IUCN Conservation Outlook Assessment 2017 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Vredefort Dome. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Vredefort Dome

SITE INFORMATION

Country:
South Africa
Inscribed in: 2005
Criteria:
(viii)

Site description:
Vredefort Dome, approximately 120 km south-west of Johannesburg, is a representative part of a larger meteorite impact structure, or astrobleme. Dating back 2,023 million years, it is the oldest astrobleme yet found on Earth. With a radius of 190 km, it is also the largest and the most deeply eroded. Vredefort Dome bears witness to the world's greatest known single energy release event, which had devastating global effects including, according to some scientists, major evolutionary changes. It provides critical evidence of the Earth's geological history and is crucial to understanding of the evolution of the planet. Despite the importance of impact sites to the planet's history, geological activity on the Earth's surface has led to the disappearance of evidence from most of them, and Vredefort is the only example to provide a full geological profile of an astrobleme below the crater floor. © UNESCO

SUMMARY

2017 Conservation Outlook

Significant concern

The geological values for which the Site has been inscribed on the World Heritage List have not been significantly impacted and remain intact, although some localized impacts may have occurred where specific geological evidence is vulnerable to damage caused by inappropriate visitation. The rural and natural landscape setting of the Site remains essentially intact, but unapproved tourism infrastructure development has caused some impacts. Pollution of the Vaal River from contamination by upstream mining activities and urban settlements remains the most significant threat to the landscape setting of the Site, with the potential to cause dieback of riparian vegetation and to affect biodiversity. While the State Party has taken steps to regulate tourism development and to address pollution of the Vaal River from communal waste water, the delay in the proclamation of the Site under national legislation, and the ensuing absence of a Management Authority, causes the Site to be inadequately protected. Until that situation has been adequately addressed, the Conservation Outlook of Vredefort Dome WHS must remain of significant concern.

Current state and trend of VALUES

Low Concern
Trend: Stable

The geological features of the Site have not been significantly impacted and remain intact (RSA, 2013), although some minor localized impacts to specific geological evidence may have occurred. The rural and natural landscape setting of the Site is vulnerable to inappropriate development, and some limited impacts from unapproved tourism infrastructure developments have occurred (UNESCO and IUCN, 2010). Steps have been taken to regulate tourism development (RSA, 2013).

Overall THREATS

Low Threat

Tourism activities in the WHS currently occur in an ad hoc way. The lack of a central focal point for visitors that provides information for geo- and eco-tourism activities currently acts as a cap on visitor numbers. Were this cap to be removed and visitors were allowed to move more freely around the site, disturbance or damage of sensitive sites and removal of geological material and flora could occur and, thus, have negative impact on the scenic values of the site and on its geological features of Outstanding Universal Value.

Overall PROTECTION and MANAGEMENT

Serious Concern

After a long hiatus, progress was made in 2012 with the signing of a Memorandum of Agreement between the State Party and private landowners. The State Party implemented a plan in 2015 to address the issues raised by the IUCN 2014 report, but consensus has yet to be reached on drafts of the Conservation and Management Authority regulations that are a necessary precursor to the proclamation of the WHS under national legislation and establishment of the MA. Although there are interim arrangements in place to ensure the management of the Site, significant gaps are likely to remain until a Management Authority is established and operational, and its responsibilities clearly defined.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Evidence of a deeply eroded complex impact structure**
Criterion:(viii)

The Vredefort Dome is the eroded remnant of the central uplift of the oldest and largest confirmed complex impact structure on Earth. It provides exceptional exposure of the features found deep below the surface beneath large impact craters that are inaccessible elsewhere in the world (IUCN 2005).

▶ **Evidence of impact energy release**
Criterion:(viii)

The Vredefort Dome is the site of the world’s greatest known energy release event. The extreme physical conditions of the impact produced a range of distinctive shock metamorphic, shock melting and deformation effects, several of which are visible in the outcrops of the site. These include shatter cones, impact melt (Vredefort Granophyre) and other impact-related melt breccias (pseudotachylite), in addition to microscopically-visible shock features (coesite and stishovite high-pressure polymorphs of quartz; planar microdeformation features in quartz and zircon). (IUCN 2005).

