

**BUSINESS PLAN FOR THE PROPOSED PERMANENT TENTED CAMP AT
SOLOBEYA “A” SITE IN SERENGETI NATIONAL PARK, SERENGETI
DISTRICT IN MARA REGION, TANZANIA**

DEVELOPER

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SUBMITTED TO:

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1.0 INTRODUCTION

1.1 Background Information

Tanzania is one among the major countries in the world, which are endowed with remarkably natural and cultural heritages. It was ranked fourth (4th) among 140 countries in the world, which are gifted with tourism-related natural resources (MoFP, 2015). Tourism Sector is therefore an ideal vehicle for propelling economic growth and reducing poverty among the citizens of Tanzania. In 2015/2016, the tourism sector in Tanzania was estimated to account for about 17.5% of the Gross Domestic Product (GDP) and was reported to contribute approximately 30% of the foreign exchange earnings (MoFP, 2016). In view of that, the government of Tanzania has continued to put considerable effort to promoting tourism business so as to increase the sector's contribution to the country's economic growth. According to Tanzania 5-Year Development Plan (2016/17-2020/2021) the Government targeted the average rate of tourism growth to 6.2% annually and the contribution of the tourism sector to the country's GDP to reach as high as 18.3% and 19.5% by the financial years 2020-2021 and 2025-2026 respectively.

In order to attain this aspiration, the Government has continued to partner with the private sector to promote tourism as well as improve tourist services, particularly accommodation facilities. Since majority of tourist who visit Tanzania are attracted by abundant and diverse wildlife, which is mostly found in wildlife protected areas, Tanzania National Parks (TANAPA), which is mandated to manage a total of 22 national parks supports Government initiatives by providing conducive environment for investors to invest in accommodation facilities that meet international standards but, which are not subject to compromising the outstanding values that compelled those parks to be established.

TANAPA is a parastatal organization under the Ministry of Natural Resources and Tourism (MNRT), which is legally mandated *“to manage and regulate the use of areas designated as National Parks by such means and measures to preserve the country's heritage, encompassing natural and cultural resources, both tangible and intangible resource values including fauna and flora, wildlife habitat, natural processes, wilderness qualities, scenery therein and provide the same for human benefit and enjoyment in such manner and by such means as will leave them unimpaired for future generations”* (TANAPA, 2019).

TANAPA achieves the balance between preservation and use in national parks among other approaches through the process of developing and implementing General Management Plans (GMPs). It has developed and currently following its Medium-Term Strategic Plan (MTSP), which is for the 5 years' term 2018/2019-2022/2023 (TANAPA, 2018). The MTSP has set a clear vision for TANAPA to ensure that all national parks remain competitive as well as the symbols of Tanzania's National Heritages and Prestige while contributing to the national conservation objectives and the development agenda. The Organization has also prepared a Tourism Investment Manual (TIM) of 2019-2024), which provides among other issues a step-by-step procedure for seeking approval for the establishment of tourism development facilities or activities within national parks in Tanzania (TANAPA, 2019).

TANAPA therefore continues to provide essential infrastructure and identify areas that are potential to putting up additional accommodation facilities within parks. The Organization allows investment in national parks to provide for accommodation to tourists, both local and foreigners and in addition to that, generate income to support conservation activities as well as opportunities for human enjoyment (TANAPA, 2019). The proposed investment is a Permanent Tented Camp (PTC) of up to 25 guest tents with a maximum of 50 beds to be established at Solobeya “A” Site at GPS 36M 0718048 UTM 9817530 (Appendix 2).

Sisini Collections Limited is therefore set to construct and operate the proposed facility, which will consist of a maximum of 50 beds in at most 25 guest tents at full capacity. However, the proposed facility will start with 15 guest tents to accommodate a maximum of 30 visitors and establishment of the remaining 10 (Ten) tents will depend about tourism business worldwide and the findings of environmental and social monitoring and audits that will be undertaken during the construction and operation of initial tents for at least two years. This period will also allow time to determine the taste of clients in order fulfill their enjoyment and satisfaction. Other major facilities at the proposed PTC will be the central building that will consist of a reception, main lodge, restaurant and kitchen, bar, management offices, Spa & Gym, public toilets, gift shop, business centre and visitors’ lounge. The facility will also provide staff and tour drivers’ quarters, a swimming pool, a solar energy harvesting farm, a powerhouse, a solar-powered two borehole, a backup generator’s room: waste both solid and liquid disposal facilities and a parking area for a maximum of 25 vehicles. All the proposed facilities are in compliance with the requirement of the TIM (TANAPA, 2019).

According to the TIM (2019-2024), a PTC is characterized as a one level accommodation facility with the reception, dining room, and bar; erected on cement blocks or wood platform and a series of one level, cement blocks or wood platform, separated, permanent tented bedroom structures, and a swimming pool, which is an optional. Only essential onsite staff housing, parking and storage only are allowed. While biodegradable trash should be buried and burnable rubbish burned at the site, non-decomposable waste should be removed and disposed off outside the Park by the investor (TANAPA, 2019). Figure 1.1 shows a site layout map of the proposed PTC to be established at Solobeya “A” Site in Serengeti National Park.



KEY:

- 1. Guest tents
- 2. Central building including restaurant, bar, kitchen, shop, business centre etc
- 3. Staff houses
- 4. Generator and powerhouse
- 6. Staff kitchen and canteen
- 7. Manager’s house
- 8. Water reserve tanks
- 9. Solar harvesting farm
- 10. Liquid waste management facilities (septic tanks)
- 11. Parking area

-And you may add number 5 for a swimming pool

Figure 1.1 Site layout of of the proposed PTC to be established at Solobeya “A” Site in Serengeti National Park

1.2 Justification of the Proposed Project

Tourism continues to grow as indicated by an increase in the number of international tourist arrivals over a period of five years from 1,137,182 in 2015 to around 1,527,000 in 2019 (Tanzania Investment com, 2020), which was approximately 7.0% average annual growth rate. Similarly, visitors both international and domestic who visited SENAPA increased from 372,986 (167,988 international and 204,998 domestic) in 2015 to about 500,000 in 2019, which also translated into approximately 7.0% average annual growth rate. Despite this impressive tourist arrivals growth rate in the country in general and SENAPA in particular, accommodation facilities in SENAPA have always been overbooked particularly during high tourist season. According to the revised SENAPA-GMP (2014-2024), there were 1,544 beds in 2014 inside the Park against the envisioned requirement of 3,728 by 2024, which obliged TANAPA to recommend for additional 2,184 beds within a period of ten years (2014-2024) (TANAPA, 2014). According to SENAPA’s GMP zoning management scheme, *Solobeya “A”* is categorized as the “High Use Zone” where lodges and PTC akin to the one being proposed are allowed for establishment provided they do not compromise the outstanding values existing in the area (TANAPA, 2014).

Further, the market survey that was conducted by the investor prior to initiating the proposed project revealed that the current market constitutes two main segments, that is, high class holiday foreign tourists as well as government officials, diplomats and business executives who make up the local segment. Majority of the potential visitors are interested to spend their nights in the park where wildlife, which motivate them to visit the area are found. The findings of the survey exemplify that the proposed PTC establishment corresponds well with SENAPA’s GMP (2014-2024) and the Tourism Investment Manual (2019-2024) with respect to adding more tourist beds in the Park on one hand, and the existing market segments on the other hand. The proposed PTC is also in line with the goal of the National Tourism Policy, which aims at providing high-class accommodation facilities in Tanzania in general and in protected areas in particular (URT, 2007). Whereas SENAPA-GMP provides for the establishment of eco-accommodation facilities, which takes a bigger share of the existing bed deficit, the findings of the survey on potential tourist preference that was conducted by Horizon Acres Limited exemplify that the proposed project fits in well into the established various tourist market segments, thus the opportunity for the developer to establish a PTC fulfills both the Government and the developer’s prospects.

1.3 The Company Profile

1.3.1 Objectives of the Company

Sisini Collections is a “Limited” Company incorporated under the Companies Act, Cap 212 with its registered office situated in Arusha, Tanzania (Appendix 3). The objects for which the Company was established, which are related to the hospitality industry are:

(a) To construct, acquire, purchase or take over, promote, construct, establish and carry on the business of real estate development, hoteliers, restaurant, bar, café, motel, holiday camping, safaris lodges, tour operators, hire of vehicles, mountain climbing, game driving and other safaris operators, boat tours and fishing, tourism resort, carriers of passengers and goods, souvenir and handcraft and to carry on any other business, which the Directors of the Company may deem fit in respect of tourist industry.

(b) To construct, maintain, improve, develop, work, control and manage any hotels, tourist lodges, motels, clubs, game camps and luxury campsites, restaurants, cafes, snack bars, casino, cinemas, pleasure ground, parks, gardens, and place of conveniences, which the company may think directly or indirectly inclusive to the objects of the Company and to do any of the business, which the Company may think fit herein.

(c) To engage in the business of Tour operators, Tour agents and Safari contractors, and generally to provide facilities for all types of tours and safaris all over the country and elsewhere; also, to carry on the business of mountain climbing and trekking.

(d) To engage in the business of tourist and traveller agents in all of its branches of hotels or lodges, luxury or budget camping in protected areas and elsewhere.

(e) To carry on business as safari contractors, organizers and operators; to equip and manage hunting safaris, photographic, game fishing and other safaris and expeditions of all kinds, water sports, cultural tourism, beach holiday, walking and biking safaris.

(f) To create and promote forms of tourism that provides healthy interaction opportunities for tourists and locals and increase better understanding of different cultures, customs, lifestyles, traditional knowledge and beliefs.

(g) To carry on the business of Air Charter Company and carriers by aircraft of passengers and goods of every description in local and tourist industry.

(h) To establish and operate an institution of flying training including training and examination of pilots, aircraft engineer, and other aeronautic personnel.

(i) To acquire, provide and maintain hangers, garages, workshops, aerodromes, landing grounds and other accommodation for, or in relation to aircraft.

(j) To carry on the business of importers, exporters, manufacturers and dealers in all kinds of mercantile goods.

(k) To enter into any arrangements with any Government or authorities supreme, municipal, local or otherwise, that may seem conducive to the company’s objects or any of

them, and to obtain and to carry out, exercise and comply with any such arrangements, rights, privileges and concessions.

(l) To obtain any provisional Order, Ordinance or Act of Parliament for enabling the Company to carry any of its objects into effect, or for effecting any modification of the Company's constitution or for an other purpose, which may seem expedient, and to oppose any proceedings or applications, which may seem calculated directly or indirectly to prejudice the Company's interests.

(m) To procure the company to be registered, incorporated, or otherwise constituted if necessary or advisable according to the law of any foreign country.

(n) To sell, improve, manage, develop, exchange, lease, mortgage, dispose of, turn to account, or otherwise deal with all or any part of the property and rights of the company.

(o) To amalgamate or enter into partnership or any agreement whether perpetual or terminable, for sharing profits, union of interest joint adventure, reciprocal concessions or co-operation with any persons, firm, society, association or group of persons, carrying on or engaged in or about to carry (in the case of a company) formed to carry on or engage in any business or transaction within the objects of this Company or any business transaction or course of action which may seem to the Company capable of being conducted so as directly or indirectly to benefit the Company or to prevent or minimize apprehended loss, damage or cost to the Company or to such person, firm, society, association or group of persons, purchase, subscribe for, or otherwise acquire and hold shares (fully or partly paid up) or stock in, or securities of, or to lend money, to guarantee the contracts of subsidies or otherwise assist any such person, firm, society, association or group of persons, and to sell, hold, re-issue with, or without guarantee or otherwise deal with such shares, stock or securities.

