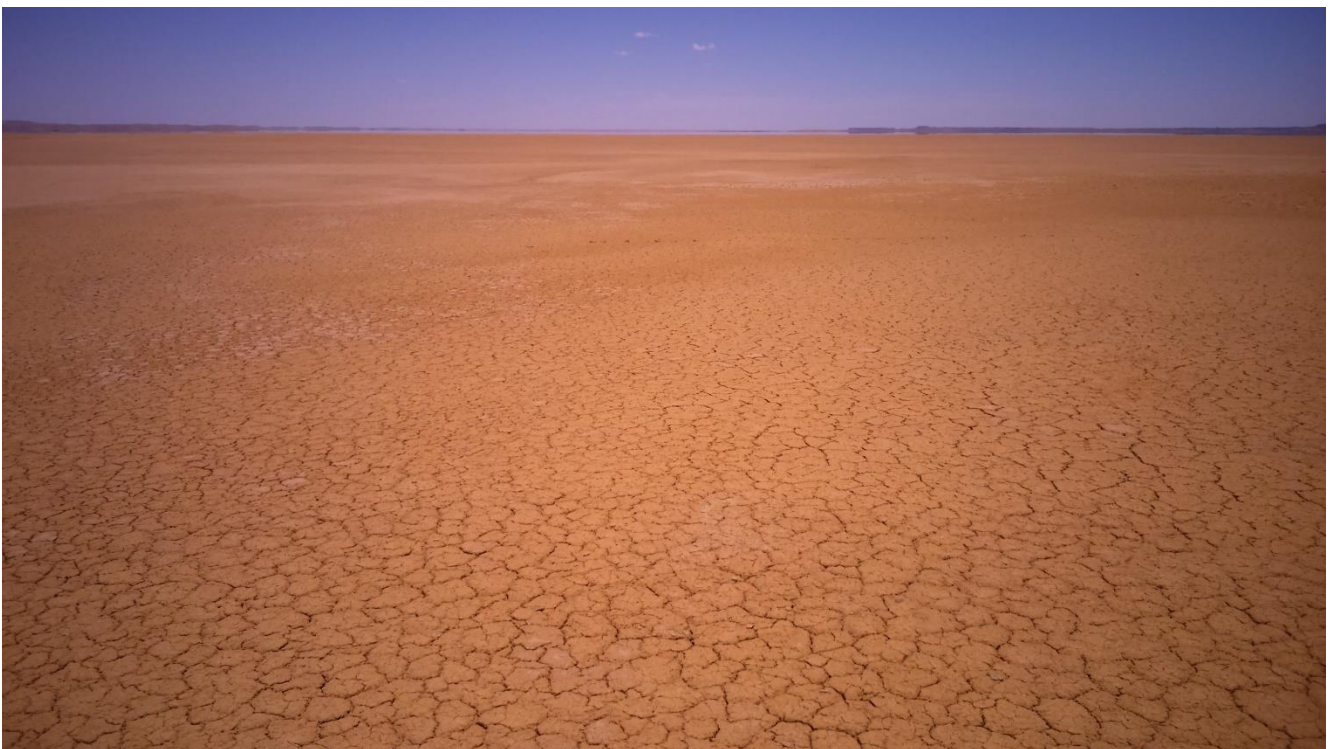


HAKSKEEN PAN EVENTS AND TOURISM-RELATED DEVELOPMENT

Including the Bloodhound SSC, Speed Events and other tourism-related events

**Farm 585, Remainder, Portion 107 of Farm 585 and
Remainder of Windhoek 122, Gordonias RD, Dawid Kruiper
Local Municipality, Northern Cape**



DRAFT BASIC ASSESSMENT REPORT

January 2017

HAKSKEEN PAN EVENTS AND TOURISM-RELATED DEVELOPMENT, DAWID KRUIPER LOCAL MUNICIPALITY, NORTHERN CAPE

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EXECUTIVE SUMMARY

Introduction

The intention is to develop Hakskeen Pan as a multi-event outdoor arena/stadium type facility which could host future events such as land speed record attempts (Bloodhound SSC), speed testing, concerts and festivals etc. Approximately 16 150ha will be rezoned to accommodate the mixed use tourism-related area.

