WATERBERG
LANDSCAPE ALLIANCE

SPATIAL PLANS OF THE WATERBERG

November 2024

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Author and contact details: Waterberg Landscape Alliance, Waterberg, Vaalwater 0530
Kelly Abram (Director), MSc Conservation Biology, with Distinction, BSc Environmental Geography (Hons) (specialised in African Habitats)
Email: Kelly@waterbergla.org.za

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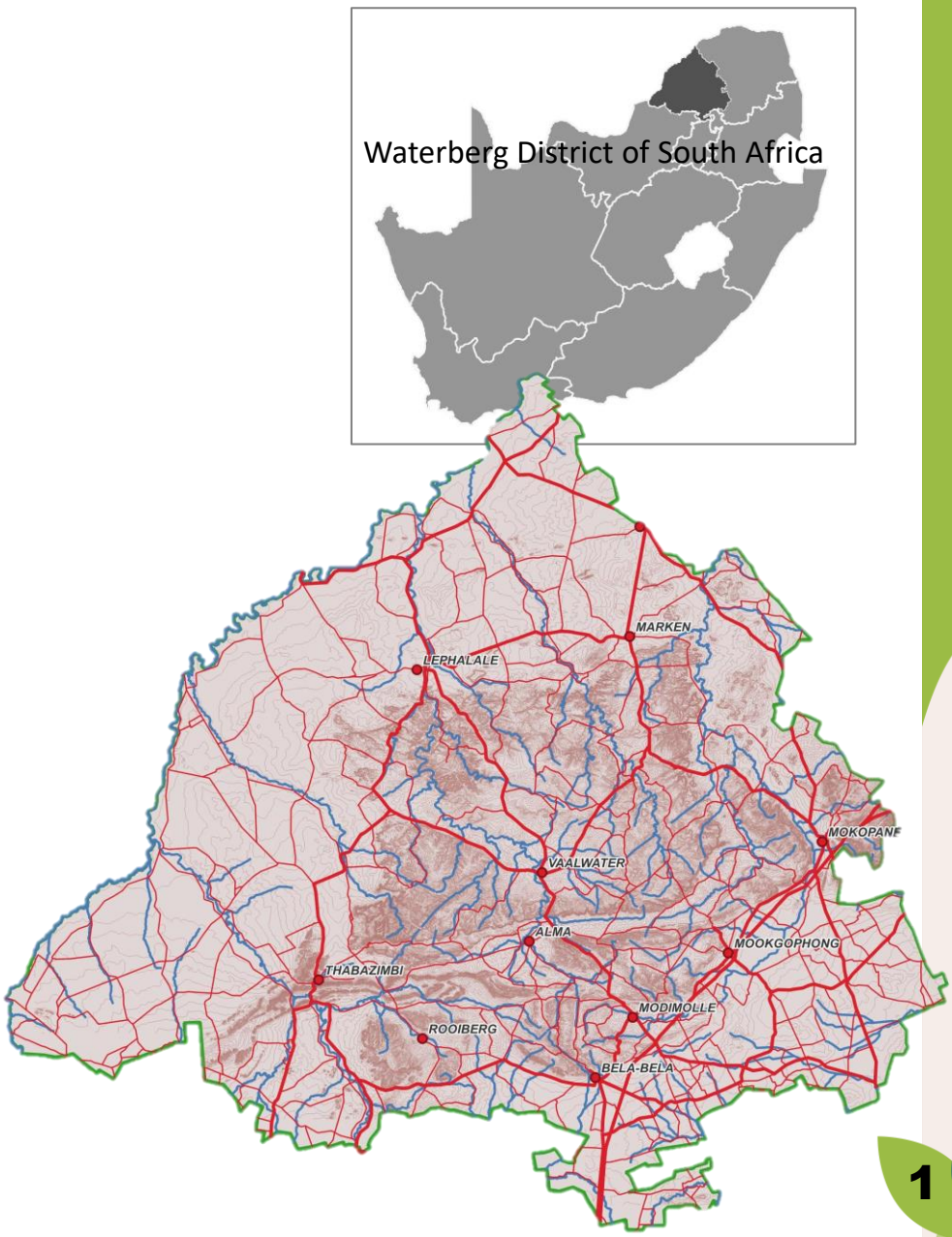


The Waterberg

The Waterberg, situated in western Limpopo, is an ancient mountain range and a remarkable ecological region that is being studied for its potential as a center of endemism. Spanning an expansive 4.5 million hectares, the district's central plateau covers approximately 2 million hectares. Over the last 30 to 40 years, the region has undergone a significant rewilding process, restoring much of its biodiversity and revitalizing its habitats and ecosystems.

Despite these positive changes, only a small portion of the Waterberg is formally protected, leaving its rich biodiversity and the associated economy at risk. However, the region remains a biodiversity hotspot, with over 80% of its land undeveloped and about 70% of its vegetation types classified as endemic or near-endemic. The central plateau is a critical water catchment area, supplying water to nearby urban centers and the broader Limpopo River system.

Although primarily part of the Savanna biome, the Waterberg's highest points feature rare patches of grassland biome, hosting species such as Proteas and specialized grassland birds. The area is also home to three key biodiversity and bird areas (IBAs) and a Ramsar site, which encompasses South Africa's largest inland floodplain system. During flood years, this area supports up to 80,000 breeding water birds, highlighting its ecological significance.

For the past 40 years, the Waterberg region has been dedicated to rewilding efforts, successfully restoring much of its lost biodiversity. This revival has laid the foundation for a thriving biodiversity-based economy that supports the region today. With such an invaluable natural resource, essential both locally and internationally, it's imperative to ensure the long-term protection of the Waterberg for future generations.

Key measures to protect this invaluable region include expanding protected areas (currently at 7%) and preventing unsuitable developments, such as mining, in zones prioritized for biodiversity conservation. These steps are essential to preserving the Waterberg's unique natural heritage and supporting its sustainable economic future.

The Waterberg plays a critical role in supporting a diverse array of species, including but not limited to Cape Vultures, Blue Cranes, black and white rhinos, pangolin, African wild dogs, leopard, giraffes, cheetah, brown hyena, sable, roan, nyala, mountain reedbuck, and numerous reptile species. Notably, the Waterberg is home to 81 animal and 19 plant species that are threatened.

Despite covering only 3.7% of the country's land area, the Waterberg boasts an impressive statistic: it harbours 40% of South Africa's total bird and mammal species and 34% of its reptiles. Such rich biodiversity, coupled with other attributes, led to the area being designated as a UNESCO Biosphere Reserve in 2001 and more recently gaining the status of a global Key Biodiversity Area as determined by using globally standardized criteria published by the IUCN as part of a collaboration between scientists, conservation groups, and government bodies across the world

There is both a need and an opportunity to strengthen protection levels and promote conservation efforts in the Waterberg, emphasizing its biodiversity's value and significance. At the same time, it is crucial to prevent inappropriate developments that could cause irreversible harm to the region.

The following spatial plans not only verify the biodiversity value and importance of the area but are also important tools that can contribute to motivating for protected area expansion as well as engaging with and providing information and guidance for developments within the Waterberg region.

Spatial Plans

The numerous biodiversity and landscape spatial plans that include the Waterberg underscore its significance as a critical biodiversity hotspot and a key area for global conservation efforts. These plans highlight the region’s unique ecological value, rich biodiversity, and role in sustaining long-term environmental resilience. The overlapping priority areas within these plans emphasize the importance of the Waterberg in maintaining ecosystem services, supporting endemic and threatened species, and serving as a natural corridor for ecological connectivity. This collective recognition affirms the Waterberg’s status as a vital conservation priority, both locally and globally.

The Waterberg is fortunate to have a range of spatial plans that can assist with the engagement of any type of development applications including prospecting and mining permit applications. The following information aims to help Interested and Affected Parties (I&AP’s) gain a clear understanding of the Waterberg landscape, the significance of each spatial plan or designation, and information to guide responsible development practices that respect and preserve the unique ecological and cultural values of the Waterberg region.

The Waterberg Bioregional Plan

The Waterberg area (the total district) has been declared as a Bioregion according to NEMBA act 10 of 2004. This was gazetted on 4 Jan 2019, gazette no. 2966, Limpopo Provincial Gazette. It was published with concurrence of the Minister.

The Waterberg Bioregional Plan is a legal planning tool and is based on the Limpopo Conservation Plan. Land is zoned according to biodiversity importance and land use guidelines stipulates the activities allowed in each zone.