(p) To sell, exchange, let, develop, dispose of, transfer or otherwise deal with the undertaking of the Company or any part thereof upon such terms, and for such consideration as the Company may think fit.

(q) To establish, promote and otherwise assist any company or companies for the purpose of acquiring all, or any part of the property of furthering any of the objects of this Company.

(r) To invest the money of the Company not immediately required in such manner, other than in the shares of this Company, as may from time to time be determined.

(s) To acquire from any sovereign state or authority supreme, local or otherwise any concessions, grants, decrees, rights or privileges whatsoever, which may seem to the Company capable of being turned to account and to work, develop, carry out exercise and turn to account the same.

(t) To provide for the welfare of persons in the employment of the Company or formerly in the employment of the Company, or its predecessors business, and the wives, widows, and families of such persons by grants of money, pensions or other payments and by providing or subscribing towards places of instruction and recreation, and hospitals, dispensaries, medical and other attendance and other assistance as the Company shall think fit.

(u) To do all or any of the matters hereby authorised in any part of the world either alone or in conjunction with or as, by or through factors, trustees or agents.

(v) General to do all such other things as the Company deem incidental or conducive to the attainment of the above objects or any of them and to carry on any other business, which may seem to the Company capable of being conveniently carried on in connection with its business or calculated directly or indirectly to enhance the value of, or render profitable any of the Company's property or rights.

1.3.2 Shareholders

The Companies Act, Cap 212 spells out that any two or more persons associated for any lawful purpose may, by subscribing their names to a memorandum of association and otherwise complying with the requirements of this Act in respect of registration, form an incorporated company, with or without limited liability (URT, 2002). The Act stipulates further that the memorandum of every company which should be printed in English language shall contain the name of the company with "limited company" as the last words of the name in the case of a public or with "limited" in the case of a company limited by shares or guarantee. A certificate of incorporation given by the Registrar of Companies in respect of any association shall be conclusive evidence that all the requirements of this Act in respect of registration and of matters precedent and incidental thereto have been complied with and that the association is a company authorized to be registered and duly registered under this Act. The fact that Sisini Collections Limited contains the word "limited" at the end confirms that it is a Company limited by shares and its certificate of incorporation, which is signed by the Registrar of Companies (Appendix 3), substantiates the legality of its presence.

According to the Company's Memorandum of Association, the authorised share capital is Tanzania Shillings (TZS) One Billion, Five hundred million (1,500,000,000=) divided into One hundred thousand (100,000) Shares of TZS Ten thousand (10,000=) each. Unless and until otherwise determined by the Company by Ordinary Resolution the number of Directors (excluding Alternate Directors) shall not be less than two (2) and not more than ten (10). The names of the First Directors of the Company are therefore Mr. Manish Harichandra Bhatt and Sumit Kishan Dhebar, the shareholders who holds 90% of the total shares are Kishan Dhebar and Mr. Sumit Kishan Dhebar holds the remaining 10% of the shares (Appendix 4).

2.0 DESCRIPTION OF THE PROPOSED SITE

2.1 Location and Accessibility

The proposed project is located within the Central SENAPA, Serengeti District in Mara Region. SENAPA is one of the famous wildlife protected areas in Tanzania, which is

situated in the northeastern part of Tanzania. SENAPA was accorded an international status as a World Heritage Site by the United Nations Environment, Science and Cultural Organization (UNESCO) in 1979 and together with Ngorongoro Conservation Area (NCA) a Biosphere Reserve under UNESCO's Man and Biosphere Reserves Programme (MAB) in 1981. According to the results that were published in June, 2015 by Safari Bookings; the largest online marketplace for Africa safari tours, SENAPA was voted the world's best safari destination, beating 140 entries from 63 countries around the world (www.aa.com.tr> world> tanzania-s, visited on 10th December, 2021). Further, for three years consecutively since 2019 SENAPA was named the leading national park in Africa, beating five other national parks from the continent in the World Travel Awards (WTA) (www.the.citizen.co.tz. Visted on 10th December, 2021). The other six national parks are Central Kalahari Game Reserve in Botswana, Etosha National Park in Namibia, Kidepo Valley National Park in Uganda, Kruger National Park in South Africa and Masai-Mara National Reserve in Kenya.

Specifically, the site where the proposed facility will be established is located at the Global Positioning System (GPS) coordinates 36M 0720975 UTM 9738218 (Figure 2.1), which is easily accessible from Arusha City through Makuyuni–Karatu–Ngorongoro road entering through Naabi Gate. It can also be accessed from Mwanza through Bunda–Mugumu–Fort Ikoma–Robanda road entering through Ikoma Gate. The proposed site is approximately 20 kilometres from Seronera airstrip along the Seronera-Fort Ikoma/Lobo main road then turning to the east in the interior about five kilometres along an undeveloped track.

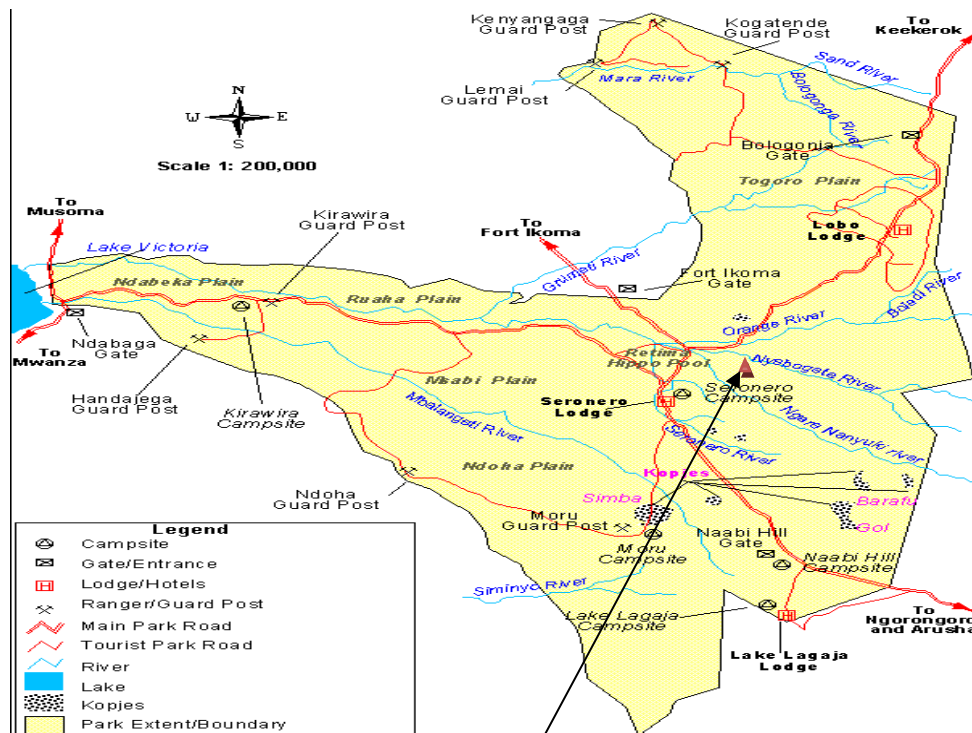


Figure 2.1 Proposed site at the Nyabogati Rhino Boma Site (Source: www.thesafaricompany.co.za, visited on 10th December, 2021)

2.2 Climate

SENAPA in general and the proposed site in particular are marked by two distinct climatic conditions namely dry and wet seasons. Whereas the dry periods are marked from June through to September and in January and February, the wet season is featured by short showers, which drop between October and December and the long rains that pour between March and May. The average annual rainfall is about 800mm. The temperature at the site depends on rainfall patterns but the average during the day varies between 24⁰C and 29⁰C and normally is below 24⁰C at night time (TANAPA, 2014).

2.3 Geology and Draiage

At the site where the PTC is proposed for establishment lies at an average of 1500 meters above sea level and it contains loam-sandy soil from the metamorphosis granites with ranges of hills formed from schists and quartzites (TANAPA, 2014). The site is characteristic of savannah grassland lying on undulating ridges and valleys that are naturally oriented down the slope and which optimizes the scenic and natural beauty of the area.

Major physical features are, a large water catchment area, which is vital for the ecology of the Park and the life beyond its boundaries. The proposed site lies on the fringes of Bologonja River to its far south passes Mara River, which drain their waters from tributaries located in relatively higher attidudes. The two rivers join Mara River and flows westerward as one water course to join Grumeti River in the Ruaha Plains, which enventually discharges into Lake Victoria (Figure 2.1). The Nyabogati Rhino Boma Site and its surrounding areas are, also featured with kopjes, which provide important habitat to diverse fauna species.

2.4 Biological Resources

SENAPA is endowed with many biological values including large mammal migration, high flora and fauna biodiversity within pristine wilderness areas and vast open savannah plains with large predator-prey populations that attract tourists and revenue to the Government and neighbouring communities.

2.4.1 Vegetation

The vegetation type at the site and surrounding areas is acacia-commiphora wooded-grassland dominated by *Acacia drepanolobium*, *A. sayel*, *A. tortilis*, *A. mellifera*, *Commiphora africana* and *Balanite aegyptica* tree species. Major grasses are *Themeda triandra*, *Spolobulus pryramidalis*, *Panicum maximum*, *Digitaria spp.* and *Chrolis spp.*

2.4.2 Wildlife

Varied habitat types and availability of surface water all year round within the Nyabogati area, support abundant and diverse wildlife and birdlife species that attract tourism. The site like any other places with the Park is an important dispersal area for the wildlife of the Serengeti ecosystem where migratory wildlife species including wildebeest *Connochaetes taurinus*, zebra *Eguus Burchelli* and Thomson's gazelle *Gazella thomsoni* utilize the area when on their way from Masai-Mara National Reserve in Kenya to the southern Serengeti plains between November and December (Figure 2.2). The migration marvel in the Serengeti-Mara ecosystem attracts over 1.0 million wildebeest, 200,000 zebra and 400,000

gazelles (Sinclair, *et. al.*, 2008).

The presence of permanent Engare Nanyuki and Nyabogati rivers as well as cyclic streams and seasonal springs, allow the presence of resident wildlife species including the elephant, giraffe, buffalo, waterbuck, eland, hartebeest, impala, topi, dikdik, warthog, baboon and their attendant carnivores, which are, the cheetah, leopard, lion, hyena and jackals to repeatedly utilize the proposed site and surrounding environment. The area also boasts of numerous bird species including weavers, hornbills, starlings, warblers, cuckoos, cisticolas, sunbirds, pigeons and fowls. Although not documented in detail, other creatures including amphibians, reptiles and insects are also found within the site and surrounding areas.



Figure 2.2 Annual movements of migratory wildlife species in the Serengeti ecosystem (Source: www.naturalhighsafaris.com, visited on 10th December, 2021)

2.5 Tourist Trend in SENAPA

In total, tourists who entered SENAPA over a five-year period (2013-2017) decreased by approximately 13% from 442,485 in 2013 to 383,972 in 2017. Whereas the overall decrease was accounted for by about 44% decline in domestic tourists from 273,203 in 2013 to 152,216 in 2017, international tourists increased by about 30% from 179,282 to 231,756 (approximately 65% average annual increase) over the same period of time (Table 4.1). The most probable factor for the decline in domestic tourists was associated with some passengers who used to pass through SENAPA from the northern part of the country to Lake Zone regions diverting the route and using the Arusha through Singida, which was improved during the period in question from the earth to tarmac road. Notwithstanding the decreasing trend in domestic tourists, the need for having more tourist beds in SENAPA

can not be over emphasized because there is an increasing trend in international tourists visiting and preferring to spend their nights in the Park (See Section 12.).