▶ **Evidence of Earth's deep crust**
Criterion:(viii)

As a result of the impact, the site is one of only a few places worldwide that exposes rocks that originally lay at depths in excess of 25 km below the surface 2,020 million years ago. The entire 25-km-deep crustal profile is

exposed as a result of the extreme differential uplift and rotation caused by post-impact rebound that formed the Vredefort Dome in the centre of the impact structure (IUCN 2005).

▶ Evidence of the record of life

Criterion:(viii)

Evidence of the the development of life on Earth is found through fossil stromatolites, protected in one of the serial sites (IUCN 2005).

▶ Evidence of major stages of Earth's history

Criterion:(viii)

The site, its satellites and its immediate surroundings expose rocks whose formation spans more than 1,200 million years of Earth's history preceding the impact, from 3,200 Ma to 2,000 Ma ago, providing important insights into how the first continents formed, geological cycles spanning hundreds of millions of years, and important clues about the evolution of Earth's early atmosphere, ocean and surface processes (IUCN 2005).

▶ Unusual landscape features

Criterion:(viii)

The Vredefort Mountainland is the product of differential erosion of layers of rock that underwent extreme rotation and structural disruption as a result of the impact event. The WHS lies in the centre of this unusual, 100-km-long, crescent of ridges and valleys that create an exceptional and unique landscape.

Other important biodiversity values

▶ Fauna and flora values

The site displays a diverse range of ecosystems reflecting interaction between underlying geology, topography, microclimate and human influences. More than 600 floral species belonging to the Sub-humid Mountain Bushveld and Moist Cool-Temperate Grassland endemisms are present. Over 235 bird species occupy the diverse habitats and decreasing

agricultural activity has seen the site repopulated by a diverse range of antelope species, giraffe, zebra, wildebeest and buffalo, which join the smaller antelope, rodent and primate (monkeys, baboons) species that have survived in the mountainland. A Breeding and Research Centre established by the Johannesburg Zoo is aimed at breeding the endangered watled crane, buffalo and various antelope species, and houses a lion population. A private cheetah breeding centre has been established adjacent to the WHS. The site hosts diverse butterfly, amphibian and reptile populations (IUCN 2005).

Assessment information

Threats

Current Threats

High Threat

The continued absence of a Management Authority to approve and monitor infrastructure development and expansion and visitor access remains a major problem with far reaching implications. Approval and implementation of management documentation (eg Integrated Management Plan (IMF), Environmental Management Framework (EMF), Spatial Development Framework, etc) is essential if the true potential of the site is to be realised. The demands on water in terms of Vaal River quality from mining and urban activities upstream of the site, and both quality and quantity of resources in the WHS remain a significant concern for both current activities and future expansion (IUCN consultation, 2014).

► Tourism/ Recreation Areas

Low Threat
Inside site, localised(<5%)

Expansion of tourism infrastructure has impact on the scenic and landscape features of the site, not only from the point of view of expanded accommodation facilities but also through the creation of hiking/biking trails and adventure tourism activities. The State Party has taken direct steps to

regulate illegal tourism developments on-site, and no new infringements have been reported (RSA 2013). The new Environmental Management Framework (EMF) being developed will determine the kind of land uses permissible for the area. The detail of this spatial planning tool is critical for ensuring protection of the rural-natural scenic and landscape values of the property (RSA 2013).

▶ **Household Sewage/ Urban Waste Water, Fire/ Fire Suppression, Other Ecosystem Modifications, Tourism/ visitors/ recreation, Dams/ Water Management or Use**

High Threat
Inside site, scattered(5-15%)
Outside site

A Management Plan has yet to be developed for the property and in the absence of such, existing uncoordinated tourist infrastructure and operations may pose a threat in causing damage to the OUV of the property. Furthermore, there is no Tourism Development Plan that would guide authorities in regard to new applications for such development in the future. Importantly, it is not clear how the geological OUVs are being adversely affected by visitor access, water use, and wild fire, to the property (UNESCO-IUCN 2010; RSA 2013; confidential consultation 2017).