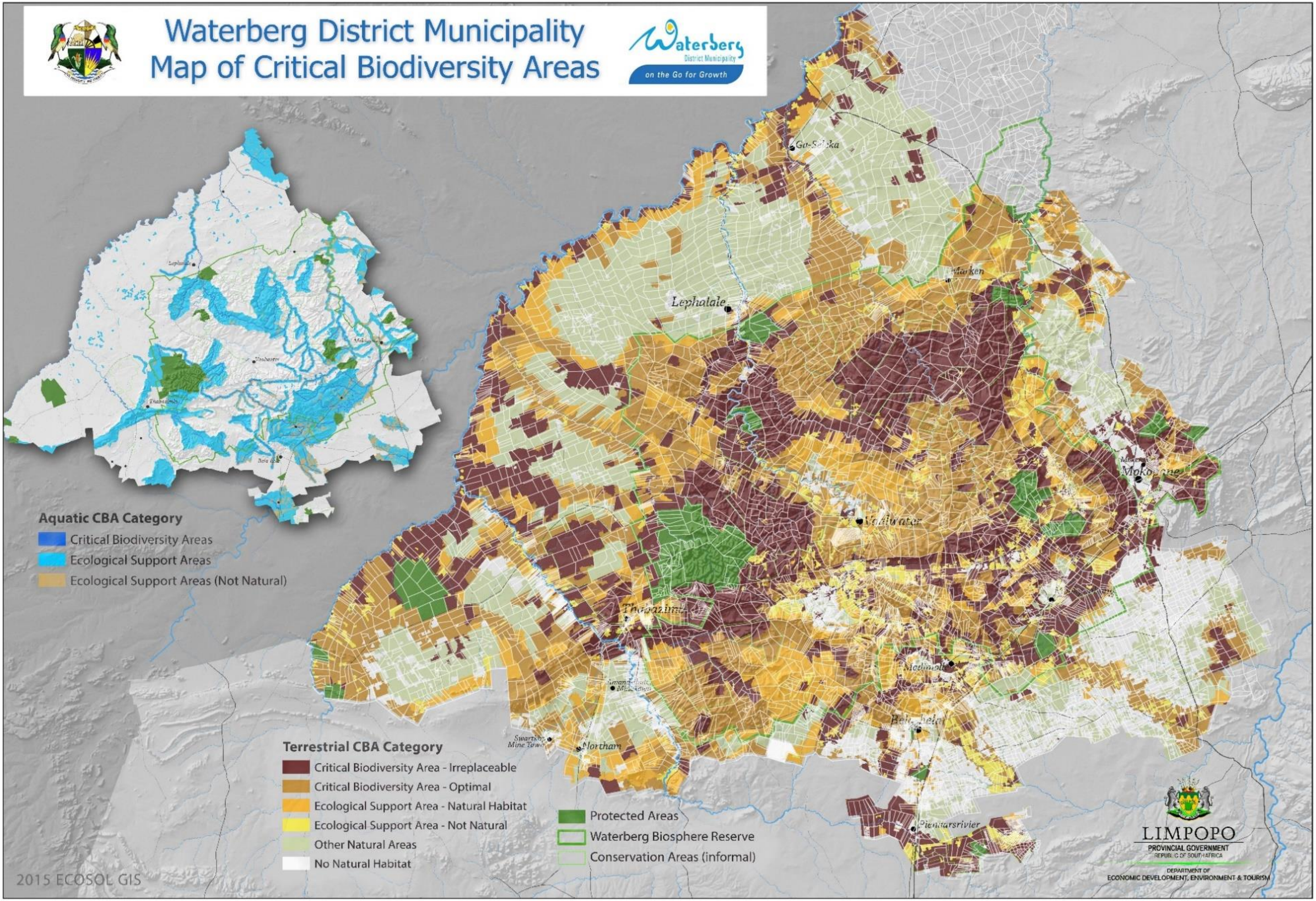
A bioregional plan serves to guide land-use planning, environmental assessments, authorizations, and natural resource management across various sectors whose policies and decisions affect biodiversity. It achieves this by offering a detailed map of biodiversity priority areas, known as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), along with guidelines to support informed land-use planning and decision-making. The bioregional plan is therefore a useful tool for addressing the need to take biodiversity into account in land-use planning and decision-making, in order to promote sustainable development.

The spatial component of the Waterberg District Bioregional Plan is built on the Critical Biodiversity Areas and Ecological Support Areas identified in the Limpopo Conservation Plan v2 (LCPv2), a systematic biodiversity plan developed by LEDET. This plan has been further refined to align with other key spatial frameworks in the district, including the Waterberg Environmental Management Framework (EMF), the Waterberg Biosphere Reserve, and municipal Spatial Development Frameworks (SDFs).

The Waterberg District Bioregional Plan aligns with the National Environmental Management: Biodiversity Act (No. 10 of 2004) and adheres to the standards set out in the DFFE's 2009 Guideline on Bioregions and Bioregional Plans.

It is important to note that the spatial maps in the Waterberg Bioregional Plan (WBP) differ from those in the Limpopo Conservation Plan (LCP) due to further refinements made in the WBP prior to its official gazetting. **As such, the Waterberg Bioregional Plan should be the primary reference for planning and conservation considerations in the region.**

The WBP map has been provided with a farm portion overlay to assist in identification of CBAs and ESAs of prospective developments and surrounding farms.


Waterberg District Municipality
Map of Critical Biodiversity Areas
Waterberg
District Municipality
on the Go for Growth
Lephalale
Marken
Vaalwater
Northam
Aquatic CBA Category
Critical Biodiversity Areas
Ecological Support Areas
Ecological Support Areas (Not Natural)
Terrestrial CBA Category
Critical Biodiversity Area - Irreplaceable
Critical Biodiversity Area - Optimal
Ecological Support Area - Natural Habitat
Ecological Support Area - Not Natural
Other Natural Areas
No Natural Habitat
Protected Areas
Waterberg Biosphere Reserve
Conservation Areas (informal)
LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM
2015 ECOSOL GIS

UNESCO Biosphere Reserves

(United Nations Educational, Scientific and Cultural Organisation)

Biosphere reserves are areas designated by UNESCO under its Man and the Biosphere (MAB) Programme to promote sustainable development based on local community efforts and sound science. These reserves aim to balance conservation of biodiversity, sustainable use of natural resources, and cultural preservation.

To qualify for acceptance as a biosphere reserve, the area must have global or regional significance for biological conservation, one or more formally protected core zones, and one or more surrounding buffer zones where human communities utilize natural resources in ecologically sustainable ways. The overall goal of biosphere reserves is the protection of biological diversity, but they differ from strictly protected areas such as national parks and wilderness areas by accepting human settlement as a feature of the landscape. Because biosphere reserves are intended to emerge from a participatory process with local communities and natural resource users, they have social, as well as spatial, components. Interest groups—or stakeholders—affected by the reserve can participate in planning the biosphere reserve's design and management.

Biosphere reserves serve as “living laboratories” for testing and demonstrating innovative approaches to conservation and sustainable development, offering examples that can be replicated elsewhere.

Biosphere reserves must be a geographical area and have a spatial component in the form of three defined zones. Core areas are strictly protected zones focused on conserving landscapes, ecosystems, and species.

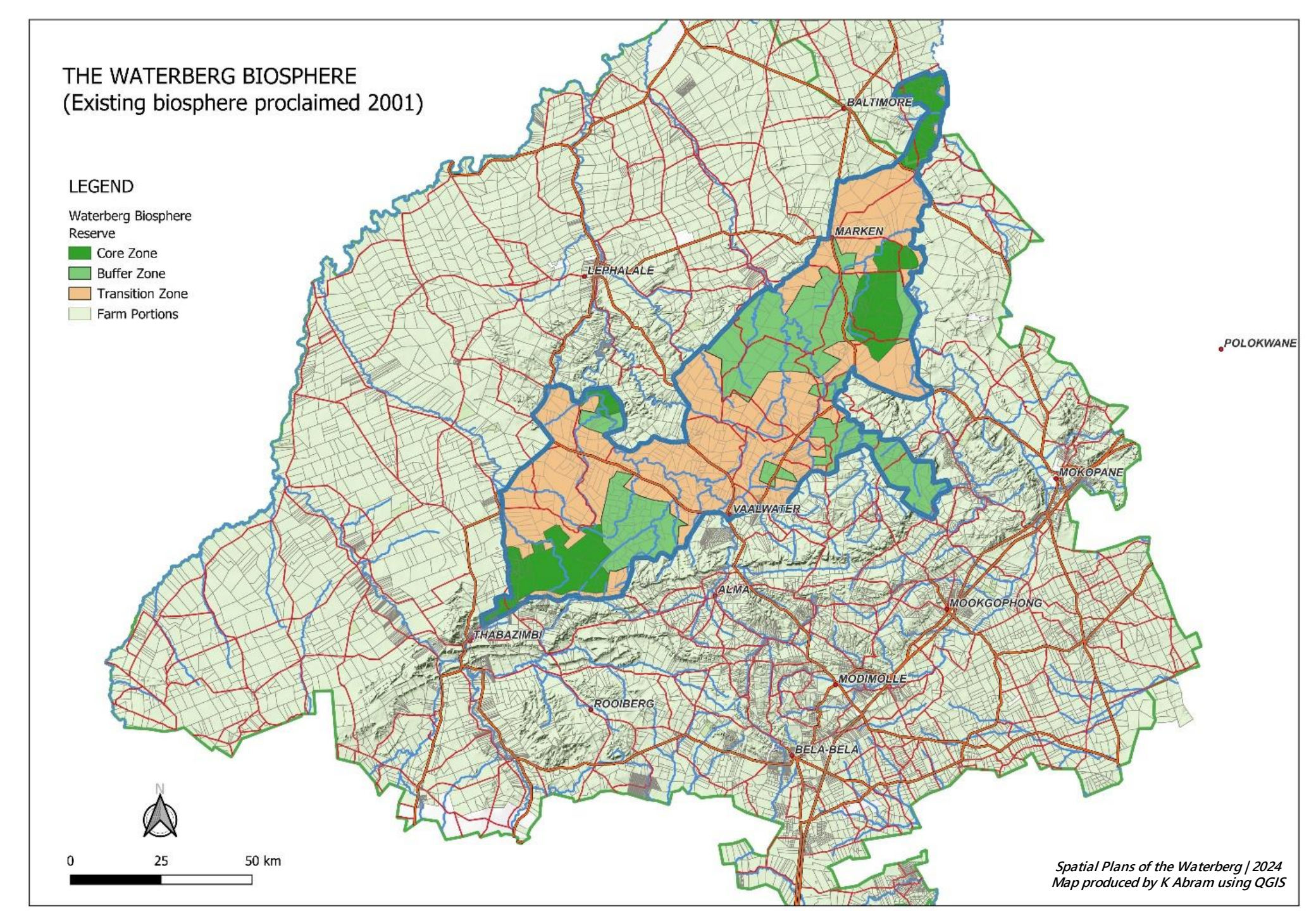
Buffer zones are surrounding areas where limited human activities, such as research, education, and sustainable resource use, are permitted.

Transition zones are the outer areas where sustainable economic and social development is encouraged, with local communities, businesses, and conservation organizations working together.

The Waterberg Biosphere Reserve was proclaimed in 2001 and its current spatial plan and zonation can be seen on the following page.

Given that much of the district holds significant biodiversity value (as highlighted in the Waterberg Bioregional Plan), the biosphere reserve has recently undergone a review to expand its spatial boundaries and revise its zonation. This updated spatial plan now awaits review and approval by UNESCO to ensure it aligns with the goals of sustainable development and biodiversity conservation via the spatial planning.

While the biosphere reserve provides important recognition and status for the Waterberg area, it has no legal protection. However, it has served as an important catalyst for other recognitions and status’ and serves as a useful brand for tourism businesses that are wildlife based. Nonetheless, it is worth highlighting the international UNESCO status in comments and objections in prospecting and mining permit applications to emphasis the conservation value of the area and that all planning must take in consideration these conservation zones.