Although the Basic Assessment Report and the Environmental Management Programme have been compiled with focus on the speed events (Bloodhound SSC), the general recommendations and mitigation measures outlined in the BAR, specialist reports and the EMP should be adopted by any other future events.

The construction of infrastructure for the speed events held/to be held on Hakskeen Pan has commenced.

The infrastructure constructed to date includes the following and is included in a separate Section 24G Application under the NEMA EIA Regulations 2010:

- a 20km long, 500m wide track has been constructed, including a 300m wide safety buffer on either side of the track. Construction comprises of the following:
 - 317 workers have cleared by hand an area of 20km x 1,1km of all surface stones and pebbles.
 - Rehabilitation of the pan in the form of removing an existing causeway which was previously the main road between Mier and Rietfontein has taken place. This road which was 1m high was removed and the pan restored to its original surface and level.
 - Material removed from the road was placed back in the borrow pits created many years ago when this road was first built.
 - In certain areas it was necessary to remove stones which protruded above the surface but which extended to below the surface of the pan. These cases only represent a total estimated area of 500m x 300m when combined thus only 0,68% of the total amount of stones removed unearthed by machines, the rest was removed by hand.
 - The only place where grading has and will take place is to repair manmade indentations and elevations in the form of old tracks created by locals or in the case of the elevated causeway which was removed.
- Temporary structures (mostly shipping containers) placed on the edge of the pan for various functions such as control, storage, hospitality, showers and toilets etc.) located at the landside/Speedweek camp.
- A 110kVa diesel generator, with a 3500l diesel tank and bund, also housed within a portable shipping container on site.
- Two telecommunications masts placed at the landside camp and next to the R31
- 6 x 10 000l jo-jo tanks have been constructed for the storage of water on site.
- Water is sourced from local borehole near the site, via a 16m long, 40mm diameter pipeline.
- There is also a 110kVa diesel generator, with a 3500l diesel tank and bund, also housed within a portable shipping container on site.
- A 44000l sewerage septic/holding tank has also been constructed at the landside/ Speedweek camp for the temporary storage of all effluent. The tank is emptied by a honeysucker by the local Municipality when it is full. At this stage it is not known what additional infrastructure (conservancy tanks etc.)
- Farm boundary fencing was also moved to accommodate the track
- There was also a 7km, 500m wide track for the speedweek events, however, no preparation of this track was required.

The following infrastructure and development still needs to take place, and is the subject to this NEMA Application in terms of the 2014 EIA Regulations:

- A landing strip will be “constructed” that will be less than 1.4km to accommodate film, support and/or medical crews. No solid permanent infrastructure will be built, but the landing strip will be marked, cleared of any large rocks and stones and have temporary lighting/signalling installed
- Additional temporary structures (including tents, marquees, stages, grand stands/viewing area, shipping containers, ablution facilities, exhibition stands, additional water tanks) will be installed at the landside/Speedweek camp area for the development of the hospitality and viewing area.
- A technical camp (Technical Camp Option B) consisting of temporary structures will be located at the existing MTN telecommunications tower next to the R31, with direct access from the R31. Please note that it is proposed that some of the area surrounding the telecommunications tower be infilled with natural material (sand and rock from the pan or surrounding area) to elevate the technical camp.
- A fuel depot area for the storage of fuel will be located to the western side of the pan. Fuel will be stored in portable fuel tankers, and be located within a bund area.
- No new roads were constructed for the activities, and only existing tracks on the pan were used.

Designated viewing areas are expected to be constructed at or near the landside/ speedweek camp. These would more likely be located on the pan surface, and not on the dune areas on the edge of the pan (the dunes areas will be designated as no-go areas to spectators).