▶ **Water Pollution, Household Sewage/ Urban Waste Water, Industrial/ Military Effluents**

High Threat
Inside site, scattered(5-15%)
Outside site

The water quality of the Vaal River has been impacted by contamination from upstream mining activities and major urban settlements outside the property, as well as from the release of partially treated waste water both within and outside of the property (UNESCO and IUCN, 2010). In addition to concerns over general environmental health, extreme pollution from contamination by upstream mining activities and poorly treated urban waste water has the potential to cause dieback of riparian vegetation and accelerated growth of invasive species, thereby impacting riverine ecosystems and the rural and natural landscapes of the property (UNESCO and IUCN, 2010). The absence of a Tourism Development Plan or a

Management Plan, it is unclear how the geological OUVs are being affected by water use.

Potential Threats

Low Threat

The potential for disturbance or damage to sensitive sites and theft of geological samples where access is unconstrained may be high, but can be mitigated as most sites lie on private land and if proper tour guides are trained and visitor awareness is raised. Thus far the geotourism aspects of the site have been limited to a few tour operators owing to the complexity of gaining access to and explaining the geological relevance of sites, which has reduced the risk of damage. Whilst mining in the WHS itself may be unlikely, the threat of surface mining operations in the vicinity cannot be fully ruled out. The completion of the Tourism Development Plan therefore remains a priority, and could become a greater threat in the longer term.

► Other Activities

Low Threat
Inside site, localised(<5%)
Outside site

Access to many sites is unconstrained; key sites could be damaged through vandalism or the theft of geological specimens. The absence of a Research Activities Management Plan means that geological sampling could lead to removal of critical material from sites (UNESCO-IUCN 2010).

► Mining/ Quarrying

Low Threat
Inside site, extent of threat not known
Outside site

The private property status of the lands and their agricultural landuse may permit some quarrying activity (IUCN 2005), although this is not known to be the case at present. At least one application for a mineral exploration licence related to gold is known to have happened since the WHS declaration in an area of the Vredefort Dome not covered by the WHS and was opposed by local environmental activists. National legislation grants Government the right to award exploration licences on private land without owner consent.

Recent history in South Africa suggests that the threat of such activities actually happening is slightly raised relative to the previous assessment, although the likely poor profitability of such operations in the current economic climate probably reduces the risk of such an eventuality. The adoption of a 'No-go commitment' by the International Council on Mining and Metals (ICMM) in 2003 has been an important and successful instrument in South Africa. Sand mining activities that existed before the declaration on certain properties in the broader Dome area continue.

Protection and management

Assessing Protection and Management

► Relationships with local people

Serious Concern

The Site was inscribed in 2005. Owing to protracted delays in negotiations between the State Party and private landowners, a Memorandum of Agreement (MoA) was only signed in 2012 (RSA 2013). A State of Conservation report was released in 2015. Following gazetting of a Public Entity for the WHS by National Treasury in April 2015, a WHS Project Manager was appointed to accelerate the drawing up of the Conservation Regulations, establishment of the Management Authority and proclamation of the Site. Drafts of both the Conservation and MA regulations were submitted, but consensus has not been reached among the landowner associations and negotiations continue (RSA, 2016; IUCN consultation, 2014).

► Legal framework

Serious Concern

Prior to 2005, the Site enjoyed no legal status as a protected area within South Africa. Despite progress in the State Party's release of the State of Conservation report (2015) and drafts of both the Conservation Regulations and Management Authority Regulations that are necessary for the establishment of the Management Authority, some landowner associations have still not accepted all aspects of the Management Regulations (RSA, 2016). These regulations comply with national legislation and, until

agreement is reached by all stakeholders, the Site exists without a legal framework for the protection and management of the property. Negotiations are apparently continuing (RSA, 2016).

► Enforcement

Serious Concern

Without a Management Authority and its related structures in place, comment on this aspect in relation to tourism and research activities is not possible and makes the site vulnerable.

► Integration into regional and national planning systems

Serious Concern

The State Party has submitted draft Management Authority and Conservation Regulations that comply with national legislation. These have yet to be accepted by all landowner associations (RSA, 2016).

► Management system

Serious Concern

The Site comprises mostly privately-owned rural land that straddles a provincial boundary that creates parallel governance/management structures in the absence of a Management Authority. The establishment of the MA is linked to the proclamation of the World Heritage Site under national legislation. In the meantime, the management of the property is ensured by the Provinces and facilitated by an interim Governmental Steering Committee (RSA 2013). Although the Government of South Africa has reported (RSA, 2013) progress in the acquisition of land for a Management Authority office and the establishment of a business plan and Regulations, the current absence of a Management Authority remains a serious concern.