THE WATERBERG BIOSPHERE
(Existing biosphere proclaimed 2001)
LEGEND
Waterberg Biosphere Reserve
Core Zone
Buffer Zone
Transition Zone
Farm Portions
BALTIMORE
MARKEN
LEPHALALE
POLOKWANE
MOKOPANE
VAALWATER
ALMA
MOOKGOPHONG
THABAZIMBI
MODIMOLLE
ROOIBERG
BELA-BELA
N
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50 km
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

Strategic Water Source Areas

Strategic Water Source Areas (SWSAs) are critical zones that, despite covering a small fraction of South Africa's land area, contribute disproportionately to the country's surface water supply. Concentrated primarily in the southern and eastern regions, these areas generate over 50% of South Africa's annual surface water runoff from less than 10% of the land. SWSAs are essential not only for water and food security but also for generating hydroelectric power, which further underscores their national importance.

However, only about 11% of surface water SWSAs (roughly 18.2 million hectares) currently benefit from some form of formal protection under the National Environmental Management: Protected Areas Act (Act 57 of 2003). This limited and unevenly distributed protection leaves these critical zones highly susceptible to unregulated development and the adverse impacts of ongoing activities. Protecting the remaining natural areas of SWSAs is widely recognized as the most effective strategy for enhancing water security, improving both the quantity and quality of water supplies in the long term.

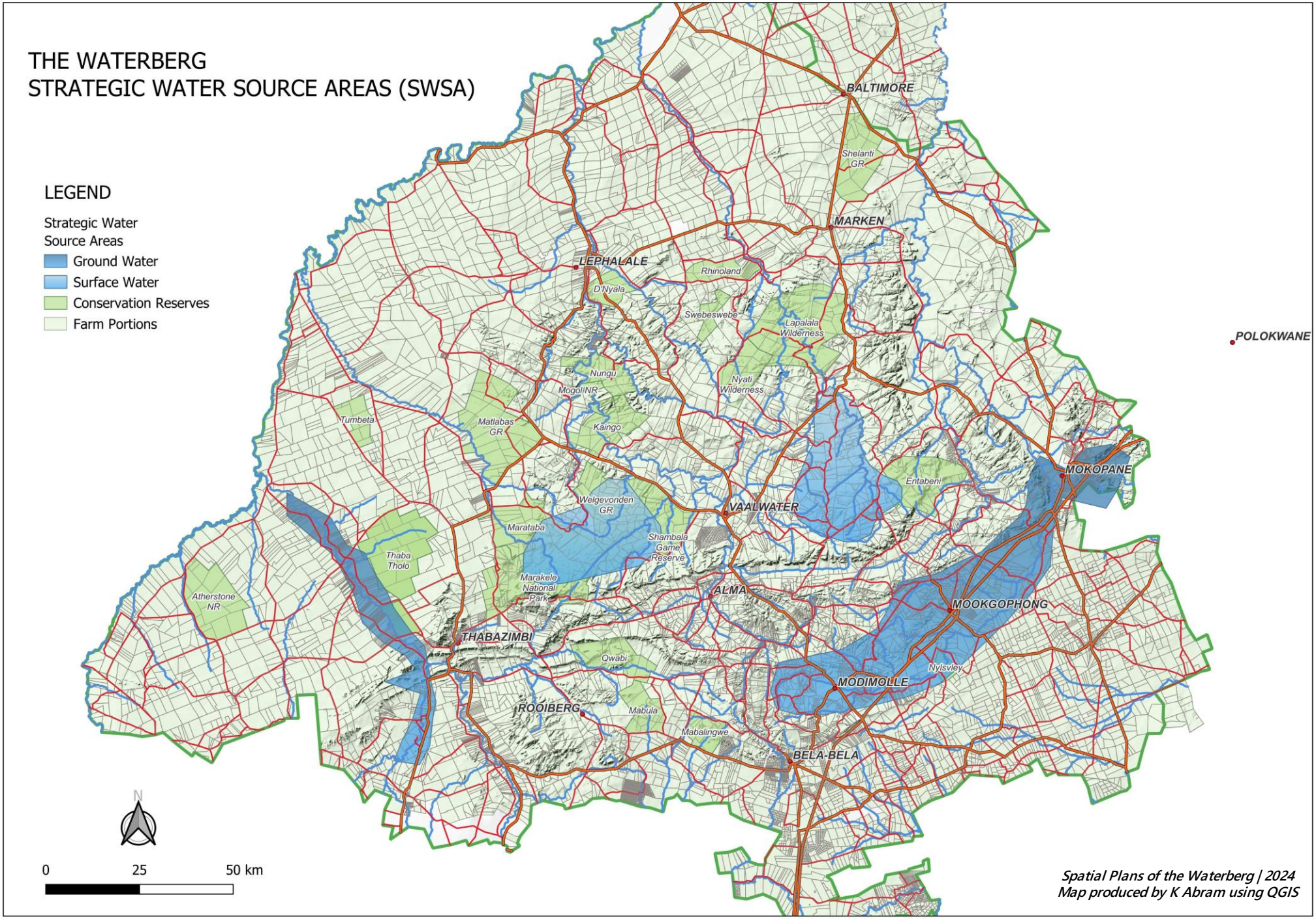
The urgency to secure these areas is heightened by the challenges of climate change. South Africa, one of the world's driest countries, has an average annual rainfall of only 490 mm, with a mere 10% feeding into its rivers. As climate change continues to raise temperatures and dry out regions, the demand for water is predicted to escalate exponentially. Combined with inadequate water management and unchecked development around SWSAs, this trend could lead to a significant water crisis.

The ongoing droughts in South Africa have highlighted the precarious nature of the country's water resources, sensitizing communities and industries to the critical need for proactive measures. Access to clean water is not only a basic human right but also a cornerstone of South Africa's economy. Recognizing this, the Council for Scientific and Industrial Research (CSIR) has prioritized research on the identification and protection of SWSAs. The goal is clear: safeguarding these vital areas will support sustainable water availability and resilience against the growing pressures of climate change and development.

The CSIR has conducted the mapping of South Africa's surface and groundwater resources, identifying areas critical for maintaining the country's water supply. This map highlights these vital zones for the Waterberg, underscoring the importance of preserving intact ecosystems in these locations to ensure long-term water protection and security both within and beyond the Waterberg.

Safeguarding Strategic Water Source Areas (SWSAs) is crucial for South Africa's water security. Expanding Protected Area status and limiting development in these areas within the Waterberg will help preserve vital ecosystems that naturally support water purification and storage, securing water resources for the future. **It is therefore vital that no inappropriate developments are granted in these areas. All I&AP's should check that the EAPs have identified and provided serious considerations for any SWSA that might fall within project areas. If they have not I&AP's are advised to raise this as a critical flaw in the application.**

THE WATERBERG
STRATEGIC WATER SOURCE AREAS (SWSA)



Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

Important Bird and Biodiversity Areas

(BirdLife's IBAs)

Important Bird and Biodiversity Areas (IBAs) are selected through scientific criteria assessing bird population sizes and trends, ensuring each site has genuine international conservation value. This standardized approach allows IBAs to be globally recognized and comparable across national, continental, and global levels.

The international significance of each site is evaluated by assessing the presence and abundance of key species, whether resident or seasonal. Initially developed at global and regional levels (including Europe, the Middle East, and South Africa), the IBA criteria were updated with input from regional coordinators and adopted in 2020 to reflect current science.

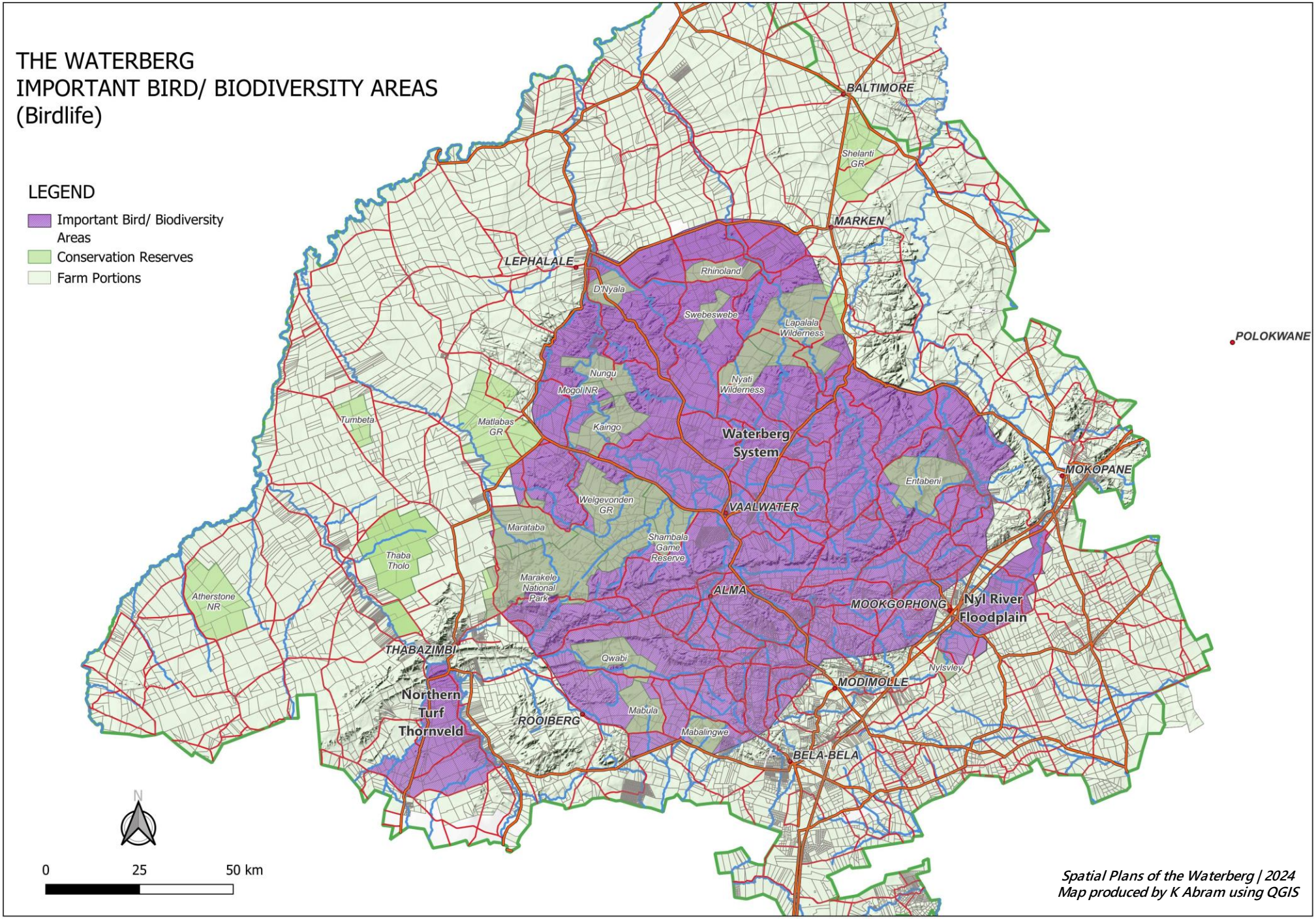
BirdLife's International's IBA Programme aims to protect these vital areas for the long term. Data collection identifies "trigger species," which determine IBA status, while regular updates allow for monitoring changes in species and site importance. The IBA Monitoring Protocol further assesses each site's condition, pressures, and conservation responses to guide effective management.