Spectators are expected to be shuttled to the viewing areas by busses at specified times, and no private vehicles will be allowed onto the pan. Parking areas will be provided, either on the pan on the northern side of the R31, or in an open area to the west of the Technical Camp.

Environmental Requirements

The National Environmental Management Act (NEMA, Act 107 of 1998), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the competent authority based on the findings of an Environmental Assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs (DEA).

Since construction has commenced and activities in terms of the NEMA EIA Regulations 2010 have been triggered, a separate Section 24G Application for the rectification of unlawful commencement or continuation of listed activity/ies under the NEMA EIA Regulations 2010 is being applied for.

The activities and development that still need to be undertaken will be included in the NEMA Application in terms of the NEMA EIA Regulations 2014.

According to the regulations of Section 24(5) of NEMA, authorisation is required for the following:

NEMA EIA Regulations 2014:

Government Notice R983 (Listing Notice 1):

Activity 12: The **development** of;

- (i) canals exceeding 100 square metres in size;
- (ii) channels exceeding 100 square metres in size;
- (iii) bridges exceeding 100 square metres in size;
- (iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size;
- (v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size;
- (vi) bulk storm water outlet structures exceeding 100 square metres in size;
- (vii) marinas exceeding 100 square metres in size;
- (viii) jetties exceeding 100 square metres in size;
- (ix) slipways exceeding 100 square metres in size;
- (x) buildings exceeding 100 square metres in size;**
- (xi) boardwalks exceeding 100 square metres in size; or
- (xii) infrastructure or structures with a physical footprint of 100 square metres or more;**

where such development occurs;

- (a) within a watercourse;
- (b) in front of a development setback; or
- (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;

Excluding:

- (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;
- (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;
- (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;
- (dd) where such development occurs within an urban area; or
- (ee) where such development occurs within existing roads or road reserves.

Activity 14: The **development** of facilities or infrastructure, **for the storage, or for the storage and handling, of a dangerous good**, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.

Activity 19: The **infilling or depositing** of any material of more than **5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from;**

- (i) a watercourse;**
- (ii) the seashore; or
- (iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving;
 - (a) will occur behind a development setback;
 - (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or
- (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.

Government Notice R984 (Listing Notice 2):

None

Government Notice R985 (Listing Notice 3):

Activity 6: The **development of resorts, lodges, hotels and tourism or hospitality** facilities that sleeps 15 people or more.

In the Northern Cape:

- i. In an estuary;
- ii. Outside urban areas, in:**
 - a) A protected area identified in terms of NEMPAA, excluding conservancies;
 - b) National Protected Area Expansion Strategy Focus areas;
 - c) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;
 - d) Sites or areas identified in terms of an International Convention;
 - e) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
 - f) Core areas in biosphere reserves;

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- g) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;
 - h) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined;
 - i) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined.**
- iii. In urban areas, the following:
- a) Areas zoned for use as public open space;
 - b) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.

Activity 7: The development of **aircraft landing strips** and runways 1.4 kilometres and shorter.

In the Northern Cape

- i. In an estuary;
- ii. Outside urban areas, in:**
 - a) A protected area identified in terms of NEMPAA, excluding conservancies;
 - b) National Protected Area Expansion Strategy Focus areas;
 - c) World Heritage Sites;
 - d) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;
 - e) Sites or areas identified in terms of an International Convention;
 - f) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
 - g) Core areas in biosphere reserves;
 - h) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core of a biosphere reserve;
 - i) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined;
 - j) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined.**
- iii. In urban areas:
 - a) Areas zoned for use as public open space;
 - b) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.

Activity 10: The **development** of facilities or infrastructure **for the storage, or storage and handling of a dangerous good**, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres.

