# REPORT OF THE OFFICER IN CHARGE OF THE RAJGIR WILDLIFE SANCTUARY (RWLS)

Introduction:-

Rajgir Wildlife Sanctuary, Rajgir, (RWLS) is a small sanctuary of 35.84 sq km. under the Nalanda Forest Division, Biharsharif. Rajgir Wildlife Sanctuary represents a remnant patch of forests nestled in the picturesque Rajgir hills within the South Gangetic Plain that is an important habitat for wildlife including the Painted Spurfowl, apart from numerous other fauna including mammals such as the hyaena and jungle cat amongst others. Rajgir also is of prime religious and cultural significance important to Buddhists, Jains and Hindus alike, and is dotted with numerous shrines, relics and monuments to the past. Protecting this sanctuary, which is far more important to the larger ecological, agricultural and cultural landscape than its mere size suggests, is consequently important. This sanctuary provides numerous ecosystem services to the surrounding landscape and even globally. The Forest Survey of India map (FSI, 2015) of Bihar indicates that this is the only forest-covered patch in Nalanda district. Therefore, to protect this forest vestige, a 35.84 km² was notified as Rajgir Wildlife Sanctuary under section 18 of the Wildllife (Protection) Act 1972 vide S. O. No 727 dated 25.05.1978. This sanctuary was subsequently renamed 'Rajgir Wildlife Sanctuary, Rajgir' vide Forest and Environment Department, Government of Bihar Notification No. 4118 dated 13.09.1988. Final notification of this sanctuary has also been carried out (No 181, 21/5/2010). Moreover, this sanctuary is free of any rights vide this final notification.

Rajgir Wildlife Sanctuary (RWLS) is located in district Nalanda with its headquarters at Bihar Sharif. Rajgir is a sub-divisional headquarters located 3 km from Rajgir WLS. This sanctuary is located 110 km south-east of Patna, the capital of Bihar and 78 km from Gaya. Rajgir sanctuary and surrounding forests span the two districts of Nalanda and Gaya, close to the border of Nawada district. Consequently, the sanctuary lies at the junction of three districts-Nalanda, Gaya and Nawada district. Surveys carried out by TERI (2015) indicated that the Sanctuary is endowed with a diversity and abundance of wildlife characteristic of the area. There are 28 species of larger mammals, over 183 species of birds, 39 species of reptiles, 11 species of amphibians, 13 species of fishes, 51 species of butterflies and 6 species of scorpions.

Rajgir WLS lies between latitudes 24<sup>0</sup> 55' and 25<sup>0</sup> 05' N and longitude 85<sup>0</sup> 6' and 85<sup>0</sup> 30' E in the Nalanda district of Bihar. The sanctuary is enclosed by five peaks of the Rajgir hills that form a natural boundary, separating the sanctuary from the surrounding landscape of agricultural fields, habitation, roads and villages. These five peaks are Vipulgiri (1), Ratnagiri (2), Udaigiri (3), Sonagiri (4) and Baibhavgiri (5). To the north of the sanctuary is located the Panchanae and Saraswati rivers as well as the town of Rajgir. As an important tourist spot, Rajgir town has much tourist infrastructure which is situated along the northen boundary of the sanctuary. The southern boundary of the sanctuary includes the villages of Faldu and Madhuban of Nawada district as well as the hills of Udaigiri and Sonagiri. The Ghorakatora forest forms the Eastern boundary of the sanctuary and is bordered by the Vipulgiri and Ratnagiri hills. On the West lie Jethian village and the Baibhavgiri peak.

Rajgir Wildlife Sanctuary (RWLS) which is under administrative control of Divisional Forest Officer, Nalanda Forest division.