Currently, over 13,000 IBAs have been documented globally, with data accessible in the World Database of Key Biodiversity Areas (WDKBA), BirdLife's Data Zone, and Key Biodiversity Areas website. Comprehensive data strengthens the case for IBA protection, aligning with international conservation mandates, including the EC Birds Directive and Ramsar Convention, which require special site protections.

IBAs are part of the Key Biodiversity Areas (KBAs) network, supporting global biodiversity strategies such as the Convention on Biological Diversity (CBD) and the Sustainable Development Goals (SDGs).

The Waterberg region is home to three Important Bird and Biodiversity Areas (IBAs), each contributing significantly to its ecological value. The largest, known as the Waterberg System, spans an impressive 1.3 million hectares, making it a critical area for bird conservation and biodiversity. In addition to this extensive area, there are two smaller yet vital IBAs: the Northern Turf Thornveld, covering 56,000 hectares, and the Nyl River Floodplain, spanning 44,000 hectares.

These IBAs not only provide essential habitats for bird species but also support a range of unique ecosystems and serve as key areas for maintaining ecological diversity across the region and should be seriously considered in any development applications.


THE WATERBERG
IMPORTANT BIRD/ BIODIVERSITY AREAS
(Birdlife)
LEGEND
Important Bird/ Biodiversity Areas
Conservation Reserves
Farm Portions
BALTIMORE
Shelanti GR
MARKEN
LEPHALALE
Rhinoland
D'Nyala
Swebeswebe
Lapalala Wilderness
POLOKWANE
Nungu
Mogol NR
Nyati Wilderness
Tumbeta
Matlabas GR
Kaingo
Waterberg System
MOKOPANE
Entabeni
Welgevonden GR
VAALWATER
Marataba
Shambala Game Reserve
Thaba Tholo
Marakele National Park
Atherstone NR
ALMA
MOOKGOPHONG
Nyl River Floodplain
THABAZIMBI
Qwabi
Nylsvley
MODIMOLLE
Northern Turf Thornveld
ROOIBERG
Mabula
Mabalingwe
BELA-BELA
N
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25
50 km
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

Key Biodiversity Areas (KBAs)

Key Biodiversity Areas are 'sites that contribute significantly to the global persistence of biodiversity', which means they are the most important places in the world for species and their habitats – whether these be in terrestrial, freshwater, estuarine or marine ecosystems. Key Biodiversity Areas (KBAs) are identified using the Global Standard for the Identification of KBAs, developed by, WWF, the International Union for the Conservation of Nature (IUCN), Birdlife International and Conservation International among others, through decades of collaborations. This standard includes five criteria to assess an area's importance for biodiversity persistence.

Identifying KBAs helps governments and civil society understand where important places for species and their habitats are found in the world. They can then work together to manage and conserve these areas to safe guard the world's biological richness and report on global biodiversity goals. An area can qualify as a KBA if it hosts a threatened species or ecosystem, supports species with limited global distributions, contains pristine wilderness, sustains essential biological processes, or holds irreplaceable biodiversity. Each criterion includes quantitative thresholds to determine eligibility. The KBA identification process involves reviewing species, ecosystems, and areas against these criteria, delineating site boundaries, and submitting the KBA for independent verification.

KBAs are sites that have been individually selected because the biodiversity that is present is globally significant. The site boundaries are designed to be manageable as a single unit. Once they have been verified, all KBAs are captured on the World Database of KBAs which is accessible online.

The site-based approach means that each KBA is identified for unique reasons. By providing the precise location of places that contribute significantly to the global persistence of biodiversity, KBAs can accelerate efforts to reverse the loss of nature, by ensuring conservation efforts are focussed in the places that matter most, and by enabling entities that may have negative impacts on nature to avoid or reduce those impacts in the places they would be most damaging. Many KBAs would benefit from being designated as formal protected areas.

KBAs are useful for the implementation of the Kunming-Montréal Global Biodiversity Framework and can be used by governments and other stakeholders in guiding expansion of protected and conserved areas (Target 3) and in spatial and conservation planning (Target 1) to minimise biodiversity loss and negative impacts. The KBA dataset enables site-based protection efforts - such as new protected areas - to be focussed on the most important places for nature and NGOs to ensure conservation effort is focussed where it will have greatest impact for nature.

South Africa is one of the few countries that has evaluated KBAs comprehensively on a national basis, and is an important test case for identifying and using KBAs in a megadiverse country. KBAs (295 in South Africa) will help to showcase South Africa's unique biodiversity and further improve our global profile.

Key Biodiversity Areas (KBAs) and Critical Biodiversity Areas (CBAs) serve different but complementary roles in conservation. CBAs, identified through systematic biodiversity planning, are critical for spatial planning and environmental authorizations in South Africa. They are designed to be spatially efficient, reduce conflicts with other land uses, and form a connected network that supports ecological sustainability across landscapes and seascapes.

KBAs, on the other hand, are essential for global conservation reporting and recognition. They highlight areas of high biodiversity value, support international conservation efforts, and help secure global funding. While CBAs are tightly integrated into South Africa's planning frameworks, KBAs provide valuable conservation data and elevate biodiversity priorities on the international stage, complementing systematic bioregional planning efforts.

Important advantages of KBAs:

Global reporting: Since KBAs follow a global standard, they are increasingly being incorporated into global reporting frameworks. KBAs are part of the reporting for indicators towards the UN Sustainable Development Goals (SDGs), the Convention on Biological Diversity (CBD), and the UN Convention to Combat Desertification (UNCCD).

Global funding: International funding agencies, like the Global Environmental Facility (GEF), look for ways to allocate funding to the parts of the world with the most significant biodiversity. Since KBAs are comparable across different countries, they can help funders to decide where to invest.

Conservation action: KBAs are distinct areas, each with a name and a character. This means that people are more inclined to rally around conservation initiatives for the area, for example by starting a local conservation group for a specific KBA.

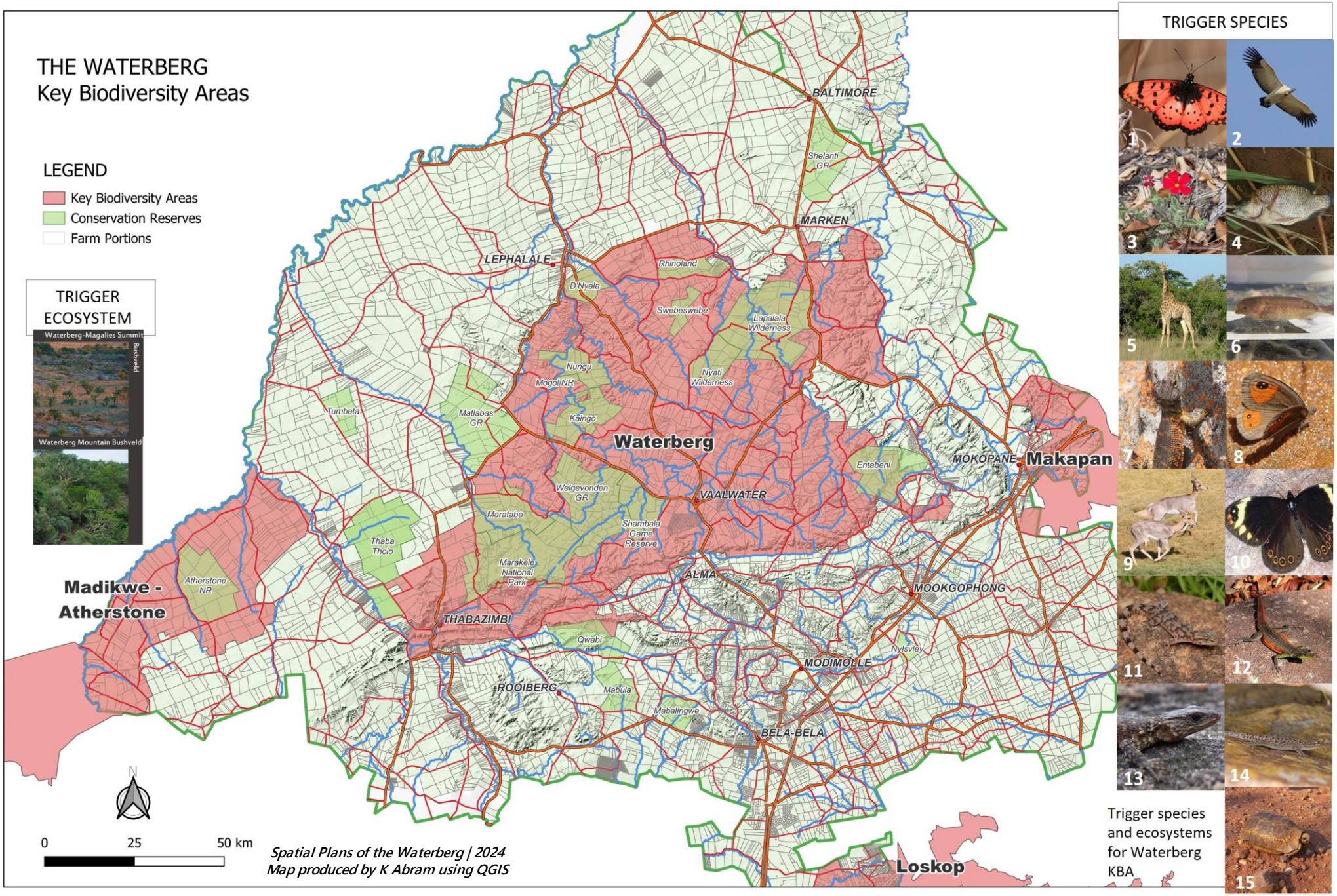
Efforts are underway to integrate KBAs as an input in South Africa's established land-use planning process. Technical working groups are currently updating systematic biodiversity planning guidelines and tools to facilitate this integration.