Table 2.1 Trends in tourist numbers to SENAPA between 2013 and 2021

Year	International tourists	Domestic tourists	Totoal
2013	179,282	273,203	442,485
2014	184,611	217,756	402,367
2015	167,988	204,998	372,986
2016	201,728	170,047	380,775
2017	231,756	152,216	383,972
2018	275,876	120,563	394,439
2019	356,000	150,000	506,000
2020	176,000	75,000	251,000
2021	245,000	130,000	375,000

Source: Ministry of Natural Resources and Tourism, 2021

2.6 Current Waste Management Practice

2.6.1 Solid waste

Current practice of solid waste management undertaken by majority of accommodation operators in SENAPA is sorting according to type and keeping the same in separate containers at the site before disposing them off accordingly. Much of wet waste, which are, organic in nature particularly food leftovers are collected, wrapped in polythene bags and transported outside the Park for feeding the pigs. Other operators bury the organic waste in deep holes covered with wire mesh or steel sheet to deter scavengers and are left to decompose.

Combustible waste including papers and cardboards are blazed on site in furnaces and non-decomposable ones, which are comprised of plastic and glass bottles, plastic packaging

materials and metal cans are stored at the site and later on transported to Arusha City and given to traders involved in recyclable rubbish like the Shanga Group, which is located at Burka area and managed by the physically-challenged people. Other operators particularly those who are located to the northern part of the Park dispose non-decomposable waste at the dump site situated about eight kilometres in the outskirts of Mugumu Township, which is owned by Serengeti District Council. The dumping site at Mugumu is however, inadequately managed as rubbish is not sorted according to type and is haphazardly thrown (Figure 2.3). Hazardous waste mostly consisting of empty chemical containers, electronic remains and batteries are closed in separate big black plastic bags according to type and once reasonable amount is accumulated, are transported to Arusha city and delivered to retailers for recycling or appropriate disposal.



Figure 2.3 Dumping site in the outskirts of Mugumu Township (Source: Field Visit on 24th November, 2020)

2.6.2 Liquid waste

With regard to liquid waste management; separation of sewage from showers/toilets and that from kitchen is initially done to enable filtration of fat from wastewater that is generated from the latter source, before both systems are joined and directed into soak away pits through Poly-Vinyl Chloride (PVC) pipes. Few accommodation facilities like the Four-Season Lodge and Gran Mellia Lodge have adopted a bio-digest system of water treatment plants where water is recycled for non-human consumption.

3.0 DESCRIPTION OF THE PROPOSED PROJECT

3.1 Type and Architectural Character of the PTC Components

The proposed development will be a PTC, which is described in the TIM (2019-2024) as a one level tented structure constructed on a cement blocks and concrete bases or wood platform consisting of a Main Lodge, reception, dining room and bar with a series of one level, cement blocks or wood platform, separated permanent tented bedroom structures; swimming pool, which is planned; essential onsite staff; and essential parking and storage facilities only. The TIM stipulates further that within a PTC, bio gradable trash shall be buried, burnable waste blazed and non-burnable ones removed from the park by an investor (TANAPA, 2019). Accessibility to, from and within the camp premises will be restricted to designated roads, tracks, trails and walkways that will be constructed in accordance with TANAPA guidelines and supervision. To reduce bright light, all outdoor lights will be down casted and obscured on the top. The proposed PTC, which will offer a unique bush experience with structures designed to blend with the park environment and depict Tanzanian culture will cater for up-end market visitors and design will as much as possible comply with the requirements of the National Policies for National Parks in Tanzania of 1994 (TANAPA, 1994), the TIM (TANAPA, 2019) and the SENAPA-GMP (2014).

3.1.1 Central building

Figure 3.1 shows a perspective of the central building that will consist of a reception, visitor's lounge, restaurant, bar, veranda deck, public toilets, administrative offices, gift shop, business centre, baggage room, kitchen and stores to keep various items including cold rooms.



Figure 3.1 Perspective of the central building for the proposed PTC camp (Source: Sisini Collections ltd concept, 2025)-

The reception, lounge, restaurant, bar, curio shop and business centre being part of the central building will be erected on concrete base and foundation, floored with cement screed with a balcony raised at most one metre above the ground on wooden floor. Whereas raising structures on concrete blocks base and wooden plinths will be the use of concrete and soil excavations on the site, the design will also allow free movement of medium-sized animals. The roof will be Canvas and or thatched with locally obtained grass on top of rafters and paring and supported by Steel or treated timber pillars, fitted in friction stone piles. Both the external and internal openings of the central building will be secured by means of beige-coloured canvas with zipped doors and windows (Figure 3.1). The restaurant and a bar will have the capacity to accommodate 50 people at one particular time.

On the back but annexed to the central building there will a guest kitchen to be provided with a common toilet, cold rooms, chef's office and different stores to keep kitchen utensils, sanitary tools as well foodstuffs and beverages. The walls of a kitchen and its associated stores will be constructed of bricks, plastered with screed cement and painted with appropriate colour preferably beige that will blend with the surrounding environment.

On one side of the central building there will be a swimming pool of 5000mm X 10000mm and 1,600mm deep at the shallow and deep ends respectively with associated changing rooms, spa, toilets and showers (Figure 3.2). The walls and floor of the swimming pool will be finished with ceramic and porcelain tiles respectively and a pump house of the size 2.5x2.5x5m as well as a balancing tank of 1.5x2.5x1.5m capacity for water circulation in the pool.



Figure 3.2 Perspective of swimming pool at the proposed PTC (Source: Sisini Collections Limited concept, 2025).

3.1.2 Guest tents

The facility will eventually contain 25 full en-suite guest tents to occupy a total of 50 beds. On each side of the central building i.e to its left and right there will be 10 tents Figures 1.1 and 3.1). Guest tents will also be constructed of beige-coloured tarpaulin, erected about half a metre above the ground using wooden platform and protected from above by the rip-stock tightened on the ground with hooks. Timber stairs to the tents entrance will be provided (Figure 3.3). Erection of tents above ground aims at allowing free movement of small organisms underneath and preventing dangerous creatures like snakes from entering inside the tents.



Figure 3.3 Perspective of a guest tent at the proposed PTC (Source: Developer's concept, 2025).

Inside the tents and the balcony, floor will be finished with mahogany timber and each tent unit will be furnished with twin beds, a closet and a reading table with two safari chairs

made from local materials. Each unit will be comprised of hot shower supplied by a 300-litre solar-powered heater, flush toilet and a hand/face washing basin at the backside. One 300-litre solar-powered heater will supply hot water to two or three guest tents. Two safari chairs and a coffee table will also be provided at the terrace of each tent unit to allow guests to rest a few moments at mid-day in between two game drives or in the evening. To comply with the requirements of TIM (2019-204), two guest tents, which will account for 10% of all tent units for the guest will be fully furnished and equipped to accommodate the physically-challenged persons. Each guest tent will be positioned to suit a view of natural features and oriented to afford maximum privacy and extensive private views of the surrounding environment. Guest tents will be accessed from the central building by ground-level pathways and all common areas will be accessible with a wheel chair to suit the physically-challenged guests. All pathways will be set in a way that they offer appropriate visibility of immediate surroundings in order to avoid potentially dangerous game, while respecting the visual opportunities and privacy of each accommodation unit. Doors and windows of all guest tents will be of zip-type, which will be opened any time of the day to suit the prevailing weather condition.

3.1.3 Staffs and tourist drivers' accommodation facilities

There will be three (7) buildings each with five (6) rooms constructed with cement blocks and roofed with a flat concrete slab; two of them to accommodate a maximum of 30 junior employees and one to house a maximum of 10 tourist drivers each designed to accommodate two people (Figure 3.4). The Camp Manager and the Assistant will be housed in a two-in-one self-contained house provided with cooking facilities. Housing facility for junior staffs and drivers will consist of shared ablutions (two flush toilets and two showers for each block). The number of flush toilets to be provided at the staffs/tourist drivers' accommodation facility will comply with the Occupational Safety and Health Act, Cap 297, which insists on one toilet to be shared by at most 25 people at the workplace.

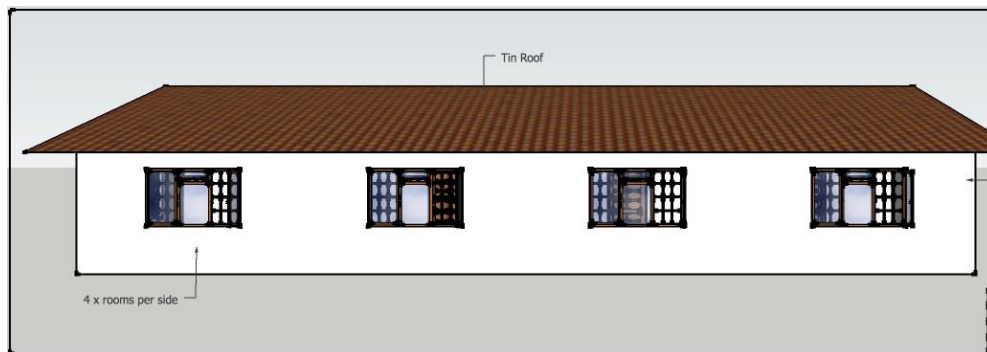


Figure 3.4 Perspective of one wing of staffs/drivers building of the PTC.

Staffs and drivers' accommodation facility will also contain a kitchen and storage facilities particularly for food utensils and a canteen to be provided with indoor recreational facilities including a Television (TV) set. Laundry services for the Camp will be provided with the staffs' premises. Both the staffs and tourist drivers' building and their associated facilities will be built with semi-permanent materials for durability and permanence but concealed within the bushes and located at a distance of about 500 metres from the central building.

3.1.4 Utilities

➤ Water supply

A deep borehole to supply the construction camp and later on the PTC with reliable as well as clean and safe water on sustainable basis will be drilled before actual construction starts. According to TANAPA's Water Use and Management Guidelines of 2014, all investments in national parks are restricted from using surface water (TANAPA, 2014a). To comply with this requirement, the developer with, guidance from the Lake Victoria Basin Water Board will commission a qualified and approved firm or a team of experts to carry out a hydrological and hydrogeological study as stipulated in the TIM (2019-2024).

➤ Energy supply

The main source of energy for lighting, heating, water pumping at a borehole and maintaining cold rooms will be sunlight tapped by solar panels that will be fixed on top of staffs and tourist drivers' houses. Hot showers in guest tents shall be supplied from solar-dependant heaters. There will be a backup diesel-run generator stored in a sound-proof room for backing power supply in case of solar energy production technical failure. Diesel will be stored in a double steel tank and covered to prevent leakage and will be fixed on a strong cement foundation to withstand weight of the full container.

LPG that will be supplied by the Gas suppliers from Arusha city and stored in the gas cylinders for both the guest and staffs/drivers kitchens will be the main source of energy for cooking. Rechargeable lamps and torches will be available to visitors and workers for mobile lighting during the night when moving from one point to the other within the facility's premises. Limited firewood will be brought from outside the park for campfire or warming when the weather turns chilly.

4.0 PERMANENT TENTED CAMP DEVELOPMENT PHASES

The development of the proposed PTC will involve various phases starting with pre-construction to construction and from operation to decommissioning. Each phase will have its own specific activities, which are described as follows:

4.1 Pre-construction phase

4.1.1 Water supply

An average of 2,000 litres of water will be utilized per day during construction and more or less 3,000 litres during operation phase at full occupancy. Utilization during operation will range between 2,000 and 4,000 litres during low and high tourist seasons respectively.