In the Northern Cape

- i. In an estuary;
- ii. Outside urban areas, in:**
 - a) A protected area identified in terms of NEMPAA, excluding conservancies;
 - b) National Protected Area Expansion Strategy Focus areas;
 - c) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;
 - d) Sites or areas identified in terms of an International Convention;
 - e) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
 - f) Core areas in biosphere reserves;
 - g) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve;
 - h) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined;

- i) **Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined;**
 - j) Within 500 metres of an estuary.
- iii. In urban areas:
- a) Areas zoned for use as public open space;
 - b) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;
 - c) Within 500 metres of an estuary

Site Description

The site is Hakskeen Pan, located approximately 12km east of Rietfontein, within the Dawid Kruiper Local Municipality (formerly Mier Municipality) in the Northern Cape.

The pan provides ideal conditions to accommodate the 20km long Bloodhound SSC track, being long, flat and hard enough. This also makes it an ideal location to host other events, such as festivals, concerts, speed events, high speed testing etc.

The majority of the study (pan and pan edge) is natural to near natural, with only very limited disturbance.

Only a small portion of the entire pan and pan edge has been impacted on. This includes the clearing of the 20km track, which accounts for approximately 7% of the pan surface area.

Impacted areas also includes the existing tracks on the pan, the existing causeway that has been cleared, the Speedweek/ Landside camp area and the technical camp area (MTN telecommunications base station).

- **Vegetation**

According to the Flora Assessment (**Appendix D6**), Hakskeen Pan is designated as Southern Kalahari Salt Pans (AZi4) and is located within the Kalahari Karroid Shrubland (NKb5) vegetation unit which forms part of the Nama-Karoo Biome and Savanna Biome.

Seventeen (17) plant species are recorded for the 2026C Quarter Degree Square in which Hakskeen Pan occurs, as contained in the POSA database.

All of the plant species listed for the QDS are classified with a "LC" (Least Concern) Red Data status and are therefore, considered at a low risk of extinction and includes widespread and abundant species. None of the species listed are endemic to South Africa.

No tree species protected in terms of Section 12(d) of the National Forests Act, 1998 (Act No. 84 of 1998) are listed for the QDS.

None of the species listed by SANBI for the QDS are contained the Threatened and Protected Species (ToPS) List, as published in the Government Gazette Notice No. 389 of 2013 (16 April 2013) as part NEMBA, 2004 (Act 10 of 2004).

No plant species of conservation concern were found to occur on the study site.

According to the Flora Assessment (**Appendix D6**), the vast majority of the pan is devoid of vegetation. Where vegetation was found in the pan it was clustered and generally consisted only of the Ganna plant (*Salsola scopiformis*). The edges of the pan were found to generally have more vegetation, but still with low species diversity. All sites surveyed exhibited little grass cover.

There is some alien vegetation present in the study area. According to the Flora Assessment (Appendix D6), one invader species listed in NEMBA, 2004 (Act 10 of 2004) a Category 3 invasive species was observed, namely *Prosopis glandulosa* (Honey mesquite). Honey mesquite was found at almost all of the survey sites and is distributed across most of the project site where vegetation occurs, i.e. on the outskirts and outside the pan.

The general impact on flora is considered Low Negative.

- **Fauna**

The desktop study indicated that species of conservation importance might occur in the area (avifauna); however, seven (7) species found during the field assessment had a conservation importance status.

The faunal assessment showed that seven (7) red data species (either ToPS protected or IUCN, or both) were found in the region for the area in which Hakskeen Pan is located. However, most of these species had focused activity on the western border of the pan where the development is minimal and in most cases the habitat there will remain undamaged, if well mitigated.

The larger area and the center of the Hakskeen Pan were investigated as thoroughly as possible due to movement restraints to protect the integrity of the soil of the pan.

The habitat integrity was found to be in an intact manner for the area and especially on the western side signs of movement and activity were sighted. No animals or movement were observed on the pan itself, as it is extremely dry and hot, reaching temperatures above 40 degrees. The soil was found to be compacted, which is expected from a pan, which in essence is a closed system.