### GEOLOGY, ROCK AND SOIL

The Munger-Rajgir metasedimentary belt of which the Rajgir hills is a part is situated in parts of Munger, Nalanda and Gaya districts of Bihar (Ahmad and Wanjari, 2009). According to Ahmad and Wanjari (2009), "Medlicott (1869) correlated the rocks of the Rajgir area with the Dharwar and Supra Dharwar Formations while Krishnan (1956) correlated these rocks with the

Bijawar series of the Purana Group and assigned late Precambrian age for these rocks. Bhagwan Das (1967) and Mazumdar (1988) correlated Munger-Rajgir Formation to sub-metamorphic rocks of the Son and Narmada valley in central India and suggested that the Munger-Rajgir Formation might constitute an orogenic entity. Sarkar et al. (1964) reported the age of quartzite from the eastern part of Munger-Rajgir belt as 358-420 million years by K-Ar dating. Banerji (1991), proposed "Munger Orogeny" around the date given by Sarkar et al. (1964). However, in the latest Geological map of India published by the Geological Survey of India (1998, 7th Edn.), the Munger-Rajgir metasediments have been depicted as probable time equivalent with the lower Vindhyans.

The Rajgir fold belt comprises alternate quartzite and phyllite units (Ahmad and Wanjari, 2009). According to Srivastava and Sen Gupta (1967) this fold belt comprises two distinct quartzite bands interbedded with phyllites, whereas Thiagarajan and Banerjee (1967) and Sarkar and Basu Mallick (1979) mention that the Rajgir fold belt comprises a quartzite unit bounded by upper and lower phyllite units. These metasedimentary units have been intruded in the northern part by granite and basic rocks at places (Sarkar and Basu Mallick, 1979). Ahmad and Wanjari (2009) mention that, "The quartzite unit displays very well-preserved primary sedimentary structures such as stratification, cross-bedding, ripple marks, mud cracks and convolute-bedding. The phyllite unit is gradational as well as in sharp contact with quartzite. The phyllite is essentially thinly laminated and shows variegated colour and is of ferruginous nature. The alternate quartzite and phyllite units of the Rajgir fold belt have preserved clear evidences of two phases of deformation. The first phase of folding has given rise to the regional fold structure with closure at Giriak in NE and the dominant NE-SW-trending bedding parallel schistosity. This is inferred to be a westerly plunging isoclinal syncline south westerly plunging isoclinal syncline (Srivastava and Sen Gupta, 1967). The second generation fold is marked by NE-plunging minor folds, with closure at Ratnagiri. This phase of deformation is represented by subvertical to steep, south-easterly dipping axial-planar cleavage (S2) trending NE-SW in the phyllite unit (Sarkar and Basu Mallick, 1979, 1982). The interference of the two fold systems has produced a structural basin at Rajgir (Rajgir basin)."

The soils of the South Bihar plains are Archaean soils. They are composed mainly of ancient crystalline gneisses, schists, granites, alluviam and quartzites. The soils of this region are deep red, brown or black in colour due to high content of iron in the rocks. The greater part of the area, however is occupied by Gangetic Alluvium consisting of silt and clay. On the hill slopes, the layer of soil is very shallow and of sandy to sandy loam, dry, and suited to xerophytic growth. The parent rock is exposed in several places. In the valley, however fairly deep soils are found, where micaceous clay is higher and the soil is rich in organic and nutrient contents (First Working Plan of Gaya Forest Division. That the erosion is common which is aggravated by frequent fires, overgrazing and forest degradation, compounded by the hilly topography of the area. This has led to gully erosion particularly in the loamy areas.