Utilization assumes that each occupant, both visitors (40) and workers/tourist drivers (30) at fully occupancy will utilize a maximum of 30 litres for taking bath, washing hands and face as well as toilet flushing accounting for approximately 50% of total utilization. The remaining 50% will be used on cooking, washing and cleaning. Assumption is further made that during low seasons the average occupancy will be 50% that is, 20 guests, 10 camp employees and five (5) tourist drives.

Two borehole will be drilled before construction activities commence to be assured of water availability early during construction phase. Water samples from the borehole shall be collected for water quality analysis including chemical, physical and microbiological to determine their conformity with the Environmental Management (Water Quality Standards) Regulations, 2007 (URT, 2007). Length of pipeline system to supply the camp including internal connections is estimated to be two (2) kilometres. Black synthetic pipes will be laid one metre below the ground, on soft sand bedding to avoid corrosion by friction when in contact with underground rocks, which may lead to water leakages or possible bursting of the pipes.

There will be two overhead polythene reservoir tanks each with capacity to reserve 20,000 litres, which will be placed on 6-inches steel pipe platform to reserve all the water from the borehole and distribute it throughout the pipeline system by gravity. The reserve tanks will assure water storage to suffice requirements for at least 10 days in the high tourist season in case of borehole system malfunction. The platform shall be camouflaged within the surrounding wooded vegetation. Water will be extracted and propelled to the reserve tanks by solar-powered pump operated from the power control room located with the staff quarters area.

4.1.2 Erection of a temporary camp for the construction team

Twenty-five (25) workers will be employed for construction of the PTC. Out of those, 20 will be labourers who will be recruited from Mugumu and nearby village, which is relatively closer to site where the proposed facility will be established. The remaining five (5) people will mainly be skilled and possibly recruited from outside the neighbouring village in case the needed expertise will not be available. The temporary camp will therefore accommodate at most 25 people throughout construction activities, which is expected to take a maximum of 12 months. At the construction site, workers will be provided with meals and average water requirement per day during construction phase as pointed out elsewhere in this DP will be 2,000 litres basing on the estimate of 20 litres per personal per day) utilization (total 500 litres) and the remaining 1,500 litres accounting for 75% of total utilization will be for construction and cleaning. Unskilled personnel will be accommodated in two big tarpaulin tents, each to accommodate maximum 10 people and five (5) one man-tent, each for one skilled persons. The tents shall be located within the same premises where the buildings for PTC employees shall be constructed. There will also be one structure with several partitions constructed from corrugated iron sheets both walling and the roof and painted green for keeping various building materials. At the construction camp there will be two pit latrines, each with two holes and a small structure with four rooms for taking shower. Wastewater from the showers shall be emptied in the pit latrines through a cement screed pathway.

4.1.3 Accessibility

The site where the proposed facility will be established is located about 18-20 kilometres from Kogatende airstrip. Out of it, 10 kilometres is a well-maintained earth along the Tabora B road, which is maintained by TANAPA. About three (5) kilometres tract is permanently used by tourist vehicles for game viewing particularly from the various Trails Seasonal Camp and Olakira Serengeti Luxury Tented Camp, which are relatively closer (approximately 2 kilometres from the proposed site). The track is also used by park rangers for administrative purposes. The remaining two (2) kilometres will be self-developed by the constant truck wheels-use particularly during construction. To that end, no civil works on accessibility to the proposed site will be needed.

4.2 Construction Activities

Construction works for the initial 10 tents and all other associated facilities will commence as soon as all necessary permits including EIA clearance certificate have been acquired as well as negotiations and signed of the TANAPA's Standard Lease Agreement between an investor and TANAPA has been finalized. Construction of the remaining ten (10) guest tents will be done two years later after operation has started and this will depend on the success of the project, principally occupancy and maintenance of the integrity of the environment.

4.2.1 Actual Construction

Construction activities will be divided into three sub-phases namely site mobilization, excavations and construction of foundations (two months); construction of common facilities and the initial 15 guest tents (Twelve months); and removal of temporary erections, landscaping and restoration of disturbed areas (two months). About 60% of construction activities particularly central building and guest tents such as canvas stitching into required sizes will be done outside the proposed site. The remaining 40% of the total works that will be conducted on site will include land clearance, levelling, construction of foundations and walkways, setting up wooden plinths, laying timber, connecting the canvas and roofing.

Construction activities shall be conducted throughout the week between 06.30 hours and 18.00 hours, thus no movements beyond the construction site will be expected. A vehicle shall be available at the construction site all the time to deliver requirements for the construction personnel such as food. Names and photographs of the construction personnel shall be submitted to TANAPA by the contractor before construction works commence.

4.2.2 Transportation of building materials to the site

List of equipment including number of vehicles, machinery and other construction equipment, their registration numbers and make or type shall be submitted to TANAPA by the Contractor prior to commencing construction works. Construction schedule shall also be available by the contractor showing among other things, when the peak activity on the site will be. However, movement frequency for both the construction personnel and vehicles shall highly be minimized. Materials for construction works that are available in Robanda village including stones and sand shall be procured locally by securing relevant permits from the Village Council. Cement blocks and aggregates shall be purchased from Mugumu Township, which is the headquarters of Serengeti District. Cement, timber and corrugated iron sheets shall be purchased from Arusha city as bulk purchasing will reduce cost per unit and the tarpaulin shall be purchased and stitched into preferred size in Arusha.

city. Building materials that will be delivered to the site in trucks not exceeding 10 tons capacity will be stored in temporary structures to be erected at the temporary construction camp site.

4.2.3 Food supplies for on-site workers

On-site workers will be supplied with food twice a week for perishables like meat and vegetables to be purchased from Mugumu Township. Bulky supplies for non-perishable supplies will be delivered at the site on monthly basis from Arusha city. All cooking at the construction site will be done using liquefied petroleum gas (LPG) to be procured from Arusha city in a 15-kg cylinder and power for lighting as well as metal works will be generated from a small diesel-run generator.

4.2.4 Solid waste facilities

During construction approximately 40kg of solid waste will be generated per day of which 20kg will be dry and combustible including pieces of wood and papers and about 10kg wet trash, which rot within a short period of time including vegetables and food remains. The remaining 10kg will be non-decomposable rubbish comprising of plastics, glass bottles and metal cans. Whereas wet waste will be buried in deep holes and protected from scavengers with a piece of steel sheet, burnable waste will be blazed in a furnace and non-decomposable rubbish will be transported and disposed off at the Mugumu dumping site at least twice in a week to match with trips for purchase perishables.

4.2.5 Liquid waste facilities

Small amount of wastewater estimated to be 350 litres accounting for 70% of the whole amount for personal utilization will be produced during construction phase mostly from showers. Approximately 50% of this, i.e 175 litres will percolate into the subsoil due the sandstone nature of the soil at the area. The remaining 200 litres will be directed into the two pit latrines, which will have the capacity to retain wastewater and human waste that will be generated throughout the construction period. The pit latrines will be covered at the end of the construction phase. Chemicals preferably Elex Ottokil disinfectant that kills disease vectors such as flies, inhibit offensive odor and repel houseflies will regularly be sprayed in the pit latrines so as to kill germs and bacteria. This type of chemical is ideal for disinfecting pit latrines, toilets, urinal areas and garbage collection centers because it contains active compounds that kill fungi, germs and bacteria instantly. The contents of this disinfectant are water, perfume, surfactants, preservatives, color, and hydrochloride. Normally 20mls of Elex Ottokil is diluted with 10 litres of water before use, but with heavily soiled surfaces or with bad smell, the chemical may be used undiluted.

4.2.5 Landscaping and removal from the site all redundant materials

At the end of the construction phase all remaining building materials will be removed and landscaping will be undertaken to restore the original appearance of the site and ensure more privacy to visitors by obscuring structures from one another. Rehabilitation of the site will go along with planting decorative but indigenous vegetation preferably from the area including *Acacia*, *Commiphora* and *Balanite* tree species and native grass species. Natural flowers, which will be irrigated with water from the borehole, will be planted at the site to complement the beauty of the inherent scenery of the area. Walkways to connect all structures within the camp premises will be stabilized with steep angle including casting concrete and laying stones to avoid skidding. External lighting will be limited to the dining and staff

areas as well as the walkways, which will be down-casted inside the lanterns to reduce direct illumination.

4.3 Operation Phase

Operation of the proposed PTC is expected to continue for a period of 15 years; the minimum period of time the developer is expected to be leased the site by TANAPA (TANAPA, 2023). However, the Lease Agreement may be renewed several times based on demonstrated compliance with the previous Lease Agreement and an investor shall serve TANAPA a one-year renewal notice prior to expiry of the License term (TANAPA, 2023). Since the proposed PTC will be designed to meet the purpose of serving high class clientele by providing high quality services commensurate with the requirements of the international standards to guarantee guests the value of their money, operation of the facility will therefore entail the following activities:

4.3.1 Staff recruitment and welfare

A total of 22 workers will be employed for the operation of the tented camp (Table 4.1). The developer envisages to employing more people from Serengeti District during operation phase provided they will be interested, have required qualifications and meet recruitment conditions commensurate with the Company’s employment Policy. The employment procedures for Horizon Acres Limited specify that all the Company workers shall be recruited for their competence, experience in their respective areas of specialization and good track record in their previous employment if any. However, all recruitments will always be done in consultation with the Park Management and respective village leaders in Serengeti District. Consultation prior recruitment of employees is very important because SENAPA Management and village leaders are aware of the potential capacity and ethical characteristics of individual as well as being able to advise those areas known to have criminal records.

All staffs will be employed under the unspecified period of time previously known as Permanent and Pensionable. Although employment priority will be given to people from neighboring communities with qualifications, recruitment will be done through advertisement and interviews. Females with requisite qualifications will be encouraged to apply and will be given priority. Since development of the facility will be in two phases, only 18 staffs will be employed during the first three years of operation and four (4) in year four (4) onwards when construction of the remaining four (4) guest tents will be completed.

Table 4.1 Manpower requirements and wages (gross) schedule (Figures are in TZS “000”)

POSITION	Number of Employees	Monthly Salary	Total Monthly Payroll Bill	Total Annual Payroll Bill
YEAR I-III (Three years)				
Camp Manager	1	1,500	1,500	18,000
Food and Beverage (Assistant Manager)	1	1,000	1,000	12,000
Chief Chef	1	750	750	9,000

Assistant Chef	1	650	650	7,800
Electrician	1			
Driver/Mechanic	1	650	650	7,800
Waiters	3	500	1,500	18,000
Room Attendants	2	500	1,000	12,000
Laundry Attendants	2	500	1,000	12,000
Storekeeper	1	500	500	6,000
Dishwasher	1	350	350	4,200
Staff cook	1	350	350	4,200
Porter	1	350	350	4,200
Security Guards	2	450	900	10,800
Total	18	-	10,500	126,000
YEAR IV – VII (Four years)				
Camp Manager	1	1,800	1,800	21,600
Food and Beverage (Assistant Manager)	1	1,500	1,500	18,000
Chief Chef	1	1,000	1,000	12,000
Assistant Chef	2	900	900	10,800
Electrician	1			
Driver/Mechanic	1	900	900	10,800
Waiters	4	700	2,800	33,600
Room Attendants	3	700	2,100	25,200
Laundry Attendants	2	700	1,400	16,800
Storekeeper	1	700	700	8,400
Dishwasher	1	500	500	6,000
Staff cook	1	500	500	6,000
Porter	1	500	500	6,000
Security Guards	3	600	1,800	21,600
Total	22	-	16,400	196,800

Source: Sisini Collections Limited, 2025

Staffs at the proposed PTC shall be provided with full boarding, uniforms, and transport from, and to their places of origin during recruitment and annual leave. One vehicle shall be stationed at the proposed facility to ensure sustainable provision of camp supplies and attendance of emergency incidents. The Company's employees shall work for 40 hours a week, which is 8 hours a day for five (5) as provided in the Employment and Labour Relations Act, Cap 366 [R.E 2019]. To comply with the Employment and Labour Relations Act regarding working hours, shifts shall be arranged in such a way that, hours spent working for each employee will not exceed those provided in the Act. Where an employee will be engaged on the work for more than the specified working hours, overtime allowance shall be paid according to the prevailing labour law and regulations.