► Management effectiveness

Data Deficient

The Authority has not yet been established (RSA 2013, 2016). There is insufficient information to assess the effectiveness of the current interim management arrangements. The effectiveness of the Management Authority, once it is established, will depend on a clear definition of its responsibilities,

the availability of sufficient funding, and the strength of cooperation with existing organisations and institutions (UNESCO and IUCN, 2010). A particular challenge remains the high proportion of private land ownership in the site, and the large numbers of landowners.

▶ Implementation of Committee decisions and recommendations

Serious Concern

The State Party has pursued the recommendations of the World Heritage Committee related to the site in drawing up draft regulations for the Management Authority and Conservation; however, consensus with certain landowner associations has not yet been reached (RSA, 2016). Consultation and/or dispute resolution is ongoing.

▶ Boundaries

Some Concern

The State Party has initiated the process of modifying the Site buffer zone boundaries where they transect individual farms (RSA, 2016). A decision was made by South Africa not to demarcate the boundaries of the three satellite sites, as their current good condition is in part due to their exact locations not being generally known (RSA 2013). There remains uncertainty about whether the boundaries of these three satellite sites have been legally defined (SOC report, 2013).

▶ Sustainable finance

Data Deficient

Following the National Treasury's gazetting of a Public Entity for the Site, the State Party funded a Project Manager to speed up the Site declaration and establishment of the MA (RSA, 2016). The Management Authority is not yet operating (RSA 2016) and there is insufficient information to assess the level of funding invested in the management of the World Heritage Site within the current interim management arrangements. Finance for projects in the Site directed at, for instance, the removal of alien and invasive vegetation, have been financed by, for instance, the national Working For Water Programme, but these are usually of limited amounts and duration.

► Staff training and development

Data Deficient

In the absence of an operating Management Authority, much of this section cannot be assessed. Staffing of the Site by national and provincial governments has been discontinuous owing to budgetary limitations and contract timelines having been exceeded owing to the protracted negotiations around the establishment of the Management Authority and the Conservation Regulations (RSA, 2016). Lower level staff training (local guides) has been initiated by the national Department of Tourism in 2015.

► Sustainable use

Data Deficient

Geological resources may be affected by research sampling or by vandalism or "souvenir taking" by visitors, which could damage key sites. The former is not yet regulated by permitting of researchers by a Scientific Board; the latter relies on the fact that most tourist visitors gain site access on privately-owned land under supervision of a limited number of tour guides, and numbers are relatively limited. Unsupervised visitor access to geological sites has the potential to cause direct impacts to the geological evidence that underpins the inscription of Vredefort Dome on the World Heritage List. Increased eco- and adventure tourism activity also has potential for environmental degradation. There is currently insufficient information available to assess the measures that are needed to regulate sustainable use of the WHS.

► Education and interpretation programs

Some Concern

In the absence of an operating Management Authority, there is as yet no formal education and awareness programme about the value of the Site in place for stakeholders, although the ongoing interactions between stakeholders and Government have created significant awareness among stakeholders. The Environmental Management Framework has been completed and drafts of both the Management Authority and Conservation Regulations have been presented to stakeholders; however, consensus has

reportedly not yet been reached on the latter (RSA, 2016).

▶ Tourism and visitation management

Some Concern

The Management Authority is not yet operating, and an overall tourism management plan is currently lacking (RSA 2013). Given the preponderance of sites on private land, visitor access is largely controlled through a few locally-based tourism operators who, in general, appear to be minimizing negative visitor impacts; however, no coherent site-based management or assessment/accreditation of the operators has been undertaken. The lack of a central Interpretation Centre remains a major problem both from the perspective of raising stakeholder awareness of site values and of growing visitor numbers and visitor awareness of site values (RSA, 2016; UNESCO and IUCN, 2010; RSA, 2013). Steps have been taken to regulate illegal tourism infrastructure developments within the World Heritage Site (RSA, 2013).