Establishing KBAs under the KBA Standard has been a significant step for South Africa in reporting on global conservation goals. This network will be a valuable part of the suite of tools that monitor biodiversity and inform policies and decisions across various sectors.

The KBA status of the Waterberg is a powerful tool when engaging with development applications, as it underscores the region's global significance for species conservation and habitat protection. This designation places the Waterberg within a worldwide network of areas recognized as essential for biodiversity, supporting efforts aligned with the Convention on Biological Diversity and its global conservation targets.

By highlighting the Waterberg's recognized ecological value, this status strengthens arguments for limiting or regulating development, such as mining, to protect these critical habitats for current and future conservation goals.

The below map includes the trigger list species and ecosystems. For list details see appendix B.


THE WATERBERG
Key Biodiversity Areas
LEGEND
Key Biodiversity Areas
Conservation Reserves
Farm Portions
TRIGGER ECOSYSTEM
Waterberg-Magalies Summit Bushveld
Waterberg Mountain Bushveld
TRIGGER SPECIES
1
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3
4
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6
7
8
9
10
11
12
13
14
15
BALTIMORE
Shelanti GR
MARKEN
LEPHALALE
Rhinoland
D'Nyala
Swebeswebe
Lapalala Wilderness
Nungu
Mogol NR
Nyati Wilderness
Tumbeta
Matlabas GR
Kaingo
Waterberg
MOKOPANE
Makapan
Entabeni
Welgevonden GR
VAALWATER
Marataba
Shambala Game Reserve
Thaba Tholo
Marakele National Park
Madikwe - Atherstone
Atherstone NR
ALMA
MOOKGOPHONG
THABAZIMBI
Qwabi
Nylsvley
MODIMOLLE
ROOIBERG
Mabula
Mabalingwe
BELA-BELA
Loskop
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50 km
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS
Trigger species and ecosystems for Waterberg KBA

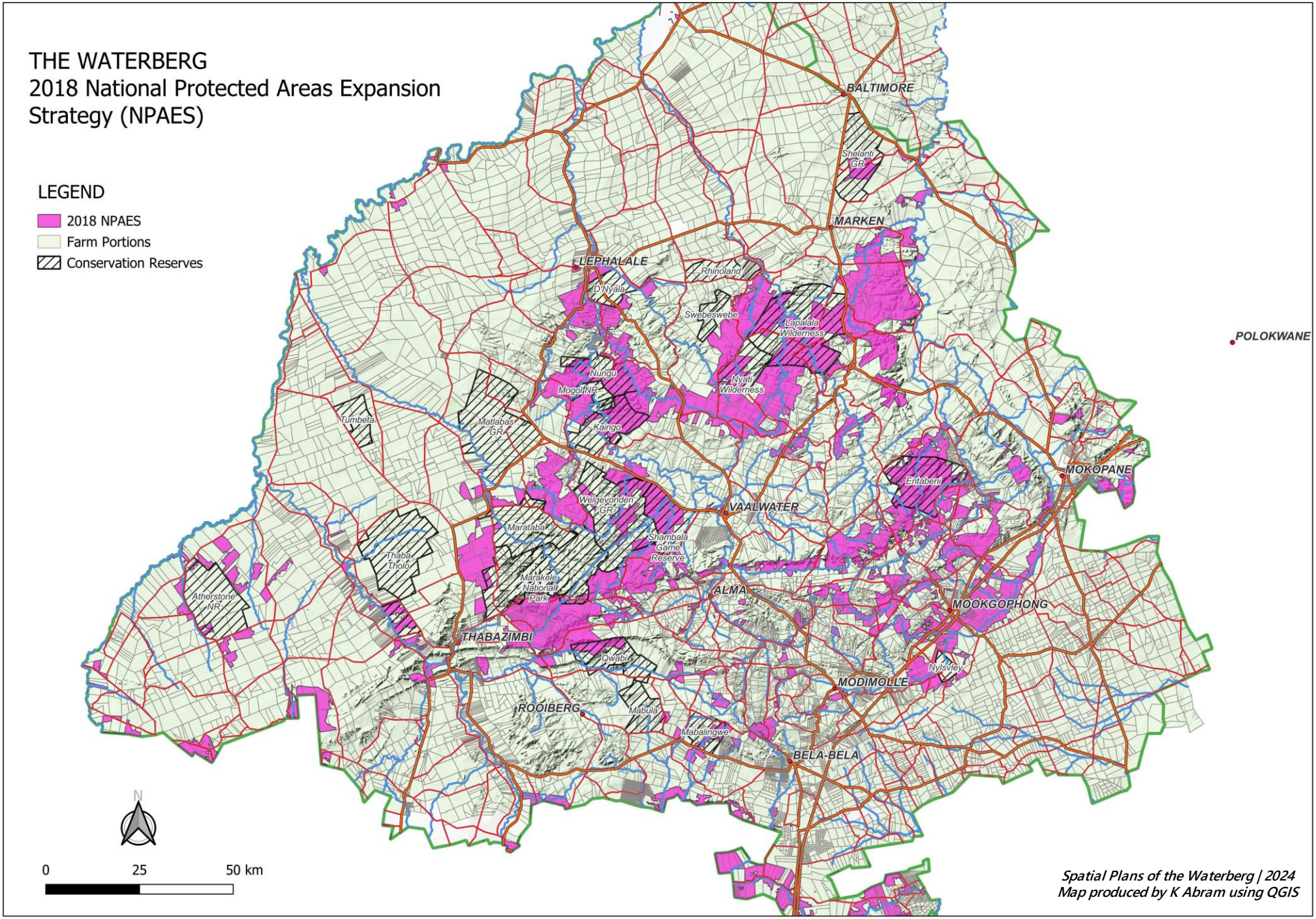
The National Protected Area Expansion Strategy 2018

The 2018 National Protected Areas Expansion Strategy (NPAES) for South Africa serves as a critical framework for addressing the nation's conservation challenges and advancing the protection of its unique biodiversity. This strategy builds on earlier iterations and is aligned with South Africa's commitments to international conservation targets, including the Convention on Biological Diversity (CBD). It identifies priority areas for expanding the country's network of protected areas, aiming to achieve ecosystem representation, climate resilience, and ecological sustainability. By doing so, the NPAES seeks to ensure that South Africa's protected areas safeguard critical habitats and species while contributing to the country's long-term environmental and socio-economic goals.

A key focus of the 2018 NPAES is the systematic identification of areas that are underrepresented within the current protected area network. Using a science-driven approach, the strategy highlights ecological corridors, threatened ecosystems, and areas of high biodiversity importance. It emphasizes the need for proactive planning to mitigate the impacts of climate change and human activities, such as agriculture and urbanization, that threaten ecological integrity. The NPAES also underscores the importance of expanding marine protected areas (MPAs) to protect South Africa’s rich marine biodiversity and ensure sustainable use of ocean resources.

The implementation of the NPAES relies heavily on collaboration among government agencies, conservation organizations, private landowners, and local communities. Innovative mechanisms such as biodiversity stewardship programs, which enable private and communal land to be formally recognized as part of the protected area network, play a central role in achieving the strategy's goals. By expanding protected areas, the NPAES not only addresses ecological priorities but also supports sustainable development by promoting ecosystem services, enhancing climate resilience, and fostering nature-based tourism, which benefits local communities.

Although dated 2018, this plan remains a valuable resource for identifying high-priority areas for protection at the landscape level. It highlights critical zones for expanding protected areas and provides guidance for safeguarding these regions from inappropriate developments. Its insights continue to inform conservation efforts and strategic planning to ensure the protection of biodiversity and ecological integrity.


THE WATERBERG
2018 National Protected Areas Expansion Strategy (NPAES)
LEGEND
2018 NPAES
Farm Portions
Conservation Reserves
BALTIMORE
Shelanti GR
MARKEN
LEPHALALE
Rhinoland
D'Nyala
Swebeswebe
Lapalala Wilderness
POLOKWANE
Nungu
Mogol NR
Nyati Wilderness
Tumbela
Matlabas GR
Kaingo
MOKOPANE
Entabeni
Welgevonden GR
VAALWATER
Marataba
Shambala Game Reserve
Thaba Tholo
Marakele National Park
Atherstone NR
ALMA
MOOKGOPHONG
THABAZIMBI
Qwabi
Nylsvley
MODIMOLLE
ROOIBERG
Mabula
Mabalingwe
BELA-BELA
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SANParks Mega Living Landscapes (MLL)

South African National Parks (SANParks) Vision 2040 for Mega Living Landscapes (MLLs) centres on creating vast, sustainable landscapes where biodiversity conservation coexists with human development. This vision, part of SANParks' broader initiative for "A Life in Harmony with Nature," aligns with global conservation goals such as the Kunming-Montreal Global Biodiversity Framework's 30x30 initiative, aiming to protect 30% of terrestrial and marine areas by 2030. MLLs are designed to preserve ecological integrity while also contributing to social and economic growth by promoting eco-tourism, sustainable agriculture, and green businesses.

MLLs emphasize partnerships with communities, aiming to ensure local populations benefit from conservation efforts. The vision prioritizes inclusivity and community engagement, particularly for those living in or near protected areas, fostering sustainable livelihoods and job opportunities in conservation-linked sectors. This strategy also contributes to South Africa's National Biodiversity Economy Strategy, which seeks to leverage biodiversity as a driver for inclusive growth and ecological resilience.

By 2040, SANParks envisions MLLs as key assets for ecological and economic resilience, enhancing South Africa's standing as a global biodiversity steward while promoting local empowerment and sustainable development in harmony with natural ecosystems.