4.3.2 Marketing

The proposed PTC is designed to meet the requirements of high-net-worth clients across the world. It will provide superior services, which will be proportionate with the requirements of international standards. Apart from using traditional marketing tools and sales promotion including advertising the camp on the Company's website, Social Media distribution of brochures, travel magazines and electronic media such as Compact Discs (CDs) and Digital Versatile Discs (DVDs), the developer will attend both national and international trade fairs in traditional and emerging source markets where the PTC will be promoted. The basic indicator and market potential for the proposed Camp is indicated by the increasing number of both domestic and international tourists who are currently visiting SENAPA and some of them failing to secure the standard services they envisage to be provided. Many accommodation facilities, which target high net worth clients in SENAPA, are often overbooked during peak tourist seasons (TANAPA, 2024).

Tanzania's tourism industry is featured by magnificent attraction and very importantly the great abundance and diverse wildlife species, which is unrivalled by any other country in the world. The characteristic of tourism attraction assortment found in SENAPA is of great significance in marketing as it forms the basis for securing a competitive advantage in the international market. It is clearly evident that, with aggressive marketing, SENAPA, which has continued to maintain its natural beauty, has the potential to keep on attracting more visitors than any other park in the county, if its environmental integrity will be persevered.

On commencement of business, the Company shall continue to study and analyse clientele preferences, the findings, which will enable the investor to improve the Camp services as operation progresses. Tourist sources to Tanzania are also changing and moving away from the traditional Europe and United States of America focus, to emerging sources including Asia and the Middle East. Due to the above facts, growth of international arrivals to Tanzania is predicted to increase at a steady rate as the country will continue to be the best destination for a combined beach and bush experience. Electronic marketing is therefore expected to be very useful in individualizing and customizing the proposed Camp services and in identifying customers who will be more valuable and potential of being more worth to the business. Thus, marketing will focus on offers, which will fit in customer needs. Intensive use of sales agents and collaborating tour operators shall therefore form the core strategy to increase and maintain the Company's market share.

4.3.3 Guests transportation to the proposed PTC

Since most of the visitors to the camp will drive to SENAPA on package programs while others will arrive by air at Seronera airstrip, the estimated maximum traffic volume during

high tourist season along a two-kilometre track extending from the currently used tracks for game viewing will be 24 vehicles a day, carrying maximum of 40 guests and an average two (10) cars transporting eight (8) visitors per day during low season. Accessibility to, from and within the Camp will be restricted to designated roads, tracks and walkways. Tour operators transporting guest at the proposed PTC will be requested to install Very High Frequency (VHF) radios in their vehicles to stay in touch with the Camp Management when out on drives. A parking site with capacity to shelter a total of 10 vehicles for the visitors and one camp logistic vehicle will be provided within the camp premises with only one access track from the drop off point at the central building.

4.3.4 Provision of accommodation and associated services to guests

Apart from providing self-contained guest tents with hot water showers, furnished with high class furniture and other facilities like coffee-makers equipment, special African cuisine menus will also be available. Working hygiene will be of the utmost importance with clean conditions in the kitchen and housekeeping routinely being supervised. The kitchen will be far away from the guest tents to ensure that activities at the kitchen are not heard in the guest area. The kitchen will however be located within the central building to ensure food reaches the guests while hot. The kitchen will be constructed with semi-permanent building materials with staffs' toilets, changing room and small pest proof store for keeping foodstuffs as well stores to keep beverages, utensils and sanitary equipment.

There will be a laundry located within the staffs' accommodation premises consisting of one (3) washing machine preferably the Baris-type made in Germany with capacity to wash 10kgs at one particular time and one small washing machine with capacity to handle 5kg for washing clothes requiring different treatment depending on quality type degree of bleaching and level of dirtiness. The laundry will also consist of one drying machine with capacity to dry 10kg and an ironing machine. Different rooms to keep the washed, dried and ironed clothes as well detergents will be provided at the laundry.

4.3.5 Food supply

The major source of foodstuffs particularly those, which are non-perishable, will be Arusha city where a logistic office for the Company will be located and the perishables like vegetables, fruits and spices; poultry products such as eggs and chicken; fish and beef will be acquired from the market at Mugumu Township. The communities will be encouraged and supported to produce goods of the requisite quality and standards so that the proposed PTC could become their reliable market in the long run.

4.3.6 Game viewing

Activities to be conducted while at the Camp will be distinctive including park tours from vehicles. Short distance walks limited to the camp boundaries will also be allowed. Walking safaris and night drives on approval by SENAPA will have guides with hand held VHF radios to ensure that walkers and night viewers stay in touch with Camp Management.

4.3.7 Photographic safaris and other recreational activities

Other recreational services to be provided at the Camp and surrounding areas are photographic safaris, bush breakfast and sundown meals. Mobile and permanent photographic hides, which will blend with the environment for maximum camouflage and best photographic opportunities, will be availed at the Camp. A swimming pool, health Spa and massage will form part of the recreation activities at the proposed PTC. Guests will

also have prospects for educational tours and visits to historical and cultural sites located within and outside the park.

4.3.8 Power supply

The major source of power at the proposed PTC will be solar, which is the most environmentally friendly, efficient and cost-effective means of power generation in remote areas than fossil-fuel and fuelwood. Solar panels or technically known as photovoltaic (PV) will generate approximately 100kW and store about 120kW in the batteries-inverter system to be used during cloudy weather or in the night. There will be water heaters supplied with energy from solar. Each of the 300-litre heaters will supply one tent-unit with hot water depending on the distance from one tent to another.

A backup diesel-run generator of 300kW capacity preferably the Poweric Cummuunis type made in India, which is known to be noise and pollutant emission-free machine will be provided in a sound-proof room with thick walls for backing the solar power supply in case of technical failure. An average of 20 litres of diesel per day will be required when the generator will be operated and also for running a logistic vehicle to be stationed at the Camp. Notwithstanding that the generator will be kept in a sound-proof room, emission levels for significant greenhouse gases particularly *Carbon dioxide*, *Carbon monoxide*, *Nitrogen oxide* and *Sulfur dioxide* shall be monitored monthly to ensure they remain in allowable limits in compliance to the Environmental Management (Air Quality Standards) Regulations, 2007. Should the generator get old and emissions exceed allowable limits it shall be replaced. Diesel will be stored in a 10,000-litre 15 Sim plastic or steel tank and covered to prevent leakage. It will be fixed on a strong cement foundation to withstand weight of the full container and located nearby the vehicle's parking area and generator room for safety and easiness whenever re-filling will be required.

LPG will mostly be used for cooking. An average of 10 kilograms of LPG per day will be required during the camp's full occupancy. LPG will be supplied by the Gas suppliers from Arusha city and stored in 2,000-litre and 1,000-litre gas cylinders for the guest and staffs/tourist drivers' kitchens respectively. The gas cylinders will be erected on concrete slabs in the open with short cement blocks' enclosure around its perimeter to reduce the risk of wildfires propagating into the tanks. The cylinders will be located between 50 and 100 metres from the kitchens and the gas supplied through pipes to laid about half-a metre under the ground. Whereas down-casted lights will be fixed along walkways, rechargeable lamps and torches will also be available to visitors and workers for mobile lighting during the night when moving from one point to the other within the facility's premises. Limited firewood will be brought from outside the park for the campfire or warming when the weather becomes chilly.

4.3.9 Internal and external Communication

Each of the guest tents will be connected to the reception with a hand-held radio (walkie talkie) for internal communication while external contacts will be accessible through the satellite internet, mobile phones, satellite phone and VHF radios.

4.3.10 Vehicle maintenance and car washing

The Camp shall provide an area nearby tourist drivers' accommodation facility for overnight vehicles' parking and car washing, which will be adjoined to a small workshop

for emergency and minor maintenance of vehicles such as punctures. Major vehicle repairs will be done outside the Camp unless a vehicle cannot move out of the area on itself. The workshop will be open with top covered with a canvas sheet and supported by steel pipes.

4.3.11 Occupational safety and health

Whereas safety and health protective gear, medical care and fully-equipped first aid kit shall be provided at the Camp and in a logistic vehicle, hand-held fire extinguishers shall be placed at strategic places within the Camp compound including but not limited to guest tents, kitchens, main building, staffs/tourist drivers' quarters and at the generator house. In order to comply with the Occupational Safety and Health Act Cap. 297, professionals from Occupational Safety and Health Authority (OSHA) shall be invited annually to give health and safety education and diagnose their health conditions.

While protection of workers and visitors against wild animals shall be emphasized by providing awareness education on the need to comply with park rules, sign boards shall be placed in visible areas requiring the occupiers to comply with the park rules. Besides lights that shall be fixed along walkways, there will be security guards with hand-held radio sets for communication and rechargeable torches to escort visitors to their rooms during the night. Each guest room will be provided with a torch fixed with a whistle to alert the Camp security guards in case of emergency. A vehicle shall be available at the proposed PTC on full time basis to attend emergency cases including transporting staff and guests needing further medication either to the Park dispensary located at Seronera or to Mugumu District Hospital.

Drums containing fuel will be stored in water-proof concrete-floored rooms. The rooms will prevent spillage into water sources and soil and hazardous chemicals will not be kept within the PTC premises. However, if need of using toxic chemicals arises such as fumigating the Camp to get rid of vectors and nuisance parasites for the comfort of visitors and staffs, the services of professional firm(s) will be hired. Fumigation will often be done when the Camp is unoccupied, preferably during off tourist seasons and fumigators will be obliged to remove from the Camp premises all their equipment. Chemical remains and empty containers will also be removed from the site on completion of the fumigation exercise.

A 5-meter firebreak will be constructed around the Camp perimeter in consultation with SENAPA Management to prevent propagation of wildfire into structures. Wildfire is one of the major risks for the Camp properties and life in the area. Further, the three main components of the Camp i.e main building, guest tents and staffs/drivers' quarters shall be separated by internal tracks to prevent further spread of fire from one component to another in case it crosses the firebreak. Caution notices will be placed in all areas with potential for fire explosion prohibiting smoking.

Proper sanitation of a swimming pool will be ensured to maintain the visual clarity of water and prevent transmission of infectious waterborne diseases. Application of disinfectants to kill infectious microorganisms particularly chlorine, which is relatively economical with ability to destroy and deactivate a wide range of potentially dangerous bacteria and viruses will be applied. However, infected swimmers as well as body oil, sweat, cosmetics, urine, saliva and faecal matter may react with chlorine to produce trichloramine and cyanogen chloride chemicals, which are unsafe to human health. To contain that risk, shower rooms

shall be availed to enable swimmers take bath before and after swimming so as to minimize the introduction of contaminants into the pool.

