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The Secretary  
Mining Affairs Board  
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## **OBJECTION TO APPLICATION FOR EXCLUSIVE PROSPECTIVE ORDER NO. 26 OF 2022, MASHONALAND WEST MINING DISTRICT**

### **Introduction**

This objection to the Application for Exclusive Prospective Order No. 26 of 2022: Mashonaland West Mining District by Shalom Mining Corporation (Pvt) Ltd to prospect for Petroleum Oil and Natural Gas in an area broadly described as “Mana Pools” is submitted by BirdLife Zimbabwe and BirdWatch Zambia, registered conservation not-for-profit non-governmental organisations in Zimbabwe (PVO no. 7/91) and Zambia that promote conservation of avian (bird) species biodiversity, maintenance of avian populations and preservation of habitats and ecosystems to sustain all biodiversity. BirdLife Zimbabwe and BirdWatch Zambia are partners of BirdLife International. In addition, a large group of objectors (predominantly members of BirdLife Zimbabwe) to the Prospecting Order have aligned themselves with this objection.

The objection is made on the grounds that prospecting for, and possibly ultimately extracting, Petroleum Oil and Natural Gas could have catastrophic consequences for human health and conservation of species biodiversity, specifically a number of critically endangered and endangered bird species. Potential risks to the environment include pollution of water sources, accelerated erosion, loss of critical habitat, habitat alteration and increased human disturbance

in a conservation area of global importance. Competence of the applicant, Shalom Mining Corporation (Pvt) Ltd, particularly in managing environmental impact is also questioned.

The preparation of this objection is based upon:

1. Expert knowledge derived from formal scientific survey of avian biodiversity in the proposed prospecting area, as described in General Notice 608 of 2023
2. Historical and current monitoring of avian biodiversity
3. Global initiatives towards conservation of species biodiversity and prevention of extinction programs for bird species.

The existing legislative framework in Zimbabwe widely defines the environment as encompassing both social and biophysical elements and makes it clear that consideration of the environment includes, as a priority, the needs of present and future generations and communities. It is therefore imperative that any development proposal, such as this application to prospect for oil and gas, must pay due respect to the overall socio-economic needs of the society in which it would be located as well as the biophysical environment.

Section 2 of the Environmental Management Act (Act 13 of 2002) defines ‘environment’ as follows:

*“environment” means –*

- (a) the natural and man-made resources physical resources, both biotic and abiotic, occurring in the lithosphere and atmosphere, water, soil, minerals and living organisms whether indigenous or exotic and the interaction between them;*
- (b) ecosystems, habitats, spatial surroundings and their constituent parts whether natural or modified or constructed by people and communities, including urbanized areas, agricultural areas, rural landscapes, and places of cultural significance;*
- (c) the economic, social, cultural or aesthetic conditions and qualities that contribute to the value of the matters set out in paragraphs (a) and (b)”.*

Furthermore, Section 73(1) of the Constitution of Zimbabwe provides that:

*“Every person has the right -*

- a. to an environment that is not harmful to their health or well-being; and*
- b. to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that -*
  - i. prevent pollution and ecological degradation;*
  - ii. promote conservation; and*
  - iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”*

## **1. Biophysical**

- a) Key Biodiversity Area and conservation status*

The proposed prospecting area is of very high conservation value and has been identified as part of a Key Biodiversity Area (KBA) on the grounds that it supports exceptionally high species biodiversity, 450 bird species alone, including Critically Endangered (4 species)<sup>1</sup> and Endangered vulture species (1 species)<sup>2</sup> and the endemic Lillian's Lovebird (*Agapornis lilianae*) that is found only in the Zambezi Valley. Critically Endangered is a conservation status assigned by the IUCN for wild species facing an extremely high risk of extinction in the wild in the immediate future.

The preamble to CMS Resolution 12.10 also highlights the ecosystem services provided by vultures which should be taken into account: i.e. *“Recognizing that vultures provide critically important ecosystem services, offering significant economic and health benefits by cleaning up carcasses and other organic waste in the environment; where there are no vultures, carcasses can take up to 4 times longer to decompose with significant consequences for the spread of diseases in both wild and domestic animals, as well as elevating pathogenic risks to humans; and also recognizing that vultures hold special intrinsic cultural value in many countries”*

Four species of vulture that are resident in Mana Pools and surrounds (including the proposed prospecting area) are “Protected Species” in terms of the Parks and Wildlife Act. They are also listed in Appendix I of the Convention on the Conservation of Migratory Species of Wild Animals (CMS). Zimbabwe is a Contracting Party to this Convention and is consequently obliged (under Article III.4) to take various measures to conserve Appendix I species, including measures to conserve habitats which are of importance in removing the species from danger of extinction. The *Multi-species Action Plan to Conserve African-Eurasian Vultures* also stresses the need for measures to ensure availability of suitable habitat for vultures to nest, roost and forage, and to reduce disturbance of vultures by human activities (especially at breeding sites). The CMS Conference of the Parties has adopted this Action Plan and urged CMS Parties to implement it as a matter of priority (Resolution 12.10). The Zambezi Valley is considered to be a critical stronghold for African vultures in respect of the resident populations of these birds it supports and data from satellite tagged individuals indicates that its influence extends to regional vulture populations from as far away as the Cape Province, South Africa and Namibia.