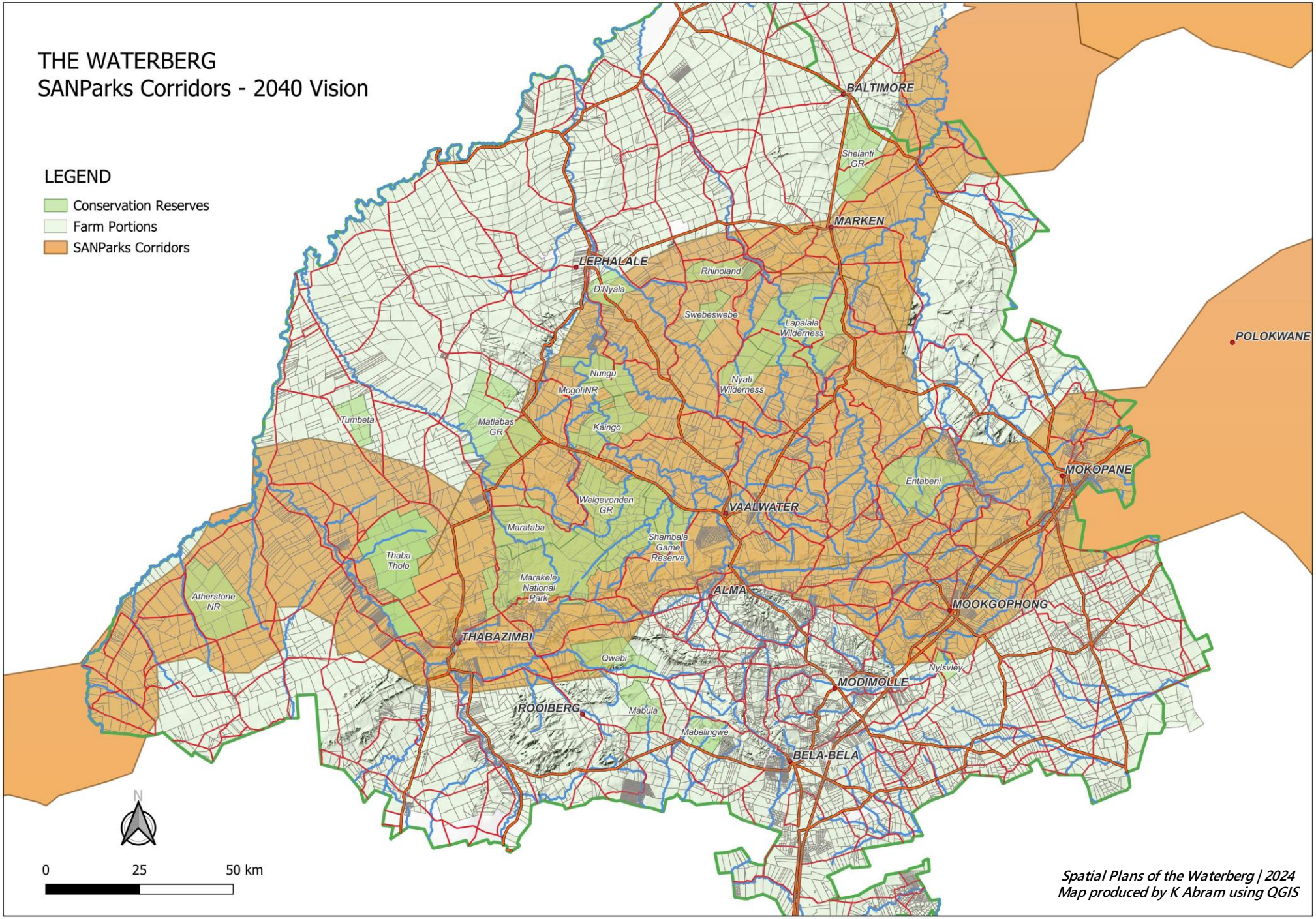
Through championing vast, interconnected landscapes of land and seascapes, SANParks aims to foster a future where nature and cultural heritage thrive alongside human well-being.

National Parks could serve as essential hubs that nurture and sustain these expansive areas, contributing to the nation's physical health, economic prosperity, social unity, and spiritual well-being. This vision can help South Africa forge a sustainable path forward, ensuring people live in harmony with nature for generations to come.

SANParks vision is to be at the centre of biodiversity protection, a cocreator of climate resilience, a guardian of heritage and a driver for socio-economic progress in South Africa is at the heart of the MLL concept. The 'green belt's surrounding National Parks will become interconnected ecologically alive lands replacing the current fragmented National Park systems. What happens outside the National Parks will be as important as what happens inside them.

The vision and spatial framework of the SANParks Managed Landscape and Livelihoods (MLL) concept are vital to support, as they aim to cultivate expansive, sustainable landscapes that benefit both people and nature. For these landscapes to fully realize their potential, it's essential to prevent inappropriate developments that could undermine this objective.

As a national priority, Environmental Assessment Practitioners (EAPs) should carefully consider and respect these spatial plans in their evaluations. Likewise, Interested and Affected Parties (I&AP's) are encouraged to raise concerns if this vision is disregarded or overlooked, helping to ensure that development aligns with the broader goal of creating resilient and thriving living landscapes.


THE WATERBERG
SANParks Corridors - 2040 Vision
LEGEND
Conservation Reserves
Farm Portions
SANParks Corridors
BALTIMORE
Shelanti GR
MARKEN
LEPHALALE
Rhinoland
D'Nyala
Swebeswebe
Lapalala Wilderness
POLOKWANE
Nungu
Mogol NR
Nyati Wilderness
Tumbeta
Matlabas GR
Kaingo
MOKOPANE
Entabeni
Welgevonden GR
VAALWATER
Marataba
Shambala Game Reserve
Thaba Tholo
Marakele National Park
Atherstone NR
ALMA
MOOKGOPHONG
THABAZIMBI
Qwabi
Nylsvley
MODIMOLLE
ROOIBERG
Mabula
Mabalingwe
BELA-BELA
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50 km
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

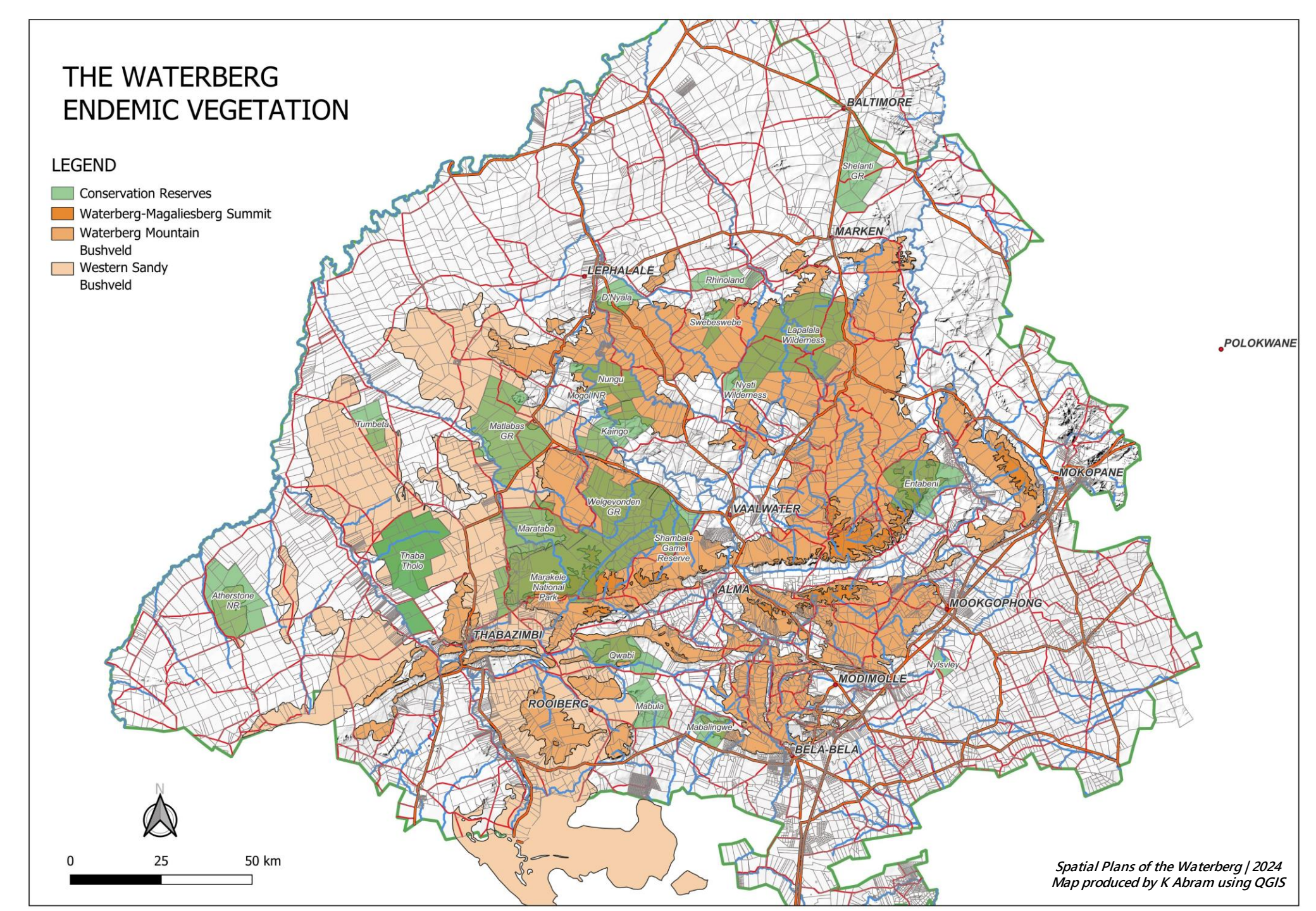
Endemic Ecosystems of the Waterberg (vegetation types)

The Waterberg region is home to a total of 20 unique ecosystems, three of which are near-endemic—meaning they extend slightly into surrounding areas in Limpopo and Botswana. More critically, however, the region also hosts three ecosystems that are fully endemic to the Waterberg District. These endemic ecosystems occupy an extensive area of almost 1.4 million hectares, constituting approximately 33% of the entire district.

The significance of these endemic ecosystems cannot be overstated. They form the basis for special conservation designations, such as Key Biodiversity Areas (KBA) and Important Bird and Biodiversity Areas (IBA), which prioritize the protection of rare and ecologically vital regions. Recognizing and documenting the distribution of these ecosystems is crucial for safeguarding them, especially in the context of mining and development applications. Highlighting the presence of these endemic ecosystems in assessments, comments, and objections helps build a strong case for their protection, countering development pressures and ensuring these irreplaceable habitats remain preserved for the future.