▶ Monitoring

Serious Concern

The Management Authority is not yet operating (RSA 2013). In the meantime, continuous monitoring of pollution of the Vaal River is in place, as well as monitoring of tourism developments to ensure compliance with environmental and development legislation (RSA, 2013). No formal or regular monitoring of geological sites is being undertaken, but researchers and guides do exchange information in this regard.

▶ Research

Some Concern

The recognition the Site's status is based on more than a century of geological research, which continues today (UNEP-WCMC and IUCN, 2005). Vetting of research proposals and monitoring of geological sampling by a Scientific Advisory Board is still not possible as the Management Authority has not yet been constituted. Thus, no targeted geological research programme acknowledged and supported by the WHS structures exists. Limiting geological sample damage is thus largely dependent on individual researchers. At least one instance of damage by sampling to a site in the buffer zone has been noted in the past 3 years. Archaeological research in

the WHS operates under its own national and international norms and standards and, thus, is highly effectively managed.

Overall assessment of protection and management

Serious Concern

After a long hiatus, progress was made in 2012 with the signing of a Memorandum of Agreement between the State Party and private landowners. The State Party implemented a plan in 2015 to address the issues raised by the IUCN 2014 report, but consensus has yet to be reached on drafts of the Conservation and Management Authority regulations that are a necessary precursor to the proclamation of the WHS under national legislation and establishment of the MA. Although there are interim arrangements in place to ensure the management of the Site, significant gaps are likely to remain until a Management Authority is established and operational, and its responsibilities clearly defined.

▶ Assessment of the effectiveness of protection and management in addressing threats outside the site

Serious Concern

The Management Authority is not yet operating (RSA 2013, 2016). Once the Management Authority becomes operational, its effectiveness in addressing threats outside the Site will depend on the strength of collaboration with relevant authorities, institutions, and organisations.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Evidence of a deeply eroded complex impact structure

Low Concern
Trend:Stable

As for #3, the greatest potential threats to the geological sites at present

appear to be vandalism by mainly local youth or irresponsible sampling for geological research; however, the location of most sites on private land in general appears to be acting as protection against damage or degradation. The rural and natural landscape setting of the property is vulnerable to uncontrolled development, and there has been some impact from illegal tourism infrastructure developments (UNESCO and IUCN, 2010), but steps have been taken to ensure that such developments are better regulated (RSA, 2013).

► Evidence of impact energy release

Low Concern
Trend:Stable

The geological features displaying the evidence of the world’s greatest known energy release event remain largely intact (RSA, 2013), although some of these features are locally being utilised for commercial purposes on a limited scale (an example being the sale of mined dimension stone blocks from certain quarries). Whilst some localised impacts may thus have occurred (UNESCO and IUCN, 2010) these remain minor. Of more immediate concern would be irresponsible geological sampling of key sites, and graffiti vandalism of outcrops, such as has happened within the buffer zone in at least two cases in recent years.

► Evidence of Earth's deep crust

Good
Trend:Stable

These features are, by their nature, widespread and thus not specific to a particular site. They are thus not particularly vulnerable (RSA, 2013).

► Evidence of the record of life

Low Concern
Trend:Stable

Fossil stromatolites are protected in one of the satellite sites, however, they are vulnerable to impacts from unsupervised visitor access (UNESCO and IUCN, 2010). Some minor localized impacts may have occurred.

► Evidence of major stages of Earth's history

Good
Trend:Stable

As for #2, these features are widespread and are not particularly vulnerable.

► Unusual landscape features

Low Concern
Trend:Stable

The exceptional landscape of the Vredefort Mountainland would be vulnerable to unconstrained tourism infrastructure development, ranging from buildings to adventure tourism facilities. In the absence of a Management Authority, the former appears to be being regulated through interim structures (RSA 2013, 2016).

Summary of the Values

► Assessment of the current state and trend of World Heritage values

Low Concern

Trend: Stable

The geological features of the Site have not been significantly impacted and remain intact (RSA, 2013), although some minor localized impacts to specific geological evidence may have occurred. The rural and natural landscape setting of the Site is vulnerable to inappropriate development, and some limited impacts from unapproved tourism infrastructure developments have occurred (UNESCO and IUCN, 2010). Steps have been taken to regulate tourism development (RSA, 2013).