While it is appreciated that the proposed prospecting area falls outside of the boundaries of the Mana Pools National Park, Chiwore and Sapi Safari Areas that constitute the UNESCO World Heritage and Ramsar Sites, the boundaries of the KBA extend beyond this and include the Lower Zambezi National Park on the contiguous Zambian bank of the Zambezi and buffer zones formed by the Dande, Doma and Hurungwe Safari Areas. The safari areas are included in the KBA in recognition of the role they play as ecological corridors and ecological connectivity across the landscape for the annual seasonal migration of large mammals away from the Zambezi River into the escarpment areas during the rainy season. The importance of effectively conserving areas of particular importance for biodiversity through *well-connected* systems of protected areas and other effective area-based conservation measures is recognized by Target 3 of the Kunming-Montreal Global Biodiversity Framework (as recently adopted under the Convention on Biological Diversity). The proposed prospecting area all falls within the Hurungwe Safari Area and consequently has potential impacts on conservation of

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<sup>1</sup> White-headed Vulture (*Trigonoceps occipitalis*); White-backed Vulture (*Gyps africanus*); Hooded Vulture (*Necrosyrtes monachus*); Cape Vulture (*Gyps coprotheres*)

<sup>2</sup> Lappet-faced Vulture (*Torgos tracheliotos*)

biodiversity. In addition, a long-term vulture monitoring program based within the proposed prospecting area (RIFA camp) has consistently recorded large numbers of vultures foraging in the area for more than three decades.

*b) Accelerated erosion, habitat loss and habitat alteration*

The exceptionally high species biodiversity found in the Mana Pools area is attributed to habitat diversity formed from ongoing natural geological processes of erosion and deposition that in turn support a unique pattern of vegetation succession. Mana Pools, and part of the prospecting area, is situated on an ancient floodplain formed by cycles of erosion and deposition of sediments in past meanderings of the Zambezi River. The prospecting area extends to and includes areas of current river bank formed from these ancient floodplain sediments which are inherently unstable and will be directly impacted, through collapse, if exposed to any vehicular traffic or seismic disturbance. Heavy equipment and vehicles can damage soil structure and increase erosion rates. Depending on extent, increased erosion of river banks could potentially alter natural patterns of erosion and deposition downstream in the Mana Pools World Heritage Site, and will directly affect avifauna such as the migratory Southern Carmine Bee-eater (*Merops nubicoides*) that nest in these banks.

By nature of its topography the floodplain has few rivers, one of which is the Rukomechi River, which has specific associated vegetation consisting of a band of large riparian trees and forest. This very restricted vegetation type is found mostly along the Rukomechi River and is important nesting habitat for two vulture species, White-Backed (*Gyps africanus*) and Hooded (*Necrosyrtes monachus*), that are both Critically Endangered species. The eastern boundary of the proposed prospecting area essentially follows the course of the Rukomechi River potentially putting a large proportion of this rare habitat type, and associated vulture populations at risk. Specific concerns are removal or disturbance of riparian forest while prospecting would cause abandonment of nest sites in a key nesting area by breeding vultures. Although it might be argued that some of the riparian forest falls within a protected area and therefore is unaffected, the narrow buffering area consisting of the width of the Rukomechi riverbed is insufficient to mitigate against vulture nest site disturbance and abandonment. In addition, the construction of roads and drilling pads will lead to fragmentation of habitats and will disrupt wildlife.

The joint E&P Forum/UNEP technical publication “Environmental management in oil and gas exploration and production” highlights oil or gas well blow-outs, explosions and fires (facility and surrounds) as potential emergencies that occur during petroleum and gas exploration. Wildfire resulting from prospecting activity could have catastrophic effect on the environment, including within the World Heritage and Ramsar Sites, if it spreads from the prospecting area into Mana Pools National Park, bearing in mind there are few if any fire breaks in place (see in this regard the comments below regarding Zimbabwe’s obligations under the World Heritage and Ramsar Conventions). Apart from immediate direct loss of biodiversity through burning of vegetation and animals, loss of critical dry-season food resources (grazing) and habitat would have a profound effect on carrying capacity of the environment for all biodiversity. Fire could also induce long term alterations to habitat, for example if it consumes mature trees.