#### TERRAIN:

The Rajgir WLS lies within the Rajgir Hills, which is a small, isolated, highland region of central Bihar state. This hill range rises abruptly from the South Bihar Plains and extends northeast-southwest for about 65 km in two parallel ranges that flank a narrow ravine in the northeast that gently opens towards the south-west. The Rajgir sanctuary lies in the valley between the parallel ridges, lying south of the town of Rajgir and is fringed by five hill peaks of the Rajgir hills. The terrain of the sanctuary is consequently flat in the valley while the surrounding small bluffs have steep slopes

#### CLIMATE;

Rajgir WLS has a typical tropical climate with three well defined seasons-summers, monsoon and winter. The summer stretches from March to June, the winter from mid November to February and the monsoon from mid June to mid September. The less well defined autumn

stretches from mid September to November. According to the Management Plan prepared by Mr Singh, occasional storms bring rains and blinding clouds of dust. WATER SOURCES:

Three small streams, the Vanganga, Saraswati and Baitarni flow through Rajgir. The Saraswati and the Vanganga flow through the valley near the base of the hills. The drainage waters of the Rajgir hills flow into a channel which passes through the Vaibhavgiri and Vipulgiri hills, and then bifurcates to form the Saraswati and the Vanganga (Sarkar, 1952). While the Vanganga flows through the Rajgir WLS near the foot of Ratnagiri and Udaigiri, the Saraswati flows close to Vaibhavgiri and receives the drainage water of the hotsprings. Both these streams drain into the river Panchana (Baitarni), a tributary of the Ganga (Sarkar, 1952). These streams are dry for a large part of the year due to heavy seepage, especially the Vanganga. The water seeps down in deep sand. The water table varies from 4 to 8 m. Pools, however, are found on the beds of the streams, even in summer. The bed of the Saraswati is sandy with stones and pebbles while the Vanganga is sandy, mixed with mud and clay.

## Forest of Rajgir Wildlife Sanctuary

Two previous studies on the forest types of Rajgir give a list of vegetation types of this sanctuary, and surrounding areas, both of which differ substantially. According to the first classification (IIRS, 2012), the sanctuary and surrounding forests consist of Dry Deciduous, Sal Mixed Moist Deciduous, Sal Mixed Dry Deciduous and Degraded forests, apart from small patches of Sal, Dry Deciduous Scrub, Moist Deciduous and Bamboo Mixed forests.

More recent data procured from FSI in March, 2015, however, classified the vegetation of Rajgir WLS into six types including Plantations/Trees outside Forest (TOF). This includes 1/E1 Cane breaks, 5B/C1 Dry Peninsular Sal Forest, scattered patches of 5/E2 Boswellia forest, 5/DS1 Dry Deciduous Scrub Forests and the predominant 5B/C2 Northern Dry Mixed Deciduous Forests. However, the cane breaks lie on the Western buffer of the sanctuary, in surrounding Reserve Forests rather than within the sanctuary limits.

A brief description of these major vegetation types according to the FSI, Atlas of India (2011) are

# Dry Peninsular Sal Forest (5B/C1)

According to the Atlas of India (FSI, 2011), the 5B/C1 Dry Peninsular Sal Forest, are found on shallow soils derived usually from crystalline and metamorphic rocks where soil moisture conditions do not favour moist sal, even in areas with high rainfall. The soil is sometimes calcareous and rests on hard impervious laterite. Common associates of sal are Terminalia tomentosa, Adina cordifolia, Boswellia serrata, and Acacia catechu.

# Northern Dry Mixed Deciduous Forests (5B/C2)

This includes dry deciduous species like Boswellia serrata mixed with other typical dry associates like dhaura (Anogeissus latifolia), siddha (Lagerstroemia parviflora) and piar (Buchanania lanzan). This forest types is found in poor and dry sites with shallow soils that retain little moisture.

# Dry Deciduous Scrub Forest (5/DS1)

This vegetation type includes shrubby growth of stunted tree species not more than a few metres high, interspersed with open patches of grass. The soil is fairly deep and often calcareous. Characteristic species of this vegetation type are Acacia catechu, Zizyphus species. The Zizyphus (ber) species are stunted due to lopping and frequent fires.

### Boswellia forest (5/E2)

This open forest type is dominated by Boswellia serrata (Salai). Occasionally, the forests consist of a pure composition of mature trees or pole crops. This forest occurs in areas with rainfall of 500 to 1300 mm with a long, hot, dry season and on a variety of rocks including crystalline and sometimes lateritic rocks, trap and shale. The soil is bouldery or pebbly, shallow and dry. Dry hill

tops and ridges as well as forests growing on southern aspects in Bihar are often are dominated by Salai.