Among the three endemic ecosystems within the Waterberg District, only the Waterberg-Magaliesberg Summit Sourveld currently enjoys an adequate level of protection. The other two, the Waterberg Mountain Bushveld and the Western Sandy Bushveld, remain under-protected and fall short of meeting critical conservation targets.

Enhancing protection for the Waterberg Mountain Bushveld and Western Sandy Bushveld is essential, as both ecosystems contribute uniquely to the region's biodiversity and ecological resilience. Without targeted conservation efforts, these areas risk degradation from development pressures, making it imperative to advocate for their inclusion in conservation planning to secure their ecological future. Again, another spatial consideration for mining or other developments within the Waterberg landscape.


THE WATERBERG
ENDEMIC VEGETATION
LEGEND
Conservation Reserves
Waterberg-Magaliesberg Summit
Waterberg Mountain Bushveld
Western Sandy Bushveld
BALTIMORE
Shelanti GR
MARKEN
LEPHALALE
Rhinoland
D'Nyala
Swebeswebe
Lapalala Wilderness
POLOKWANE
Nungu
Mogol NR
Nyati Wilderness
Tumbeta
Matlabas GR
Kaingo
MOKOPANE
Entabeni
Welgevonden GR
VAALWATER
Marataba
Shambala Game Reserve
Thaba Tholo
Marakele National Park
Atherstone NR
ALMA
MOOKGOPHONG
THABAZIMBI
Qwabi
Nylsvley
MODIMOLLE
ROOIBERG
Mabula
Mabalingwe
BELA-BELA
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0
25
50 km
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

Threatened Species

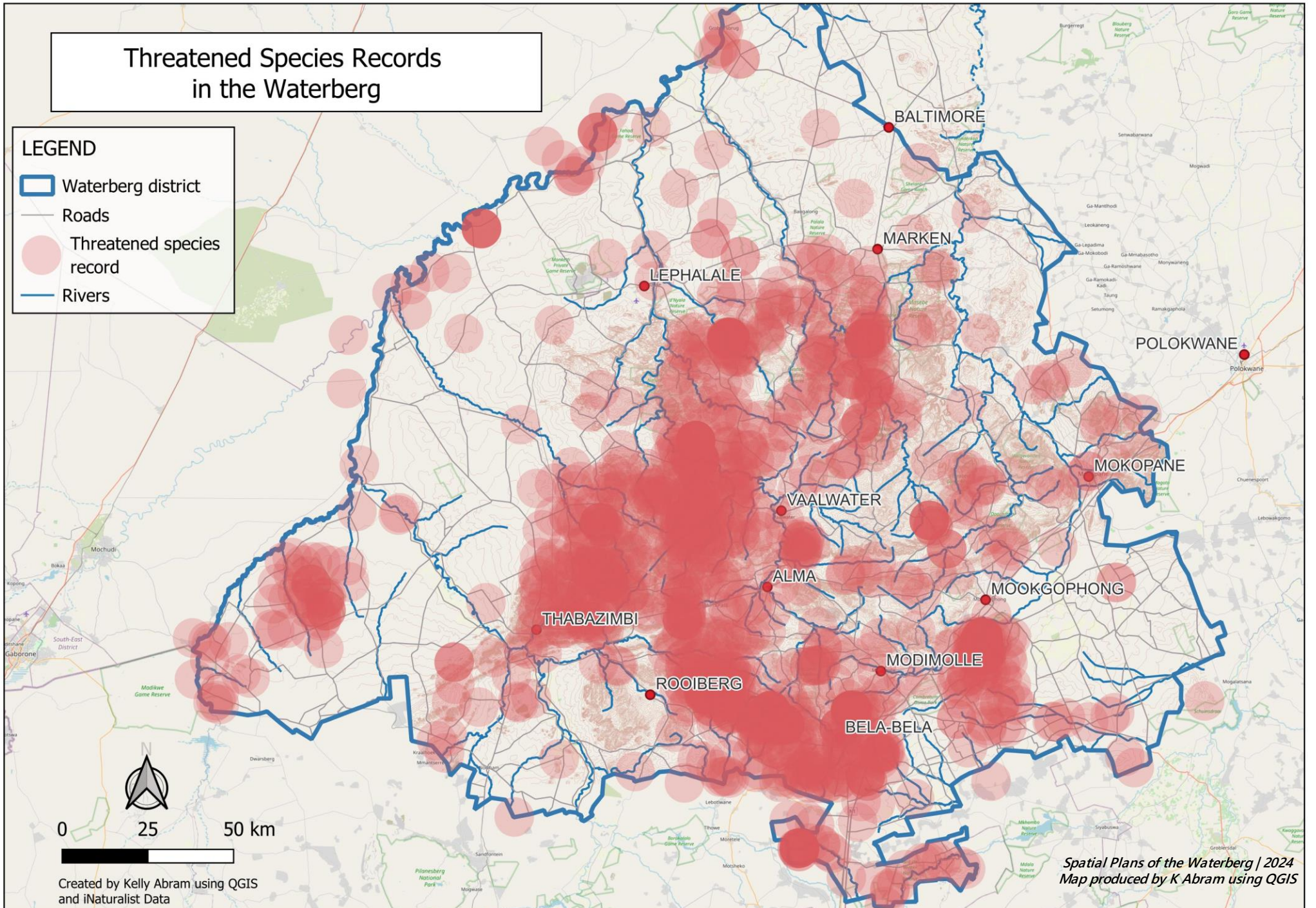
A threatened species is one at risk of extinction in the near future. These species are listed on the IUCN Red List, a vital measure of global biodiversity health. More than just a registry, the Red List serves as a powerful tool for guiding conservation actions and shaping policies essential to protecting the natural resources humanity relies on for survival.

While the status of threatened species can change over time, the Waterberg currently hosts 100 threatened species, underscoring its importance as a biodiversity refuge. This highlights the region's critical role in safeguarding habitats for these at-risk species and reinforcing global biodiversity conservation efforts.

When engaging in development applications, it is essential to document all threatened species within and around the proposed area. These species hold international significance, potentially triggering legal obligations for Environmental Assessment Practitioners (EAPs) and necessitating heightened environmental protections. Listing these species strengthens the case for conservation by underscoring the area's biodiversity value, providing compelling evidence to classify it as a biodiversity priority area.

The Waterberg is home to many threatened species, including the black rhino, mountain reedbuck, African wild dog, pangolin, leopard, secretary bird, southern ground hornbill, Cape vulture, short-fin barb, and Lobatse hinged tortoise, among others.

This diverse array of vulnerable species highlights the region's critical role in biodiversity conservation and the urgent need to protect these habitats for future generations. A full list is provided in appendix A.


Threatened Species Records
in the Waterberg
LEGEND
Waterberg district
Roads
Threatened species record
Rivers
BALTIMORE
MARKEN
LEPHALALE
POLOKWANE
MOKOPANE
VAALWATER
ALMA
MOOKGOPHONG
THABAZIMBI
MODIMOLLE
ROOIBERG
BELA-BELA
0
25
50 km
Created by Kelly Abram using QGIS
and iNaturalist Data
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

Combined Spatial Plans

The following map illustrates the integration of multiple spatial plans, each layered with 25% transparency. This visualization highlights priority biodiversity areas, where darker green shades indicate regions with overlapping spatial plans.

The Waterberg Plateau stands out as a significant priority conservation area across the plans. Additionally, the combined analysis underscores the critical importance of maintaining corridor areas for ecological connectivity and biodiversity conservation.

Caveats and Conclusions of Spatial Plans

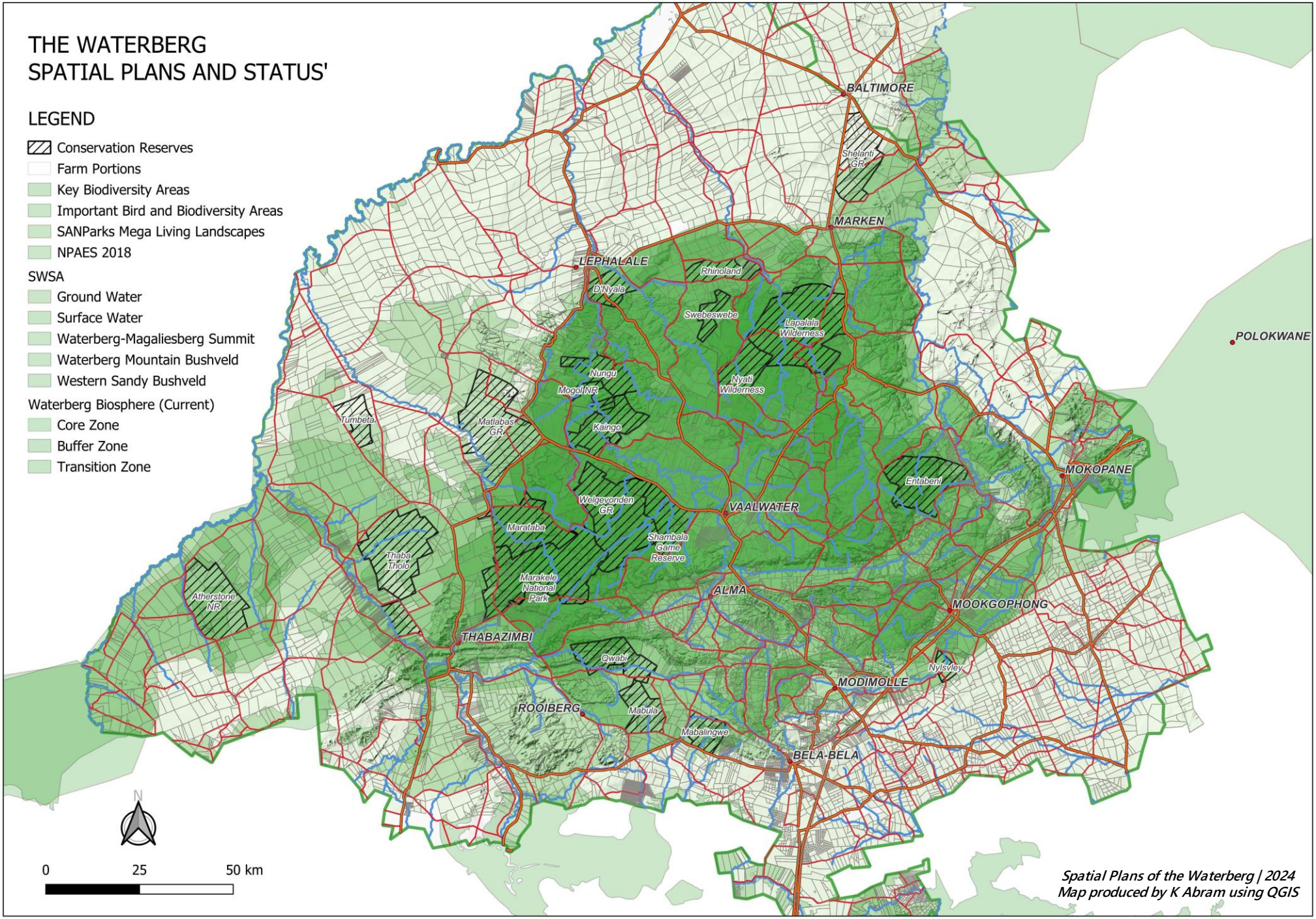
Spatial plans are invaluable tools for guiding sustainable development and ensuring the protection and conservation of biodiversity, securing the future of the Waterberg for all.

