidation of all the most important biophysical and cultural attributes found in the COH WHS and the new proposed buffer zone (2011).

Table 1-1: Management zone guidelinesfor the COH WHS and the new proposed buffer zone (2011)

Note: It is imperative to consult the definition of terms in Section 6.3.3.

<table>
<tr><th>Sensitivity zones</th><th colspan="4">Policy statement and decision guideline</th></tr>
<tr><td rowspan="4">Primary zone

(Area of Outstanding Universal Value comprising the primary cultural heritage, water and biodiversity elements)

This zone consists of 39,549.68 ha of land (49%) of the total site excluding the buffer zone.

This is the PRIMARY SENSITIVITY AREA of the EMF.</td><td colspan="4">Policy statement:

The primary zone is considered the most important zone in terms of the outstanding universal value of the COH WHS. This zone represents the extent of the fossil bearing dolomitic limestone features and caves and Karst system that extends beyond the boundary of the existing proclaimed WHS and originally proposed buffer zone (2008). These physical features and resulted landscape defines geographically the most important primary natural elements of the COH WHS. The need to protect and preserve the integrity of this zone is without doubt the prime management responsibility of the MA in terms of its mandate to protect, preserve and present these elements. It is for the above reason that a new proposed buffer zone (2011) is proposed outside of the present boundary of the COH WHS for the full extent of the dolomitic limestone area where it overlaps with the originally proposed buffer zone (2008) within the study area. This proposed new buffer zone (2011) extends north-east of the proclaimed WHS into an area that is essentially rural in nature with existing development that is focused around homesteads on portions of largely undeveloped land. The proposed new buffer zone (2011) to the south-west of the WHS is however substantially fragmented being an area of agricultural holdings with associated mixed use development.

As indicated, the primary zone and associated new proposed buffer zone (2011) is not in a pristine “untouched” condition and historical development and infrastructure has resulted in both appropriate and undesirable development in this zone. It is hence important to provide best environmental practice guidance both in terms of areas that has been subject to development (mitigation approach) and areas that are largely representing intact functional landscapes and systems. The possibility of introducing flight corridors in conjunction with aviation authorities and affected parties is being investigated in order to manage the movement of aircraft within the COH WHS airspace.

The substantial functional and intact natural and cultural landscapes within this zone provides for a range of opportunities for the future management of this zone in a responsible and sustainable manner to the benefit of the COH WHS as well as visitors, tourists and certainly the owners of properties. These properties still provide a range of limited development options that will ensure the long term protection and future functioning of the area as an important cultural and natural landscape and functional ecological system which will provide ongoing opportunities for the discovery of fossil elements and the advancement of the understanding of human development.

The rural landscape of today is the result of successive generations of farmers working and shaping the land in an effort to make a living. These past rural practices have had, compared to urban development and agricultural sub divisions (agricultural holdings) relatively limited negative impacts on the outstanding universal value of the COH WHS as these practices resolved around grazing and cultivation activities that required large portions of land for grazing and smaller patches of land on good agricultural soils for cultivation purposes. These relatively large portions of land (mostly larger than 20 ha) generally only requires limited access to rural roads and contains structures closely related to farming and agricultural practices without any formal services provision and generally low human density. These rural and farming areas must continue to be places where people can live and work provided that it is sensitive to the landscape character and sense of place of the area. This type of use of land, when practiced in conjunction with sustainable and ecological farming practices, holds the best promise for the preservation, conservation and presentation of the outstanding universal value of the WHS.

The area further contains substantial surface and sub surface water resources contained in a series of aquifers and watercourses located throughout the site and buffer zone (2008). These aquifers appear to be divided by sub surface dykes into a number of compartments. This requires that water resources (both quantity and quality) be managed responsibly to ensure sufficient water availability for the primary development activities such as farming and conservation which is highly reliant on natural sources of water. This source of natural water is the only source of water for large parts of the COH WHS and proposed buffer zone (2008) and hence should be protected and managed accordingly. Development activity that places a high demand on water resources or has the potential to pollute this water resource needs to be excluded from this area.