## 2. **Pollution**

Review of the environmental impacts of oil exploration indicate that accidental spills and leakages are a common source of environmental contamination that can affect soil, surface water and ground water quality. Potential contaminants include a cocktail of Polycyclic Aromatic Hydrocarbons (PAH's), volatile organic compounds (VOC's) which include BTEX (Benzene, Toluene, Ethylbenzene and Xylenes) and heavy metals, such as lead and Barium, depending on the nature of the deposit. Toxicity and persistence, particularly of PAH's, in the environment is dependent on chemical composition of the deposit, however PAH's containing two to five fused aromatic rings are of concern due to their toxicity and persistence in natural systems. In addition, some PAH's have been identified as carcinogens, mutagens and teratogens.

### *a) Potential impacts on human health*

The proposed prospecting area has three main rivers, the Rukomechi, Mongwe and Nyakasana, that drain run-off. All these rivers drain directly into the Zambezi River which is extensively used by communities settled on the margins of the river. Obviously, the impact is highly dependent on quantities of crude oil that might be spilled however the previously mentioned E&P Forum/UNEP technical publication does indicate that the probability of uncontrolled release of crude oil and/or gas from oil wells (oil and gas blow-out) is much higher in the exploratory/prospecting phase of oil drilling. An uncontrollable leak or spill could conceivably be seriously detrimental to human health from acute toxicity and long-term carcinogenic effect. These effects may be far reaching and extend to downstream communities.

### *b) Potential impacts on wildlife*

While the toxic effects of accidental spill and leakage of petroleum products apply similarly to wildlife as it does to human health, some taxa such as fish are far more sensitive to petrochemicals than others. Large fish kills are associated with accidental spillages in both marine and freshwater ecosystems, with consequences to fish stocks and sustainable harvest thereof. The lower Zambezi River and Cahora Basa Dam are significant fisheries with many communities dependent on these resources for their livelihoods. It is highlighted that the rivers that drain the proposed prospecting area flow directly into the Zambezi immediately upstream of the World Heritage Site that is world renowned for its biodiversity, including fish species, and the Rukomechi River effectively runs through the Heritage site.

Pollution of surface water, especially the perennial pools that occur in smaller river systems such as the Rukomechi and Mongwe Rivers, is potentially devastating to Critically Endangered vulture populations as these birds congregate *en masse* daily to drink and bath at these sites. Vultures seldom, if ever, use sandbanks on the Zambezi River for these purposes, presumably due to the high risk of predation by crocodiles. Vultures are notoriously sensitive to environmental contamination, and it is estimated that diclofenac contamination of just 1 carcass in 800 resulted in a 95% decline in the population of Indian White-Rumped Vulture (*Gyps bengalensis*) within a decade. Conceivably the many vultures that utilize perennial pools in

the proposed prospecting area could be exposed to high levels of petrochemicals particularly if water flow is low with potentially lethal and far reaching effect.

Noise pollution has the potential to drive away wildlife to more habitable sites, including community areas where cases of human wildlife conflict will likely increase. Noise pollution from petroleum and natural gas exploration is a significant threat to the environment and wildlife in Mana Pools area. The impacts of noise pollution on wildlife and the environment are complex and far-reaching, and very little can be done to mitigate these impacts.

*c) Potential impacts on sites in respect of which Zimbabwe has international obligations*

As noted above, the Rukomechi River effectively runs through Mana Pools National Park – which is both a World Heritage Site and a Ramsar Site. As a Contracting Party to the World Heritage Convention, Zimbabwe has undertaken “not to take any deliberate measures which might damage directly or indirectly” the natural heritage situated in its territory (Article 6.3). The World Heritage Committee has urged Parties, in line with this undertaking, to make “every effort to ensure that extractive companies located in their territory cause no damage to World Heritage properties” (Decision 37 COM 7, para. 8). Under Article 3.1 of the Ramsar Convention, Zimbabwe has also committed to promoting Ramsar Sites’ conservation (i.e., to maintaining their ecological character).

### **3. Shalom Mining Corporation (Pvt) Ltd**

The applicant, Shalom Mining Corporation (Pvt) Ltd, is an unknown entity with no apparent track record in the mining industry. While it is understood to be a Zimbabwean company, there is no apparent published Company Profile for Shalom Mining Corporation and more concerning no record of its Environmental Policy, especially safe-guarding protocols for preventing and mitigating established risks that are inherent to the proposed activity, such as accidental leakages, spills and fires. The fact that their application is made to prospect an area that directly borders a world-renowned UNESCO World Heritage Site without any form of buffer zone suggests a flagrant disregard and lack of respect for any environmental considerations or the conservation value of the area they intend to operate in. This attitude could potentially have dire and irreversible consequences for the environment and unique biodiversity it supports. This approach and lack of experience are all the more concerning given the potential implications for Zimbabwe’s compliance with four global conservation treaties: the Convention on Migratory Species, Convention on Biological Diversity, World Heritage Convention, and Ramsar Convention.

### **Conclusion**

Based on the above assessment of environmental risk, we urge the government to REJECT the application by Shalom Mining Corporation (Pvt) Ltd, for an Exclusive Prospective Order to prospect for Petroleum Oil and Natural Gas in the area broadly described as “Mana Pools”.