Other potential sources of pool contaminants are windblown dirt and debris, incoming water from unsanitary sources, rain containing microscopic algae spores and bird droppings. To control this risk, an electrically operated water pump to re-circulate water by a reverse osmosis system and allow air circulation to limit the building up of harmful compounds will be installed. Water filter to remove pollutants will also be fixed. Awareness to swimmers on hazards and risks at the facility will be made through display notices at the reception, in changing rooms and on pool sides. While the floor, stairs, internal walls and the whole premises at the pool will always be kept clean, dustbins for waste disposal shall be provided and emptied every night.

4.3.12 Community benefits

In addition to employment opportunities, communities will also benefit from educational, historical and cultural tours to special sites by tourists. Tourist guiding and interpretative services particularly on the historical and cultural heritages available in their areas will be done mainly by members from the local community. Local communities will also benefit from prospects for supplying foodstuffs, vegetables, fruits, souvenirs and locally made artifacts to the Camp. Local people will be encouraged and supported to produce goods and services of the requisite quality and standards to make the Camp become their reliable market.

4.3.13 Solid waste management

On average 80kg and 40kg of solid waste of all kinds will be generated daily both by visitors and camp employees as well as tourist drivers during high and low tourist seasons respectively. This estimation assumes that each person will generate an average of one kilogram per day and the average occupancy will be 100% during high season and 50% during low season. Management of solid waste will first and foremost involve the purchasing of supplies that are packed in decomposable containers. This will be followed by proper sorting and provision of containers for disposing different types of waste. After sorting, organic waste mainly composed of food leftovers and accounting for about 25% of all solid waste garbage (i.e 20kg and 10kg during high and low seasons respectively) will be deposited in deep holes covered with steel sheet to prevent scavengers with a door on top and left to decompose. About 20kg and 10kg of burnable waste such as lunch boxes to be generated during high and low seasons respectively will be blazed at the site in a furnace.

The remaining non-decomposable waste estimated to be 40kg and 20kg per day during high and low tourist seasons including plastic and glass bottles, plastic papers and cans will be stored temporarily in different containers within a cage made of wire mesh to prevent scavengers and later on transported to Mugumu Township dump site, which is located about eight kilometres from the centre of the town. However, recyclable waste will either be sold or donated to traders dealing with recyclables preferably the “Maendeleo Plastic and Recycling Company or Shanga group, which are currently known to perform well in the city of Arusha. Although little amount of hazardous waste such as obsolete solar appliances, batteries and related accessories will be generated and may cause far-reaching danger to the environment as well as humans and animal health. These will be delivered to retailers in the city of Arusha for either recycling or appropriate disposal. Whereas generation of plastic bottles at the proposed PTC will be reduced by providing filtered

water in re-usable glass bottles in the restaurant, bar and rooms and refilled every morning, education and awareness to workers and visitors on the importance of proper sorting of waste and procedural instructions and enforcement will make part of solid waste management at the Camp.

4.3.14 Liquid waste management

Management of liquid waste will first and foremost be minimization by installing modern toilets, which use relatively small amount of water than the traditional ones. Washing taps will have sensors, which signal the faucet valve to turn on when the user's hands come in close proximity of the lip of the spout and only showers, which normally consume relatively lesser water than bathtubs will be installed. The showers will be of instant heating system instead of the traditional practice where some minutes have to lapse before warm water comes out. Bed sheets and towels will be re-used on request from clients, if one will be spending more than one night. In the swimming pool water re-use will be achieved through reverse osmosis system for re-circulation.

Wastewater will pass through 100mm Polyvinyl chloride (PVC) pipes from the source and directed into septic tanks through a sieving or mesh screen in the manhole so as to remove all large objects that might clog pipes and thus cause substantial damage and inefficiency in the process. The sieved large objects will be directed into a grit chamber where the velocity of the incoming wastewater will be adjusted to allow settlement of objects like sand, grit, stones and broken glasses. Initially wastewater from the kitchen will be separated from other sources more specifically from toilets and showers and passed through a small tank where primary clarifiers will collect the floating fat. Wastewater from both routes will join together and get into a septic tank where biological treatment will take place and effluent as well as sludge retained (Figure 4.1).

From septic tanks the partially-treated wastewater will pass through non-perforated PVC into a distribution box, which is optional and then through perforated pipes into french, leach or drain fields filled with gravel or crushed stones where further biological treatment will take place. Through vent pipes that will be provided in the drain fields, impurities will be removed leaving the treated water to percolate into the subsoil as the soil at the site where the proposed facility will be constructed is loamy-sand and therefore permeable. In this technology septic tanks and drain fields are key parts of waste-water disposal system, which are necessary for treating wastewater in rural locations, where public treatment facility or a sewer system are not available.

In the soil, wastewater will be filtered and treated naturally by assorted bacteria and microbes. Bacteria and microbes that live within the top ten feet of the soil will remove the organic material that will be dissolved into the wastewater. Some foul water will move up to the soil surface by capillary action and evaporate whereby plants will absorb a few that does not percolate all the way into the subsoil. The wastewater that will percolate down into the leach field and eventually reach a groundwater aquifer, will have been cleaned up biologically and will therefore not contaminate the soil and groundwater. Whereas septic tanks will be pumped yearly to avoid large build-ups of solid material, drain fields will be located in areas free of roots and not obstructed by anything else, as this may negatively affect maintenance of leach fields. Performance of this liquid waste disposal system will be inspected regularly to rectify any malfunctioning.

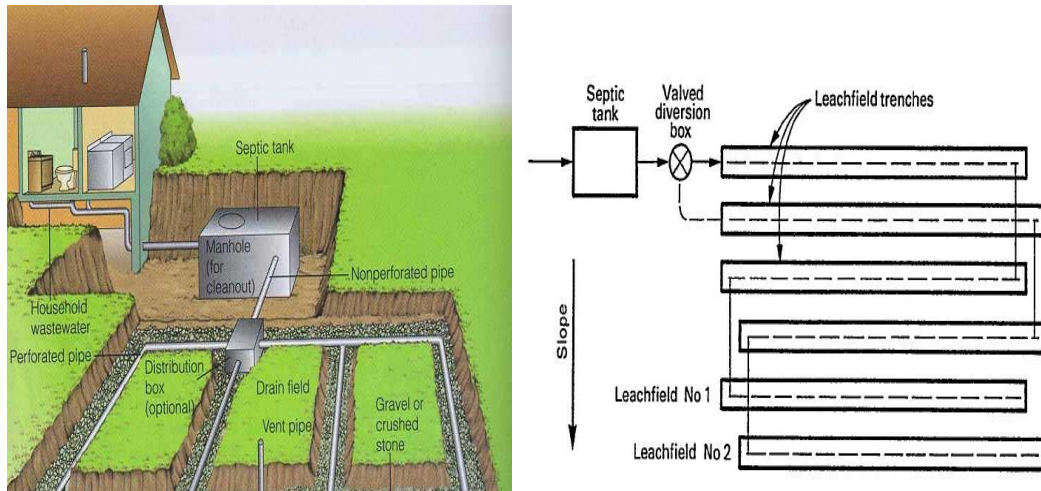


Figure 4.1 Schematic illustration of a septic tank and French Drain technology for wastewater disposal system (Source: encyclopedia Britannica, Inc; visited on 8th December, 2024.

4.0 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND THEIR MITIGATION MEASURES

In order to have minimal negative environmental and social impact, any development in a national park should be limited to structure only adequate for economic accomplishment. The structures should be carefully planned, sensitively located and aesthetically constructed to match with both the natural resources conservation and visitors' enjoyment and satisfactory. Since the proposed PTC will definitely have both positive and negative impacts during all phases of the prowhenn, the anticipated consequences of the project are identified and impartial mitigation measures and actions are proposed in Table 5.1 to prevent or minimize the negative impacts and enhancement the positive ones so that the protection and conservation of natural resources and the environment are esured.

Table 5.1 Potential impacts of the proposed project and possible mitigation measures

Identified Impact	Mitigation/Enhancement Measures
Pre-construction and construction phases	
Positive impacts	

Prospects for employment and the subsequent reduction of poverty among neighbouring community	<ul style="list-style-type: none"> • Employment opportunities for unskilled as well as skilled personnel whenever available shall be given to people from neighboring villages. • Employment shall consider gender and where appropriate females will be given priority where they will have same qualifications as males. • Employees shall be paid reasonable wages and the developer shall abide to all terms of employment as provided in the operating policies.
Provision of supplementary economic opportunities to the local community.	<ul style="list-style-type: none"> • People from the local community shall be encouraged to produce quality farm products for supplying the construction. • Available local building materials such as sand shall be purchased from Robanda village, which is relatively closer to the proposed site than other villages.
Improved security in the Park due to presence of construction activities and regular human movements	SENAPA should introduce an incentive package for any person residing in the Park who will help the apprehension of poachers before poaching takes place.
Negative impacts	
Risk for soil erosion due to excessive clearance of trees and trampling access road	<ul style="list-style-type: none"> • Construction activities shall take place end of rainy season or during dry season. • Truck movement shall be confined to designated tracks. • Adequate open channels shall be provided to collect storm water. • Vegetation clearance shall be limited to unavoidable situations.
Injuries and sometimes deaths to people and wildlife by construction equipment and speeding vehicles	<ul style="list-style-type: none"> • Construction workers shall be provided with personal protective equipment including heavy boots, pair of overalls, helmets, hand gloves, eye shields, earmuffs and mouth covering devices to reduce chances of accidents and injuries and the use of the equipment shall be enforced. • A first aid kit shall be available at the construction site and a trained person(s) in availing first aid services shall be available at the construction site. • Road bumps shall be placed at regular distances along the road going to the proposed site so as to control speed. • Drivers shall be warned and penalized if found driving beyond speed limits. • Clear procedures on how to coordinate an emergency evacuation will be posted at the construction site and supervisors will have training on how to coordinate an emergency evacuation for serious life threatening injuries and illness.
Potential for human attack by wild animals	<ul style="list-style-type: none"> • Assistance of a ranger from SENAPA who will be stationed at the construction camp most of the time shall be requested. • Workers shall not disturb wild animals and walking beyond construction camp premises at any time shall be prohibited.

Firewood collection and the resulting soil exposure to wind and gully erosion	<ul style="list-style-type: none"> • Cooking at the construction camp will be dependant exclusively on liquified petroleum gas • Lighting at the construction camp will solely be dependant on a small diesel-run generator.
Effect of noise and vibration to humans and wildlife by construction vehicles and other equipment	<ul style="list-style-type: none"> • Construction activities shall take place only during day time leaving wildlife free during the night when many species are active. • Modern machinery and vehicles that generate low noise shall be used. • The construction team shall be required to keep noise as low as possible when on site
Introduction of invasive plant species through the importation of construction materials	<ul style="list-style-type: none"> • Collection of building materials from areas known to harbor alien plant species shall be avoided and as much as possible care and screening shall be undertaken before importing the material to the site. • During re-planting, only indigenous plant species shall be planted. • In cooperation with SENAPA all identified alien plant species shall be removed.
Potential for transmission of zoonotics	<ul style="list-style-type: none"> • Animal feeding shall be prohibited. • All food remains shall be collected and kept in appropriate containers to avoid scavenging. • Domestic animals shall not be allowed at the camp.
Visual impact by inappropriate storage of building materials	<ul style="list-style-type: none"> • A store of corrugated iron sheet both for the walls and the roof and painted with green colour shall be provided to keep all building materials. • Rubble and other redundant building materias shall be removed from the site from the site immediately after are generated and disposed off as appropriately as possible outside the Park.
Potential for increased poaching due to increased human influx in the area	<ul style="list-style-type: none"> • SENAPA and the village leaders from where potential employees will come from shall be involved in scrutinizing and screening candidates applying for employment. • A copy of the list of names for the people working at the construction site and their photographs shall be submitted to SENAPA and respective village where an employee comes from. • A photograph of any employee resigning from employment shall be surrendered to the nearest Police Post. • All construction employees shall be given temporary identity cards and required to carry them all the time in particular when are out of the construction site. • Mechanism shall be devised to ensure effective communication among all developers in the park and between developers and the Police force and rangers from SENAPA to make them participate successfully in combating emergency insecurity cases in the area; • An armed guard from a registered security and reputable company shall be recruited and a contract signed with that company.