The existing biodiversity hotspot areas represents an example of the vegetation and animal life that once existed within this landscape and that has evolved over many years in conjunction with the landscape changes that took place. It is hence important to protect and preserve these bio-diverse landscape areas as it reflects functional and diverse natural habitat and species that forms part of our natural heritage.</td></tr>
<tr><td colspan="2">COH WHS</td><td colspan="2">Buffer zone</td></tr>
<tr><td>Desirable development and associated</td><td>Undesirable development and associated</td><td>Desirable development and associated</td><td>Undesirable development and associated</td></tr>
</table>

Sensitivity zones	Policy statement and decision guideline			
	infrastructure	**infrastructure**	**infrastructure**	**infrastructure**
	Additional dwelling unit Agricultural buildings Boutique hotel/lodge Dwelling house Extensive agriculture Farm labourer structures Fossil research and associated infrastructure Guest house Guided scientific tours Home occupation Infrastructure: Associated infrastructure Low impact camping site Nature and heritage trails, mountain biking and horse trails Servant quarters Tourism incentive accommodation	Advertising on site Agri-industry or expansion of existing operations Aircraft landing strips or expansion of existing strips Bed and breakfast Business premises or expansion of existing facilities Camping Commercial antennae Conference facility in excess than provided for in this guideline or expansion of existing facilities Farm shop Heli-stops or expansion High density residential development or expansion of existing facilities Holiday accommodation Industrial activity Infrastructure: Bulk engineering infrastructure facilities or transmission lines Intensive agriculture or expansion Lifestyle estates or expansion of existing estates Mining and quarries Motorised outdoor recreation Place of instruction Place of worship Resort Restaurant Retirement village Roadside advertising Service stations or expansion Service trade Subdivision of farm	Same requirements as those for the COH WHS	Same requirements as those for the COH WHS unless the area has already been substantially subdivided and developed such as the agricultural holdings and informal settlements located to the south of the N14 and west of the Krugersdorp Nature Reserve – in these instances, best practice management in terms of services provision and impact mitigation should apply to try and limit negative impacts on water and visual resources

<table>
<tr><th>Sensitivity zones</th><th colspan="4">Policy statement and decision guideline</th></tr>
<tr><td></td><td></td><td>portions or land</td><td></td><td></td></tr>
<tr><td>Secondary zones 1 and 2

This zone consists of 27,069.71 ha of land (51%) of the total site excluding the buffer zone, comprising 20,096.08 ha (zone 1) and 6,973.63 ha (zone 2) respectively

These are the SECONDARY SENSITIVITY AREAS of the EMF</td><td colspan="4">Policy statement:

The secondary zones consist of two distinct geographical zones within the boundary of the proclaimed COH WHS which essentially comprises elements of outstanding universal value associated with the COH WHS that surrounds the primary zone.

Zone 1

This Zone being located predominantly away from urban pressures and immediate access from the adjoining urban areas has not generally been subject to levels of traffic and access infrastructure and hence development impacts generally associated with areas located nearer to urban development and expansion. The farm portions in this area have generally remained extensive except for a number of smaller portions (smaller than 40 ha) located in the far northern reaches of this zone in close proximity to the Hartebeestpoort Dam and adjoining tourism facilities. In general, this area is characterized as presenting a rural character with wide and expansive views from the major road system (D400 East/K26) which traverse a wide plain flanked by prominent ridges on either side as well as an area of distinct incised river valleys and hills located in the south western corner of the area. This area is characterized by limited development except for the Hartebeesthoek Satellite Tracking facility and associated structures which visually detract from the surrounding rural landscape. The Maropeng Information Centre is also located within this zone and requires special consideration and attention in terms of activities and development in its vicinity. The possibility of introducing flight corridors in conjunction with aviation authorities and affected parties is being investigated in order to manage the movement of aircraft within the COH WHS airspace.

Zone 2

This zone can be characterized as an area consisting mainly of sub divided farm portions in an area characterized by strongly undulating plains, prominent ridges and secluded hills and rocky outcrops. Development in this area is characterized by a mixed use of rural and tourism facilities resulting in a cultural landscape with a general rural character that has seen limited modification due to intensive agricultural or agri-industry and tourism related facilities dispersed in the landscape. This area is well provided with surfaced road infrastructure resulting in these roads becoming popular tourism routes both for motorized vehicles and cyclists alike. Although this road system provides for increased access to properties, it unfortunately also have to content with negative impacts related to traffic safety, congestion and traffic noise which needs to be carefully managed. The range of development options provided in this zone is aimed at the maintenance of the rural character of the area with limited provision for tourism and non-motorised outdoor recreational facilities in view of the existing tourism uses and road infrastructure. The possibility of introducing flight corridors in conjunction with aviation authorities and affected parties is being investigated in order to manage the movement of aircraft within the COH WHS airspace.