However, it is important to recognize that areas not identified as priority zones within these plans are not necessarily insignificant for biodiversity or conservation. In many cases, this may simply reflect gaps in available data or localized information.

Therefore, when evaluating developments or considering applications for protected area status, it is essential to complement these spatial plans with local knowledge and insights to achieve a more comprehensive understanding of the area’s ecological value.

iNaturalist

iNaturalist is a free, open-source platform that offers a powerful tool for enhancing biodiversity data and knowledge in the Waterberg region. Residents and landowners are strongly encouraged to contribute by submitting images and observations. Every contribution helps build a richer understanding of the region's biodiversity, providing valuable input for current and future spatial plans. By participating, the community plays an active role in shaping conservation efforts and sustainable development in the Waterberg.


THE WATERBERG
SPATIAL PLANS AND STATUS'
LEGEND
Conservation Reserves
Farm Portions
Key Biodiversity Areas
Important Bird and Biodiversity Areas
SANParks Mega Living Landscapes
NPAES 2018
SWSA
Ground Water
Surface Water
Waterberg-Magaliesberg Summit
Waterberg Mountain Bushveld
Western Sandy Bushveld
Waterberg Biosphere (Current)
Core Zone
Buffer Zone
Transition Zone
BALTIMORE
Shelanti GR
MARKEN
LEPHALALE
Rhinoland
D'Nyala
Swebeswebe
Lapalala Wilderness
POLOKWANE
Nungu
Mogol NR
Nyati Wilderness
Tumbela
Matlabas GR
Kaingo
MOKOPANE
Entabeni
Welgevonden GR
VAALWATER
Marataba
Shambala Game Reserve
Thaba Tholo
Marakele National Park
Atherstone NR
ALMA
MOOKGOPHONG
THABAZIMBI
Qwabi
Nyisvley
MODIMOLLE
ROOIBERG
Mabula
Mabalingwe
BELA-BELA
N
0
25
50 km
Spatial Plans of the Waterberg | 2024
Map produced by K Abram using QGIS

References, links and further reading

LEDET (2016). Waterberg District Bioregional Plan. Compiled by ECOSOL GIS for Limpopo Department of Economic Development, Environment and Tourism (LEDET), Polokwane. January 2016.

You can access the Waterberg Bioregional plan from SANBI's website: http://bgis.sanbi.org/Projects/Detail/183

https://waterbergbiosphere.com

https://www.unesco.org/en/mab/about

Protecting South Africa's strategic water source areas | CSIR

Strategic water source areas: Combining surface and groundwater to enhance water security | CSIR

IBA Map - BirdLife South Africa

https://birdlife.org.za/wp-content/uploads/2018/06/IBA_Limpopo_2016_web.pdf

https://limpopobirding.com/waterberg-nylsvley?m=11

Key Biodiversity Areas Partnership (2024) Key Biodiversity Areas factsheet: Waterberg. Extracted from the World Database of Key Biodiversity Areas. Developed by the Key Biodiversity Areas Partnership: BirdLife International, IUCN, American Bird Conservancy, Amphibian Survival Alliance, Conservation International, Critical Ecosystem Partnership Fund, Global Environment Facility, Re:wild, NatureServe, Rainforest Trust, Royal Society for the Protection of Birds, World Wildlife Fund and Wildlife Conservation Society. Downloaded from https://keybiodiversityareas.org/ on 05 Nov 2024.

SANBI. 2024. What is a KBA Map? SANBI Factsheet series. South African National Biodiversity Institute, Pretoria.

South Africa's new KBA network is a staggering 263 terrestrial sites with more in the pipeline.

KBA-factsheet.pdf

Further reading: http://www.keybiodiversityareas.org/home

A WORLD LEADER IN KEY BIODIVERSITY AREAS - WWF Nedbank Green Trust

SANParks Vision 2040 – Imagine a world where…

Vision-2040-Pathways-To-The-Future-Of-Conservation.pdf

APPENDIX A

Waterberg current threatened species list

Mammals

Black rhino	CR
Mountain Reedbuck	EN
African wild dog	EN
Elephant	EN
Short-eared trident bat	EN
Juliana's golden mole	EN
Roan	EN
Pangolin	EN
Tsessebe	VU
Cheetah	VU
Black-footed cat	VU
Leopard	VU
Sable	VU
Hippo	VU
Lion	VU
Spotted-necked otter	VU
Swamp musk shrew	NT
Southern African Hedgehog	NT
White rhino	NT
Serval	NT
Spotted hyaena	NT
Brown hyaena	NT
Cape clawless otter	NT
Peak-saddle horseshoe bat	NT
Grey Rhebok	NT
Striped Weasel	NT
Zebra	NT
Buffalo	NT

Birds

White-backed Vulture	CR
White-headed Vulture	CR
Wattled Crane	CR
Martial Eagle	EN
Lapped-faced Vulture (V)	EN
Bateleur (V)	EN
Grey-Crowned Crane (V)	EN
Cape Vulture	EN
Yellow-billed Stork	EN
Southern Ground Hornbill	EN
Saddle-billed stork	EN
Tawny Eagle	EN
Secretary Bird	EN
Steppe Eagle	EN
African Black Eagle	VU
Black Stork	VU
Lanner Falcon	VU
Denham's Bustard	VU
African Finfoot	VU
African Grass Owl	VU
White-bellied Bustard	VU
White-backed Night Heron	VU
Crowned Eagle	VU
Red-footed Falcon	VU
Blue Crane	VU
Maccoa Duck	VU
African Pygmy Goose	VU
Kori Bustard	NT
Abdim's Stork	NT
Half-collared Kingfisher	NT
Gurney's Sugarbird	NT
Black-winged Praticole	NT
Pallid Harrier	NT
Marabou Stork	NT
Greater Painted Snipe	NT
Short-clawed Lark	NT
Yellow-throated Sandgrouse	NT
European Roller	NT
Greater Flamingo	NT
Lesser Flamingo	NT
Greater Painted Snipe	NT
Curlew Sandpiper	NT

Reptiles

Nile Crocodile	VU
Lobatse Hinged Tortoise	VU

Fish

Mozambique Tilapia	VU
Three-spotted Tilapia	VU
Short-fin Barb	NT

Insects

Waterberg Copper	CR
Dwarf Percher	EN
Assegai Sprite	VU
Jerine's Widow	VU
Makabusi Sprite	NT
Quarre's Tiger	NT

Plants

Crassula cymbiformis	CR
Ceropegia stentiae	EN
Encephalatos eugenemaraisii	EN
Eulophia coddi	EN
Jamesbrittenia bergae	VU
Ansellia africana	VU
Xerophyta adendorffii	VU
Dioscorea sylvatica	VU
Oryza longistaminata	VU
Lithops coleorum	VU
Gladiolus zimbabweensis	VU
Cyphostemma hardyi	VU
Elaeodendron transvaalense	VU
Brachylaena huillensis	NT
Curtisia dentata	NT
Drimia sanguinea	NT
Xerophyta rehmannii	NT
Platycladus orientalis	NT
Stenostelma umbelluliferum	NT

APPENDIX B

Image information and credits for trigger species of Waterberg Key Biodiversity Area

	Common name	*Scientific name*		Image credit	Category
1	Barber's Acraea	*Tildia barberi*	LC	Malcolm Douglas	B1
2	Cape Vulture	*Gyps coprotheres*	VU	Odette Curtis (iNaturalist)	A1b
3	Crimson Jaybee	*Jamesbrittenia bergae*	VU	Annerie Senekal (iNaturalist)	A1b, B1, B3a
4	Mozambique Tilapia	*Oreochromis mossambicus*	VU	Joubert Heymans (iNaturalist)	A1b, A1d
5	Giraffe	*Giraffa camelopardis*	VU	Kelly Abram	A1d
6	Limpopo Bulldog Fish	*Marcusenius krameri*	LC	Pistolpete (iNaturalist)	B1
7	Northern Crag Lizard	*Pseudocordylus transvaalensis*	LC	Kelly Abram	B1, B2
8	Sekhukhune Shadefly	*Coenyra rufiplaga*	LC	Markus Lilje	B1
9	Mountain Reedbuck	*Redunca fulvorufula*	EN	Kelly Abram	A1a, A1c
10	Jerine's Widow	*Dingana jerinae*	VU	Steve Woodhall (Waterberg-Bioquest)	A1b, B1
11	Waterberg Flat (Rock) Gecko	*Afroedura waterbergensis*	LC	Joubert Heymans (iNaturalist)	B1, B2, B3a
12	Waterberg Flat Lizard	*Platysaurus minor*	LC	Kelly Abram	B1, B3a
13	Waterberg Girdled Lizard	*Smaug breyeri*	LC	Ryan van Huyssteen (iNaturalist)	B1, B3a
14	Waterberg Dwarf Gecko	*Lygodactylus waterbergensis*	LC	Ruben Foquet (iNaturalist)	B1, B2, B3a
15	Lobatse (Marico) Hinge-back Tortoise	*Kinixys lobatsiana*	VU	Kelly Abram	A1b, A1d, B3a
16	No common name	*Enteromius sp. Nov. 'waterberg'*	NT	No image	B1