To the eastern side of the pan, there are signs of human intervention, particularly where the tower and ablution buildings are located.

The general impact on fauna is considered Low-medium Negative to Medium Negative.

- **Freshwater**

The classification of Hakskeen Pan as a wetland has been problematic, as it does not necessarily conform to the general description of a wetland. According to the Freshwater Assessment (**Appendix D4**), an ephemeral pan in an arid landscape does not fit the general description of a wetland in various South African policy documents.

The general impact on freshwater ecosystems is considered Low Negative to Medium Negative.

- **Heritage**

According to the Heritage Impact Assessment (**Appendix D5**), in terms of significance, the very small numbers of isolated artefacts noted (they seem also to be widely distributed through time, from Earlier Stone Age [>500 000 years old] to Later Stone Age [perhaps up to the 19th century]) suggests that they have low local significance (to be graded 3C in terms of the National Heritage Resources Act).

The grave is of high sensitivity and should be subject to a detailed management plan if there is a chance that development may encroach into the area where it is situated.

All pan and pan-side settings, with the exception of the grave site, the significance of impact is likely to be low. The grave site is of high sensitivity and it is recommended that it be a no-go area.

The general impact on heritage resources is considered Very Low Negative.

Need and Desirability

According to the Socio-economic assessment (**Appendix D2**), the activities associated with the pre-event and planning and hosting phase will create significant employment and business opportunities for local community members in the Mier area and the Dawid Kruiper Local Municipality. The hosting of the Bloodhound event will also create significant benefits for the local hospitality, tourism and business sector. The Bloodhound land speed record event is also a unique, global event and will create a once in a life time opportunity to place Hakskeen Pan on the international map and establish it as one of the best high speed testing sites in the world.

The event will also create a unique opportunity to show case the Mier area, Northern Cape and South Africa to the rest of the world.

In addition, the event will create an opportunity for a number of significant legacy opportunities linked to the establishment of Hakskeen Pan as an internationally recognised high speed testing and events venue. With proper planning and management these benefits will be long term.

Services

- **Solid Waste**

Solid waste disposal will need to be confirmed, but it is expected that all solid waste will be consolidated on site (either in wheelie bins and /or skips), to be removed on a regular basis by the municipality and/or other service provider.

There will be no burying, incinerating or other means of waste disposal allowed on site.

According to the Freshwater Assessment (**Appendix D4**), waste is to be collected and transported off-site, from where it can be separated, recycled and disposed of on a sanitary landfill. To conduct these actions on Hakskeen Pan is deemed to be too risky, from an environmental impact point of view.

According to the Bulk Engineering Services Report (**Appendix D8**), there are four registered solid landfill sites in the vicinity of Hakskeen Pan, located at Rietfontein, Loubos, Philandersbron and Groot Mier. All of which are classified as Class G: C: B- disposal sites.

General Waste refers to any waste that does not fall within the definition of Hazardous Waste. In other words, waste that does not pose a significant threat to public health or the environment. The waste generated at Hakskeen Pan can be screened on site and the General Waste disposed off at one of the solid landfill sites.

The Hazardous waste will have to be pre-treated on site and disposed off according to the chemical and physical composition on a registered hazardous waste landfill site. There is not such a landfill site in the Mier area.

- **Effluent**

At the moment the Speedweek facility is provided with a conservancy tank which is emptied with a tanker truck from time to time. The sewage then is taken off site. It is foreseen that the sewage from the Bloodhound facility at the Speedweek site as well as from the technical camp will be collected in conservancy tanks and moved off site.

The treatment of sewage on-site at this stage of the project is deemed as environmentally risky and as not feasible.