Siting new development in rural areas in a way that protects the integrity of these natural and man made features is an essential part of sustainable development.</td></tr>
<tr><td></td><td colspan="2">COH WHS
Secondary zone 1</td><td colspan="2">COH WHS
Secondary zone 2</td></tr>
<tr><td></td><td>Desirable development and associated infrastructure</td><td>Undesirable development and associated infrastructure</td><td>Desirable development and associated infrastructure</td><td>Undesirable development and associated infrastructure</td></tr>
<tr><td></td><td>Same provision as for the primary zone excluding:

Fossil research and associated infrastructure, but including:

Infrastructure: Associated infrastructure

Bed and breakfast

Farm stall</td><td>Same as for the primary zone excluding uses indicated in the “desirable” column (left)</td><td>Same provision as for the primary zone excluding:

Fossil research and associated infrastructure, but including:

Infrastructure: Associated infrastructure

Bed and breakfast

Commercial kennel</td><td>Same as for the primary zone excluding uses indicated in the “desirable” column (left)</td></tr>
</table>

Sensitivity zones	Policy statement and decision guideline			
	Resort Restaurants		Farm stall Plant nursery Resort Restaurants	

1.3.3 Definition of terms

The definition of terms that follow should be read in conjunction with the schedule of management zone guidelines presented in Table 1-1:

"additional dwelling unit" means dwelling unit that may be erected subject to approval from the MA on an existing subdivided farm portion or agricultural holding where a permitted dwelling house has first been erected and no additional dwelling unit or structures exceeding this provision has been erected to date. The additional dwelling unit shall remain on the same cadastral unit as the dwelling house. Only a single additional dwelling unit is permitted on an existing subdivided farm portion or agricultural holding regardless of the size of the portion or holding. An additional dwelling unit including a parking structure, may not exceed 250 m^2 coverage and the development footprint may not exceed 500 m^2 per unit. The additional unit must be a single storey construction and must preferably be placed adjacent to the dwelling house to limit the visual impact of the proposed development to the original farmstead precinct.

"advertising on site" means the placing of physical advertising signs and hoardings within the property located within the COH WHS and buffer zone, this includes the attachment of banners and posters to existing infrastructure, walls or fences for advertising purposes. This excludes on site facility signs approved by the MA.

"agricultural buildings" means any permanent structures such as required for the parking and general storage of farm vehicles, implements and produce directly related to the farming activities on site. Any activity or structure that exceeds merely the storage of the above such as packaging, sorting or commercial activity is excluded from the above provision.

"agri-industrial" means an undertaking involving the beneficiation of primary agricultural produce.

"agricultural land" means any land which is or may be used for agricultural purposes.

"agriculture" means the cultivation of land for crops and plants, or the keeping and breeding of animals, or the operation of a game farm, including use on an intensive basis of the natural veld or land, and includes only such activities and buildings as are reasonably connected with the main farming activities, but excludes an agricultural industry.

"agricultural holding" means a holding established in accordance with the Agricultural Holdings (Transvaal) Registration Act, 1919 (Act No. 22 of 1919) or any amendment thereof.

"aircraft landing strips" means any site prepared for use by the owner/user of an aeroplane to land or take off within the boundary of the COH WHS and buffer zone.

"associated infrastructure" means the minimum infrastructure required to service a particular development which is aimed at best environmental practice and limited impact on the environment. The provision of sustainable methods such as grey water use, solar energy, ecological storm water management etc. should be promoted. In areas underlain by dolomitic conditions, the provision of on site waste water (sewage) treatment and storm water runoff requires particular attention. Soak away "French drains" and septic tanks are not acceptable systems. Properly constructed and maintained conservancy tanks with sufficient capacity is the only acceptable option at present. Storm water management should be aimed at the prevention of ponding of water. In instances where access is required to properties beyond the existing surfaced road system, careful consideration should be taken of the visual and physical impact of surfaced (tarred) roads in the COH WHS. Alternative options ranging from well maintained and sited gravel surfaces to limited provision of cobbled or cement sections in areas that require high maintenance or vehicle traction problems should be considered in preference to surfaced (tarred) roads. Access pathways to individual units on a property should also be carefully designed and constructed with a width and length limited by visual and functional considerations in line with an approach aimed at minimum disturbance.