	<ul style="list-style-type: none"> • Roll-calls for construction personnel shall be taken every morning before the work starts and tonight before they go to bed to ensure that all the people are at the construction camp all the time.
Effect of dust to humans and wildlife by construction vehicles and other equipment	<ul style="list-style-type: none"> • Water bowser shall be provided to sprinkle water on cleared sites and tracks in order to reduce dust. • Bumps shall be erected along roads going to the site in order to minimize dust to be generated by speeding vehicles. • Masks shall be given to the construction personnel to prevent them from dust effects.
Interference with wildlife dispersal areas and calving grounds	<ul style="list-style-type: none"> • The construction camp shall not be fenced to allow free movement of animals. • Construction personnel shall be warned prior to commencing construction task to avoid feeding and harassing the animals and shall be required to keep noise as low as possible. • SENAPA shall be requested to station a ranger at the construction site to enforce the park regulations.
Transmission of sexually-transmitted diseases particularly HIV/AIDS	<ul style="list-style-type: none"> • Professionals from OSHA shall be invited to provide safety and health awareness training to workers putting emphasis on communicable diseases in particular HIV/AIDS and other sexually transmitted diseases. • Workers shall be encouraged to voluntarily test for HIV/AIDS. • Adequate protective gear particularly condoms shall be provided at the construction camp. • Hygiene and cleanliness shall be given priority and enough tents shall be provided to avoid congestion.
Contamination of soil as well as surface and underground water by human waste and sewage	<ul style="list-style-type: none"> • Long pit latrines shall be dug and water from showers directed in it. • Pit latrines shall be covered at the end of the construction phase. • Chemicals preferably Elex Ottokil disinfectant that kills disease vectors such as flies, inhibit offensive odor and repel houseflies will regularly be sprayed in the pit latrines so as to kill germs and bacteria.
Contamination of soil as well as surface and underground water by oil.	<ul style="list-style-type: none"> • Regular inspection of construction vehicles and other equipment shall be done in order to control accidental oil spillage and leakages. • A drum shall be provided at the construction site to store used oil. • The collected oil shall be donated to local people at Robanda village for treating construction wood to contain woodborers.
Creation of breeding sites for disease vectors by solid waste	<ul style="list-style-type: none"> • Containers for collecting different types of solid waste shall be provided at the site and sorting done immediately after the rubbish is generated. • Burnable waste shall be burnt immediately in the furnace to be constructed at the camp. • Decomposable waste such as food leftovers shall be buried in deep holes covered with wire mesh to prevent scavengers and left to decompose. • Non-decomposable waste such as plastic and glass bottles shall be transported and disposed off at the Mugumu dumping site, which is managed by Serengeti District Council. • Recyclable and hazardous waste shall be transported to Arusha city and delivered to organized groups dealing with recycling or to retailers for recycling or appropriate disposal.

	<ul style="list-style-type: none"> • Chemicals preferably Elex Ottokil disinfectant that kills disease vectors such as flies, inhibit offensive odor and repel houseflies will regularly be sprayed at the garbage sorting area to kill germs and bacteria.
Operation phase	
Positive impacts	
Prospects for employment and its subsequent contribution to reducing poverty among local people	<ul style="list-style-type: none"> • Individuals from the relatively closer Robanda village shall be given priority for employment in e they will have requisite qualifications. • Trained Village Game Scouts shall be considered for employment particularly as guards during walking safaris in the Park. • Employment shall consider gender and where applicants will have same qualifications females will be given priority. • Employees shall be paid reasonable wages and according to terms and conditions as provided for in the Employment Policy and the Employment and Labour Relations Act. • A motivation scheme to reward and award best staff performing at highest level of compliance shall be established. • On job training on different skills shall be provided to employees to advance their qualifications.
Likelihood of creating additional economic activities to the local communities and businesspeople	<ul style="list-style-type: none"> • People from the local community shall be encouraged to produce quality farm products such as vegetables, fruits, meat, milk and eggs for the camp supplies and handicraft products for sale to visitors. • Training shall be provided to volunteers from the local community on guarding and providing interpretative services. • Other essentials for the operation of the camp such as equipment for sanitary shall be purchased from business people at Mugumu Township, which is the headquartes of Serengeti District.
Increased quality accommodation facilities in Serengeti National Park	<ul style="list-style-type: none"> • Collaboration with other actors particularly SENAPA shall be established to ensure that international standard services including good roads, reliable security and other utilities such as water and electricity are sustainably provided. • The presence of the camp staffs and tourists at the Camp shall be sustained for the purpose of minimizing the chances of poaching incidents and boosting security in surrounding areas.
Prospects of increasing revenue to the Park, Serengeti District Council and the Central Government	<ul style="list-style-type: none"> • Visitor and revenue records shall as appropriately as possible be prepared and reports submitted regularly to SENAPA, Serengeti District Council and Tanzania Revenue Authority (TRA). • Taxes and fees shall be paid as appropriately as required to respective authorities. • Available tourist attractions within the park and surrounding areas shall be marketed vigorously to convince guests stay moredays in the Park. • Fee for disposing waste at the Mugumu dumping site shall be paid to the District Council to boost its income. • Corporate social responsibility to the neighboring local communities shall be executed in order to motivate people appreciate the presence of the facility.
Negative impacts	
Overutilization of water and	<ul style="list-style-type: none"> • Underground water from a deep borehole shall be the major source.

interruption of flow patterns and aquifers	<ul style="list-style-type: none"> • Water saving appliances shall be installed particularly in toilets, taps and showers. • Re-using towels and sheets shall be encouraged to reduce water utilization in the laundry. • Rain water shall be harvested to complement water from the borehole.
Visual impact (eyesore) caused by building materials, which do not blend with the environment	<ul style="list-style-type: none"> • The roof tops of all structures shall not protrude above the eye-line to make them less visible from below; • Roof tops shall be constructed in uneven lines to breakup as far as possible ‘unnatural’ looking lines. • Locally obtained building materials that blend with the natural environment like thatch grass shall be used. • Shiny or bright materials will not be used on external surface of the buildings. • Indigenous trees and grasses shall be replanted to obscure the Camp structures. • All outdoor lights shall be fade and down-casted to reduce luminosity.
Injuries and sometimes deaths to people and wildlife by speeding vehicles	<ul style="list-style-type: none"> • Bumps shall be placed at regular distances along the track going to the tented camp to control speed. • Drivers shall be warned and penalized if found driving beyond speed limits both within and outside the park.
Potential for poaching and insecurity incidences due to increased human influx in the area	<ul style="list-style-type: none"> • Regular collaboration with guards and game scouts employed by other developers in the park and rangers from SENAPA on conducting full time intensive patrols shall be encouraged. • Armed guards provided with radios for communication shall be recruited from a registered and reputable security company to and stationed full time at the camp. • All employees at the camp shall be issued with identity cards and a list of names and their photograph submitted to SENAPA. • Camp employees shall be required to carry their identity cards particularly when are out of the camp and shall be required to report to the Camp Management on any observed and doubtful movements.
Potential for human attack by wild animals	<ul style="list-style-type: none"> • Assistance of a ranger from SENAPA who will be stationed at the construction camp most of the time shall be requested. • Workers shall not disturb wild animals and walking beyond construction camp premises at any time shall be prohibited.
Effect of noise and vibration to humans and wildlife by tourist vehicles and a back up	<ul style="list-style-type: none"> • Modern back up and vehicles that generate low noise shall be encouraged. • A generator shall be serviced regularly though will be used intermittently because more than 90% of the power source for camp operation except cooking will solar
Effect of dust to people, animals and plants by vehicles	<ul style="list-style-type: none"> • Speed bumps shall be erected along the road accessing the camp to minimize dust generation. • Heavy penalties shall be imposed to Company drivers found driving beyond the speed limit in the Park.

Interference with wildlife dispersal areas and calving grounds	<ul style="list-style-type: none"> • The camp shall not be fenced so as to allow free movement of animals. • Majority of structures shall be raised above the ground on wooden plinths to allow free movement of small creatures. • Outdoor lights shall be fade and down-casted to reduce direct illumination. • Visitors and camp employees shall be prohibited to feeding and harassing animals.
Introduction of invasive plants and the resulting disruption of natural growth the indigenous species.	<ul style="list-style-type: none"> • Close screening of foodstuffs prior to transporting into the park shall be instituted. • No introduction of ornamental plants shall be allowed at the Camp. • In cooperation with SENAPA all identified alien plants shall be removed.
Transmission of communicable diseases particularly HIV/AIDS	<ul style="list-style-type: none"> • Professionals from OSHA shall be invited to provide safety and health awareness training to workers putting emphasis on communicable diseases in particular HIV/AIDS and other sexually transmitted diseases. • Workers shall be encouraged to voluntarily test for HIV/AIDS. • Adequate protective gear particularly condoms shall be provided at the construction camp. • Sleeping rooms for staffs and tourist drivers shall be spacious and designed to accommodate maximum of two people to avoid congestion.
Potential for transmission of zoonotics	<ul style="list-style-type: none"> • Animal feeding shall be prohibited • All food remains shall be collected and kept in appropriate containers to avoid scavenging. • Domestic animals shall not be allowed at the camp.
Contamination of soil as well a surface and underground water by wastewater	<ul style="list-style-type: none"> • Sewage shall be emptied through 100mm PVC pipes to properly designed septic tank for biological treatment, drained in leach fields through perforated pipes for futher removal of impurities and left to percolate in the subsoil. • The use of low phosphate soaps and application of appropriate concentrations of caustic soda should be employed to prevent failure in an infiltration system due to a soap scum build up. This technique will also prevent over flow and surface pollution; • Wastewater from kitchens shall initially pass through a separate route to collect floating fat that jioned with that from toilets and showers for further treatment. • A sewerage vehicle shall be hired to dislodge the mess from the sewage and sludge from a septic tank in case it becomes full for disposal at designated dumping site. • The camp's architectural design provides for proper waterways to ensure that storm water is appropriately channelled to areas covered with natural vegetation as a strategy to maintaining green vegetation cover within the camp and surrounding areas.