According to the Bulk Engineering Services Report (**Appendix D8**), the closest wastewater treatment facility is located at Rietfontein, approximately 14km from the Hakskeen Pan. The treatment facility consists of a set of oxidation ponds. According to the municipality the system is hydraulically overloaded due to the additional sewage load received from Philandersbron and Loubos that is also disposed of at Rietfontein.

The following proposals may be considered:

- Increasing the capacity of the Rietfontein WWTW. Consider the possibility of increasing the capacity of the existing wastewater treatment works at Rietfontein to accommodate the current load from Rietfontein, Philandersbron and Askham, as well as the load that will be generated on Hakskeen Pan. This will be mutually beneficial for both stakeholders.
- On-site treatment. Depending on the volume generated, on-site treatment can be considered. This can be achieved by the construction of an on-site treatment facility, such as an oxidation pond system which require low maintenance. A package type plant can also be considered but have more operation and maintenance requirements. Environmental aspects will have to be considered.

- Chemical ablution facilities. The waste will have to be disposed of at a wastewater treatment facility. The only wastewater treatment works in the vicinity of Hakskeen Pan is at Rietfontein. The system is already overloaded and this option will not be viable.

Chemical ablution facilities would be the preferred measure, especially in the short term, due to the versatility of this measure (the location and number of toilets can be adapted as per each events requirement). However, since the waste will have to be disposed of at a wastewater treatment facility, and the only wastewater treatment works in the vicinity of Hakskeen Pan is at Rietfontein, which is already overloaded this option may not be viable, unless the waste is transported over a greater distance to a facility that has capacity, or until such time as the capacity at Rietfontein WWTW is increased.

An on-site package plant can also be a viable option, however, it should not be placed on, or in close proximity to the pan.

- **Water**

According to the Bulk Engineering Services Report (**Appendix D8**), the Kalahari-East to Mier Pipeline runs within the R31 road reserve, adjacent to the Hakskeen Pan. The pipeline was designed to supply potable water to the Mier area. The design capacity of the pipeline is approximately 13 l/s over twenty-four hours and operates under gravity.

A 21 ML earth-fill reservoir was also constructed approximately 6 km from Groot Mier to provide two weeks' storage capacity in the event of an emergency.

Water provision to Hakskeen Pan is not expected to be a problem. Two water connection points were requested for the Bloodhound project. One connection close to the existing access of the pan and another connection point at the MTN facility.

Once the water requirement for the temporary Bloodhound facilities is made available by the organisers, a model will be developed to simulate the maximum water availability versus the water demand for the Hakskeen Pan.

Conclusion

Although the proposed development will result in and expected to have some potential environmental impacts, these are considered insignificant at this stage.

The best environmental option would be the no-go alternative. However, the massive social benefits of the proposed project would not be realised. The potential benefits from a socio-economic perspective are considered to significantly outweigh any potential environmental impacts.

With appropriate measures, as per the Specialist recommendations and the Environmental Management Programme, any potential negative environmental impacts are expected to be satisfactorily mitigated.

None of the specialist assessments to date have found any significant potential negative impact from the proposed development that could potentially cause substantial detrimental harm to Hakskeen Pan.

No significant negative environmental impacts have been identified or are expected. Any negative environmental impacts identified (see section B and D) have been adequately mitigated. The socio-economic benefits are expected to outweigh these environmental impacts.

According to the Socio-economic Impact Assessment (**Appendix D2**), the significance, with mitigation, of the all of the potential negative impacts associated with the operational phase was rated as Low Negative. All of the potential negative impacts can therefore be effectively mitigated if the recommended mitigation measures are implemented.

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According to the Freshwater Assessment (**Appendix D4**), there is no indication that the Bloodhound SCC should not go ahead on the grounds of possible deleterious impacts on the aquatic environment.

Considering all the information, it is not envisaged that this proposed development will have a significant negative impact on the environment, and the considerable socio-economic benefits are expected to outweigh any negative impacts.

It is therefore recommended that this application be authorised with the necessary conditions of approval as described throughout this BAR.