"bed and breakfast establishment" means a dwelling house or additional dwelling unit in which the occupant of the dwelling supplies lodging and meals for compensation to transient guests who have permanent residence elsewhere, provided that:

(i) the dominant use of the dwelling house concerned shall remain for the living accommodation of a single family; and

(ii) the property complies with the provisions pertaining to a bed and breakfast.

"bulk engineering infrastructure" means the provision of large scale engineering services and facilities not aimed at providing a direct link or service only to an individual property or erf. This includes facilities such as waste water treatment works, water purification plants, electrical sub stations and associated power lines as well as link services excluding reticulation.

"business premises" means a building or property from which business is conducted and includes a shop, office, financial institution and building for similar uses, but does not include a place of assembly, place of entertainment, institution, service station, motor repair garage, industry, industrial hive, noxious trade, risk activity, restaurant, adult entertainment business or bottle store.

"camping site" means a property or part thereof in which tents and caravans are utelised for accommodation for temporary visitors, and includes ablution, cooking and other facilities for the use of such visitors and must comply with the following requirements: 1 site per property, maximum of 20 tents or 20 caravans at a density of 1 tent/caravan/10 ha of property size with central ablution facilities including cooking/washing. Each tent sleeps maximum 4 people.

"commercial antenna" means a facility incorporating a high mast, for the transmission and/or receiving of electromagnetic waves, and includes a television station, a radio station and a cellular communication tower.

"commercial kennel" means kennel services for dogs, cats and similar animals, and includes commercial breeding, boarding kennels, pet motels and dog training centres.

"conference facility" means a place of assembly without overnight accommodation, which also supplies meals, which normally is an additional activity to a primary function such as a boutique hotel, guest-house or restaurant and where the building restrictions will be those of the primary function, except that additional parking may be required.

"development" in relation to a place, means any process initiated by a person or body to change the use, physical nature, or appearance of that place, and without limitation includes:

(a) the construction, erection, alteration, demolition or removal of a structure or building for which building-plan approval is required;

(b) change of actual land-use;

(c) up-or downgrading of development rights, including the subdivision or consolidation of land;

(d) the preparation, surveying or advertising of land in anticipation of approval of amended rights or in a way as to suggest possible approval;

(e) the installation of infrastructure or the preparation of land there for;

(f) changes to the existing or natural topography of land;

(g) the destruction or removal of vegetation; and

(h) any other physical change being brought about in respect of land, buildings, infrastructure or other structures.

"dwelling house" means a permanent homestead for occupation by the owner of the property either full time or part time consisting of a single building or consolidated units (rooms)(single storey) without any separate outbuildings or structures except for a structure providing for the parking of vehicles not exclusively used for farming purposes. Outdoor entertainment areas such as a swimming pool and braai area as well as all soft and hard landscaping areas must form a single consolidated unit with a limited and well defined footprint. A dwelling house including a parking structure may not exceed 500 m^2coverage and the development footprint may not exceed 1,000 m^2 per dwelling house.

"extensive agriculture" means agriculture that involves the use of the natural vegetation without any attempt to increase its yield above that of the original condition, and/or the cultivation of up to 20 ha of land for crops or pastures. This refers primarily to the grazing of livestock and game on natural veld but does allow for a limited amount of crop or pasture production. Included is the use of facilities such as dips, spray races, and holding kraals.

"farm labourer structures" means any permanent structures for the bona fide occupation of farm

labourers employed on the same farm portion including provision for soft and hard landscaping which must form a single unit with a limited and well defined development footprint if not contained within the dwelling house footprint. Each structure should not exceed 60 m^2 within a footprint of 100 m^2.

"farmstall" means a building, located on a farm, which does not exceed 100m^2 in floor space, including storage facilities, where a farmer sells products produced and processed on this farm to the general public.

"farm shop" means a building, located on a farm, which does not exceed 100 m^2 in floor space, including storage facilities, where the farmer sells goods, whether to his employees or to the general public.

"footprint" means the total area transformed by the structures, buildings, soft and hard landscaping excluding an internal access road to gain access to structures and buildings.