► Assessment of the current state and trend of other important biodiversity values

Low Concern

Trend: Stable

The natural values remaining on site have essentially been protected voluntarily and there is some natural regeneration through volunteer programmes to remove alien and invasive vegetation. Upstream pollution of

the Vaal River (from both urban sewage and mining) is a concern, both in terms of general environmental health and its potential to cause dieback of riparian vegetation (UNESCO and IUCN, 2010). The Ngwathe and Parys waste water treatment works have been upgraded in order to improve the water quality for local communities and visitors, and water use and quality-related issues in the site are covered by national legislation and enforcement systems (RSA, 2013).

Additional information

Benefits

Understanding Benefits

► Outdoor recreation and tourism

With the drawcard of the geological features, most visitors to the Site are further attracted to the unique natural landscape, which offers a range of eco- and adventure tourism opportunities.

The WHS status has decreased agricultural land use, with increase in the natural ecosystems and reintroduction of indigenous large mammal species. This has led to improvements in the health of natural ecosystems and increased biodiversity. This has been aided by programmes removing alien and invasive species, particularly in and along the Vaal River. The single greatest threat to these habitat improvements is the mainly upstream-derived pollution of the Vaal River. In the longer term, the Site's location in southern Africa may make ecosystems vulnerable to climate change. Given the exceptionally high number of private landowners, avoiding overexploitation of the Site and its resources for tourism purposes will need to be a major focus of the Management Authority.

► Contribution to education

The Vredefort Dome preserves one of the greatest geological events in Earth's history that has, in turn, exposed an exceptional range of additional

geological treasures (deep crustal profile through Earth's oldest continent) and thus has immense benefits as an educational resource. With the geological resources of the Site as the focal point to draw visitors, the Site also offers exceptional biodiversity, archaeological, cultural history and astronomy-related educational opportunities.

The geological features of the Vredefort Dome have potential to attract geo- and eco-tourists both nationally and internationally. The return of much of the Site to its natural state, repopulation of large fauna, clearing of alien vegetation and addressing of water pollution issues will attract the high end of both tourism markets. Additionally, the Site has immense potential for development as a major educational tourism destination aimed at South Africa's youth, not only because of the range of educational opportunities presented by its features but also its proximity to South Africa's major population centre and ease of access. Whilst less demanding than the high-end tourism market, the same factors apply. Given the limited resources (particularly water) in the Site, careful management oversight will be required if visitor numbers in both sectors grow significantly.

► Importance for research

The Vredefort Dome is a world-renowned geological site and is the subject of ongoing studies related to large asteroid impacts and the evolution of the early Earth. It also presents a range of opportunities for research by archaeologists, biologists, cultural historians and social scientists.

From a geological perspective, none of the factors are likely to negatively impact research; however, they could be either negative or positive towards other forms of research. For instance, archaeological evidence suggests long-term climate change effects have influenced settlement patterns and the cultural history of the region, as has historic over-exploitation of natural resources; and monitoring of habitat reclamation after removal of alien species or reduction in pollution can likewise drive research, as can researching the effects of pollution on local food chains.

Summary of benefits

The Vredefort Dome continues to drive significant research into a global (and interplanetary) phenomenon and into Earth history and the processes that

have shaped it. The potential exists to use the Site to develop a far wider range of research and educational opportunities to the benefit of the local stakeholders.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Provincial Governments		Establishment of Visitor Centres, offices, supervising tourism developments, providing interim on-site protection.
2	Management Authority		Removal of alien and invasive vegetation
3	National Government and Municipalities		Vaal River water quality improvement.
4	Johannesburg Zoo		Breeding of endangered endemic bird and animal species.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Future Management Authority	Identify geological research needs and solicit researchers.	
2	Future Management Authority	Developing skilled and capacitated staff to manage the World Heritage Site on a day to day basis and give effect to interpretation. In addition to undertake regular Management Effectiveness Assessments.	
3	Future Management Authority	Developing the suite of educational information for visitors	From: 2018 To: 2019

№	Site need title	Brief description of potential site needs	Support needed for following years
4	Future Management Authority	Building management access facilities for visitors	
5	Future Management Authority	Finalising Visitor Information Centre(s)	
6	Future Management Authority	Negotiating legal access for visitors and management protection investments for key sites	
7	Future Management Authority	Delineating the detailed boundary of the property to coincide with existing farm boundaries.	

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