Contamination of soil as well as surface and underground water by oil.	<ul style="list-style-type: none"> • Regular inspection of construction vehicles and other equipment shall be done in order to control accidental oil spillage and leakages. • A drum shall be provided at the construction site to store used oil. • The collected oil shall be donated to local people at Robanda village for treating construction wood to contain woodborers.
Generation of solid waste and the resulting creation of breeding sites for disease vectors	<ul style="list-style-type: none"> • Sorting the waste into different types and stored in different containers at the site shall be undertaken. • Wet waste shall be buried in deep holes covered with steel sheet with a door on top to prevent scavengers and left to decompose. • Non-decomposable waste including scrap metal, used tires, plastic and glass bottles, cans and plastic papers shall be transported to Mugumu dumping site. • Hazardous waste such as used solar appliances, empty containers previously containing poisonous chemicals and batteries shall be delivered to retailers in Arusha city for recycling or appropriate disposal. • Filtered water shall be provided in re-usable glass bottles in the restaurant, bar and rooms and refilled every morning to reduce the generation of plastic bottles. • Chemicals preferably Elex Ottokil disinfectant that kills disease vectors such as flies, inhibit offensive odor and repel houseflies will regularly be sprayed at the garbage sorting area to kill germs and bacteria.
Damage of the camp property by wildfires and electrical faults	<ul style="list-style-type: none"> • Fire extinguishers shall be placed strategically at fire hazard areas and all staff members will be trained on how to operate fire extinguishers. Necessary servicing of the equipment shall be strictly observed to make sure they are ready for use all the time. • Fire blankets shall be provided in kitchens and in all guest tents. • Guests shall be provided with a clear notice of where to go in case of a fire, and where the closest fire extinguisher is from their tent. • Each of the guest tents shall have a small fire extinguisher and a fog horn for guests to use in case of fire. • Smoking shall not be allowed in areas with high fire risk including inside guest tents. • Electrical wiring system shall be inspected regularly to detect potential electrical faults. • A Fire break shall be constructed around the perimeter of the camp and grass cleared regularly to prevent fuel accumulation.
Air pollution by smoke and green house gases	<ul style="list-style-type: none"> • The major source of power will be solar, which is the most environmentally-friendly type of energy than fossil-fuel and fuelwood. • Energy for water heaters shall be generated from solar. • A backup diesel-run generator shall be kept in a sound-proof room with thick.

	<ul style="list-style-type: none"> • Cooking for both the guests and staffs'.tourist drivers' will depend solely on liquified petroleum gas.
<p>Cumulative effect from solid and liquid accumulation resulting from addition of more accommodation facilities in the Park</p>	<ul style="list-style-type: none"> • The initial strategy shall be the minimization of waste generation through conservative procurement system such as purchasing of bulk supplies with limited packaging, use of biodegradable soaps and use of a drinking water filtration system to minimize usage of water from plastic bottles. • The Company shall join hands with other developers in SEANAPA under the coodination of the Serengeti District Council to improve a dumping site located in the outskirts of Mugumu Township. • Different containers of prescribed specifications shall be placed at the site of the proposed tented camp to allow sorted waste to be disposed off and treated according to different kinds; • Water minimization by installing water-saving appliances at the camp shall be an initial stage for wastewater management. • All wastewater from toilets, showers and kitchen shall pass through septic tanks for biological treatment then emptied in the environment through leach field system. • A wastewater tanker shall be hired to dislodge the mess and sludge from septic tanks when full for disposal at designated dumping site outside the Park. • Detailed environmental impact assessment shall be carried out to comprehensively address all environmental and social issues before commencement the construction of the proposed camp. The study shall identify and recommend appropriate abatement measures and enhancement actions for negative and positive impacts respectively during all phases of the project implementation.

PROJECTIONS:

Sisini- Serengeti P&L	2025	2026	2027	2028	2029
NETT REVENUE- US\$					
Peak Season -Average Occupancy -50% - USD 1000 x 26 Beds x 120 days	1,560,000	1,638,000	1,719,900	1,805,895	1,896,190
Shoulder Season -Average Occupancy - 40% -USD 600 x 26 Beds x 90 days	561,600	589,680	619,164	650,122	682,628
Low Season -Average Occupancy -40% - USD 400 x 26 Beds x 90 days	374,400	393,120	412,776	433,415	455,086
Total Room Sales	2,496,000	2,620,800	2,751,840	2,889,432	3,033,904
Other Income					
Game Drive, Spa and Curio Shop	124,800	131,040	137,592	144,472	151,695
TOTAL REVENUE	2,620,800	2,751,840	2,889,432	3,033,904	3,185,599
VARIABLE COSTS					
Restaurant:- Foodstuffs	250,000	262,500	275,625	289,406	303,877
Bar: Drinks	50,000	52,500	55,125	57,881	60,775
Park fees and concession	-	-	-	-	-
Cleaning & Sanitation	12,000	12,600	13,230	13,892	14,586
Commission paid	50,000	52,500	55,125	57,881	60,775
FIXED AND SEMI FIXED		-	-	-	-
Salaries & Wages	650,000	682,500	716,625	752,456	790,079
NSSF Employers Contribution	65,000	68,250	71,663	75,246	79,008
Skills & Development Levy	15,000	15,750	16,538	17,364	18,233
Staff Meals	30,000	31,500	33,075	34,729	36,465
Insurance & Licenses	25,000	26,250	27,563	28,941	30,388
Marketing and Advertisements	60,000	63,000	66,150	69,458	72,930
Directors Remunerations	60,000	63,000	66,150	69,458	72,930
Camp Upkeep	30,000	31,500	33,075	34,729	36,465
MV Running Expenses	120,000	126,000	132,300	138,915	145,861
Postage, Telephone & Internet	30,000	31,500	33,075	34,729	36,465
Stationary & Printing	10,000	10,500	11,025	11,576	12,155
Bank Charges	5,000	5,250	5,513	5,788	6,078
Transport & Traveling	24,000	25,200	26,460	27,783	29,172
Accountancy & Audit fees	10,000	10,500	11,025	11,576	12,155

Board Expenses	6,000	6,300	6,615	6,946	7,293
Entertainment	5,000	5,250	5,513	5,788	6,078
Medical & Staff welfare	12,000	12,600	13,230	13,892	14,586
Liquified Petroleum Gas	6,000	6,300	6,615	6,946	7,293
TV monthly fees	1,000	1,050	1,103	1,158	1,216
Website fees	5,000	5,250	5,513	5,788	6,078
Repair & Replacements	50,000	52,500	55,125	57,881	60,775
Uniforms and Personal Protective Equipment	24,000	25,200	26,460	27,783	29,172
Legal fees	5,000	5,250	5,513	5,788	6,078
Unforeseen Expenses	25,000	26,250	27,563	28,941	30,388
TOTAL EXPENSES	1,635,000	1,716,750	1,802,588	1,892,717	1,987,353
Profit before Tax	985,800	1,035,090	1,086,845	1,141,187	1,198,246

INVESTMENT PLAN:

CAPITAL INVESTMENT			
			USD \$
ITEM	QTY		TOTAL
Buildings Sub Structure			500,000.00
Tents			500,000.00
Swimming Pool			25,000.00
Vehicle	15		1,500,000.00
Electrical Cabling,Solar Power & DG			250,000.00
Borehol and water articulation			100,000.00
Soft Furnishings, Cutlery & Crockery			350,000.00
Furniture & Fittings			260,000.00
Room Furniture			250,000.00
Golf Carts	10		150,000.00
Back of the house buildings			100,000.00
Consultants, Architechts & Interiors			25,000.00
Pre-Operational Expenses,Transports and others			25,000.00
TOTAL			4,035,000.00

Capital investment is over \$4,035,000.00

5.0 DECOMMISSIONING PLAN

Although the period of lease for piece of land within SENAPA will be 15 years but renewable according to TANAPA's Tourism Investment Manual (TANAPA, 2019), in case the operation of the project comes to an end due to any reason(s), all decommissioning requirements as provided for, in the EIA and Audit Regulations, 2005 and their amendments thereof of 2018 shall be adhered to URT, 2005; 2018). Similarly, cost indication for impact monitoring activities during decommissioning will be uncovered after EIA study has been completed and will be included in the Project Proposal. The plan shall focus on enhancement measures for positive impacts, which shall include but not limited to site restoration, availability of accommodation and working structures for SENAPA staffs, reduction of water utilization in the Park, and risk of introducing alien plant species as well as reduced waste generation. Mitigation actions shall concentrate on laying-off employees, loss of other economic opportunities by local communities and loss of revenue by TANAPA, Serengeti District Council, the Central Government and the local community.

6.0 CONCLUSION

Sisini Collections Limited showed an interest of establishing a Permanent Tented Camp at *Solobeya "A"* Site in Serengeti National Park through the letter with reference number XXXXXX. . In response the Tanzania National Park advised the Company, which is referred as an Interested Party (IP) to prepare the Development Prospectus and the Business Plan commensurate to step three (3) of TANAPA Tourism Investment Manual(TANAPA, 2019). Initial assessment has unfolded that the proposed project will comparatively have more benefits than costs and most of the potential negative environmental and social impacts could be mitigated. The developer is well vested with most of the relevant national policies, laws and international conventions that govern environmental conservation and safety and human health. To that regard, the developer is committed to implementing all the abatement measures and enhancement actions that will be addressed in the EIA report and TANAPA's Standard Lease Agreement. To that end, Horizon Acres Limited requestes TANAPA to the Company proceed to the next step according to TIM (2019-2024), which is to commission a study on the hyrology and hydrogeological at the site in question.

REFERENCES

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APPENDICES

Appendix 1: Letter of Acceptance by the Developer to Establish a Permanent Tented Camp at Solobeya "A" Site within Serengeti National Park

**THE HORIZON
ACRES LIMITED**

An Insignia Ltd- Associated company.

OUR REF: THA/236/DEC/2023

Conservation Commissioner,
Tanzania National Parks,
P.O Box 3134
Arusha,
Tanzania

Date: 18.12.2023

Dear Sir,

**RE: RELOCATION OF SITE TO KOGATENDE WITH COORDINATES - 36M
0718048 ITM 9817530**

Please refer to the above subject,

We thank you for showing us a proposed **Permanent tented camp site** around Kogatende with coordinates **36M 0718048 ITM 9817530** which we visited with your team last week.

Kindly note that the site meets our requirements, and we would like to commence development activities to meet forthcoming seasons for 2024, we anticipate having your cooperation to fast track the site allocation process and allow us to develop the site at the earliest.

Thanking you in advance,

Yours truly,

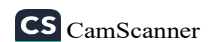
Anjali
Ms Anjali Bhatt
Operations Manager

**THE HORIZON ACRES LIMITED
P.O. BOX 822
MOSHI**

P.O. BOX 71449, DAR ES SALAAM, TANZANIA.

TEL- +255 784 789541

EMAIL- anjali@sisini-africa.com



Appendix 2: Letter for Preparation of the Development Prospectus (DP) and Business Plan (BP)



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF NATURAL RESOURCES AND TOURISM
TANZANIA NATIONAL PARKS



In reply please quote:

Ref. No: AD.170/235/01

Date: 18/12/2023

Operations Manager,
The Horizon Acres Ltd,
P.O.Box 822,
MOSHI.

Email: kdhebar@sisini-africa.com, anjali@sisini-africa.com

**RE: SUBMISSION OF DP, BP AND DRAWINGS FOR THE NEW SITE IN
KOGATENDE FOR CONSTRUCTION OF A PERMANENT TENTED CAMP IN
SERENGETI NATIONAL PARK**

Reference is made to your letter dated 18th December 2023 with reference number THA/236/DEC/2023 and NEMC technical committee observation report with reference HF.53/145/50/12 dated 28.08.2023. In your letter you have described that the new site we identified for you with coordinates 36M 0718048 UTM 9817530 in Kogatende area meets your requirements for the purpose of constructing a Permanent Tented Camp (PTC) with 25 guest units (maximum 50 beds).

2. This is to inform you that, you are required to prepare and submit project investment documents namely Development Prospectus, Business Plan and Architectural drawings as per TANAPA Tourism Investment Manual (2019-2024) within two months from the date of this letter.

3. Please note that, the documents will be evaluated by a multidisciplinary investment committee. When the documents are approved, you will be given an offer letter that guides you to fund hydrological surveys, borehole drilling and Environmental Impact Assessment (EIA) study. After the successful EIA you will have to sign a standard licence agreement and commence construction under the terms therein.

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