"fossil research" means all activities undertaken by an authorized scientist to excavate a site for fossil evidence or related scientific information within the boundary of the declared COH WHS and buffer zone. Such excavation activity must be authorised by at least SAHRA and t**he MA.**

"guest house" means an additional dwelling unit (250 m^2) which is used for the purpose of letting individual rooms for residential accommodation, with or without meals, provided that:

(i) the property is retained in a form which can easily be re-used by a family as an additional dwelling unit; and

(ii) all amenities and provision of meals shall be for the sole benefit of bona fide lodgers.

"guided scientific tours" means any formal tours undertaken by a suitably qualified and registered tour guide to any heritage site or fossil excavation site with the written permission of the land owner and relevant authorities.

"heli-stops" means any site prepared for use by the owner/user of a helicopter to land or take off within the boundary of the COH WHS and buffer zone excluding sites required for use by emergency personnel.

"high density residential development" means residential development of single privately owned stands and units with associated services in densities associated with urban development.

"holiday accommodation" means a harmoniously designed and built holiday development used for holiday or recreational purposes, whether in private or public ownership, which:

(a) consists of a single enterprise in which accommodation is supplied by means of short term rental or time sharing only;

(b) may include the provision of a camping site, mobile home park and dwelling units;

(c) may also include a restaurant and indoor and outdoor recreation facilities; and

(d) may include a boutique hotel and lodge.

"home occupation" means the practicing of an occupation, or trade, or the conducting of an enterprise from a dwelling house by one or more occupants of the dwelling house, provided the dominant use of the dwelling house concerned shall remain for the living accommodation of a single family.

"hotel/boutique hotel/lodge" means property used as a temporary residence for transient guests, where lodging and meals are provided, and may include associated conference and entertainment facilities that are subservient and ancillary to the dominant use of the property as a hotel/lodge, as well as premises which are licensed to sell liquor for consumption on the property, but does not include an off-sales facility. The facility is limited to a single hotel, boutique hotel/lodge or consolidated units on a property with a maximum of 10 units per property at a density of 1 unit per 10 ha of property size, each unit/suite should not exceed 120 m^2 and is limited to sleep a maximum of 3 people. In addition, conference and entertainment facilities in scale can be provided at a rate of 10 m^2 floor space/unit up to a maximum of 100 m^2.

The primary structure including provision for conference/entertainment should be a single storey development with a maximum building footprint of 700 m^2. **"industrial activity"** means such industrial and/or trade purposes for example factories , warehouses, workshops and similar purposes as is generally defined in relevant Town Planning Schemes.

"intensive agriculture" means a farming system involving high yields of crop or livestock products by

means of replacing or enhancing the natural agricultural resource base. Included are operations involving irrigation of crops or pastures by means of centre pivot irrigation systems including as example such activities as chicken batteries, egg packaging facilities and woodlands, etc.

"life style estates" means land containing residences usually developed in relation to significant open space, the latter which may (or may not) include other lower intensity uses such as recreation, golf courses or polo fields.

"low impact camping site" means a property or part thereof in which tents are utlised for accommodation for visitors, and includes ablution, cooking and other facilities for the use of such visitors. These camping facilities must however be exclusively in support of low impact tourism activities such as horse riding, hiking and mountain biking and must comply with the following requirements: 1 site per property, maximum of 20 tents at a density of 1 tent/10 ha of property size with central ablution facilities including cooking/washing. Each tent sleeps maximum 2 people.

"mining and quarries" has the meaning assigned to it in the Mineral and Petroleum Resources Development Act, 2002.

"nature and heritage trails, mountain biking and horse trails" means any formal trails used on a permanent basis for the conducting of any of the above non-motorised outdoor activities both on a commercial or non commercial basis. The design and construction of these trails should be done in accordance with best management principles and facilities should make provision for public amenities normally associated with trail use.

"place" means that the concept of place recognises the importance of uniqueness and requires that uniqueness be enhanced, not destroyed. It relates to both the natural and the built environment.

"place of instruction" means a crèche, pre-primary school, school, college, technical institute, university, research institution, convent, (public library), public art gallery, museum or other centre of education and includes an associated hostel, but excludes a building or erf which is intended in total or mostly as a certified school, correctional facility or reformatory or industrial school or reformatory.

"place of worship" means a church, synagogue, mosque, temple, chapel or other place for practicing a faith or religion, and includes any building and a residence associated therewith, but does not include a funeral parlour, cemetery or crematorium with related chapel.

"plant nursery" means a property which is used for the sale of plants, gardening products and gardening equipment and excludes the commercial planting of trees or plants for horticultural purposes and excludes and coffee shop or restaurant facility.

"resort" means facilities for overnight tourism accommodation which sleeps more than 15 people, a maximum of 10 units per property at a density of 1 unit per 10 ha of property size, each unit/suite should not exceed 120 m^2 and is limited to sleep a maximum of 4 people. The resort should be a single storey development or consolidate units with a maximum building footprint of 700 m^2. In addition, conference and entertainment facilities in scale can be provided at a rate of 15 m^2 floor space/unit up to a maximum of 150 m^2.

"restaurant" means a commercial establishment where meals and liquid refreshments are prepared and/or served to paying customers for consumption on the property, and may include licensed provision of alcoholic beverages for consumption on the property. The size is limited to a maximum of 100 patrons.

"roadside advertising" means the placing of physical advertising signs and hoardings within the road reserve of any road within the COH WHS and buffer zone, this includes the attachment of banners and posters to existing infrastructure, walls and fences for advertising purposes. This excludes on site facility signs approved by the MA.

"scale" means the extent of development relative to its natural and built environment.

"servant quarters" means any permanent structure for the bona fide occupation by domestic workers employed on the same farm portion including provision for soft and hard landscaping which must form a single unit with a limited and well defined footprint if not contained within the dwelling house footprint. This single building unit may not exceed 60 m^2 and should be located within the footprint of the dwelling house or additional dwelling unit.

"service station" means property for the retail supply of fuel and includes trading in motor vehicles, oil, tyres or motor spares, the repair or overhauling of motor vehicles and washing of vehicles, but does not include spray-painting, panel beating, blacksmithery or body work. Any portion of a shop or business premises which incorporates facilities for retail supply of fuel for the use of motor vehicles, shall be deemed a service station.

"service trade" means an enterprise which is:

(i) primarily involved in the rendering of a service for the local community such as the repair of household appliances or the supply of household services;

(ii) not likely to be a source of disturbance to surrounding properties;

(iii) employs at most 10 people;

(iv) not liable, in the event of fire, to cause excessive combustion, give rise to poisonous fumes or cause explosions;

(v) includes a builder's yard and allied trades, laundry, bakery, dairy depot and similar types of uses; but

(vi) does not include an abattoir, brick-making site, sewage works, service station or motor repair garage.

"site development plan" means a plan that shows details of proposed development, including:

- existing biophysical characteristics of the property
- the layout of the property indicating the use of different portions of the property
- the position, use and extent of buildings
- sketch plans and elevations of proposed structures including information about their external appearance
- the alignment and general specification of vehicle access, roads, parking areas and pedestrian footpaths
- typical details of fencing or walls around the perimeter of the land unit and within the property
- electricity supply and external lighting proposals
- provision for the disposal of storm water, sewage and refuse
- water supply
- external signage details
- general landscaping proposals including vegetation to be preserved, removed or planted, external paving, and measures for stabilising outdoor areas where applicable
- the phasing of the development
- the proposed development in relation to existing and finished ground levels, including excavation, cut and fill
- statistical information about the extent of the proposed development, floor area allocations and parking supply or any other details as may reasonably be required by the MA or Council.

"suite" means guest accommodation which comprises more than the bedroom, including a lounge, etc.

"sustainability" means a sustainable system which can continue to operate successfully indefinitely.

"tourism incentive accommodation" means permanent provision of accommodation units on actively farmed properties to provide bona fide farmers with additional opportunity to generate income. Units may not exceed the following provisions: 1 unit per 10 ha of property size, 5 units maximum per property, each unit limited to 150 m^2 including a structure for the parking of a car, development footprint not exceeding 250 m^2. Owner must submit a formal application for such unit/s and provide a detailed motivation including services provision for consideration. Land or units may not be transferred to any other person, organisation or group of people. Provision does not apply to already existing agricultural holdings.

"transformation" means the physical or legal alteration of the land use as a result of the undertaking of any activity.

"urban areas" means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated within the edge of built-up areas.