#### Cane Brakes (1B/E1)

This vegetation type occurs in wet hollows and depressions near water. The soil consists of fine clay and is rich in humus. *Calamus tenuis* (cane) can grow to large sizes. Cane breaks, however, are found outside the Rajgir sanctuary border.

### Remote sensing and ground-truthing-based classification of forest types (TERI, 2015)

The TERI classification of vegetation types is similar to FSI's without cane breaks or *Boswellia* forests. In addition, the sanctuary has Sal Mixed Deciduous Forest and patches of mixed bamboo forest and a single grassland patch within the deer park.

- a) Dry Peninsular Sal Forest (5B/C1)
- b) Northen Dry Mixed Deciduous Forests (5B/C2),
- c) Dry Deciduous Scrub Forest (5/DS1)
- d) Sal Mixed Deciduous Forest
- e) Bamboo Mixed Forest and
- of f) A patch of grasslands within the deer park

Detailed vegetation surveys were carried out by TERI in 2015. According to management Plan total of 98 species of trees, shrubs and herbs were sampled in 69 plots of the sanctuary area including 49 tree species with gbh > 20 cm. In terms of diversity, the the Shannon-Wiener diversity index is 1.67 suggesting a relatively low diversity forest. The reciprocal Simpson's index is 2.66 suggesting that there are 3 common species in this forest (*Dendrocalamusstrictus*, *Shorea robusta* and *Buchananialanzan*). In total, the sanctuary has about 520 species of trees, shrubs and herbs based on all the vegetation assessments that have been carried out to date. The sanctuary and surrounding forests are particularly rich in medicinal plant species.

Total number of 14 grass species (including 1 species of bamboo), and 1 sedge (*Cyperus scariosus*) species were present in the herb layer. *Cenchrus ciliaris (Churant ghaas)* occurred in the most plots, followed by the sedge species *Cyperus scariosus* (*Nagar moth*) and common dhoob grass (*Cynodondactylon*).

### Fauanal and Avi fauan Diversity Rajgir Wildlife Sanctuary and ESZ

The Rajgir hills, although naturally floristically poor, support fauna characteristic of dry, deciduous forests including a fast-dwindling, globally Near Threatened (Arumugam et al., 2015) population of Striped Hyaena (*Hyaena hyaena*). Moreover, the mosaic of habitats such as scrub forest, bamboo thickets, grasslands, rocky cliffs and sal forests ensure a varied and diverse birdlife including species endemic to this region of India like the Painted Spurfowl (*Galloperdixlunulata*). A survey of wildlife (TERI, 2015) found 28 species of larger mammals, over 183 species of birds, 39 species of reptiles, 11 species of amphibians, 13 species of fishes, 51 species of butterflies and 6 species of scorpions. These surveys point to a varied diversity and abundance of wildlife that is characteristic of this region, and the range of habitats and ecosystems found in Rajgir WLS.

Wild Boar (Sus scrofa), Neelgai (Boselaphus tragocamelus), Cheetal (Axis axis), Jungle fowl (Gallus gallus murghi), porcupine (Hystrix indica), Hare (Lepus nigricollis), Langur (Semnopithecus entellus), Monkey (Macaca mulatta), Jackal (Canis aureus) are the species of vital importance in Rajgir Wildlife Sanctuary, Rajgir besides some of the endangered species like, Barking deer (Muntiacus muntjak), Python (Python molurus molurus) etc. are also found in the Sanctuary.

#### Birds

Rajgir wildlife sanctuary is a mosaic of mixed Sal forest, thorny shrub desert patches, bamboo patches and hilly areas with dry deciduous forests, creating a set of varied and favourable habitats for avifauna. The sanctuary supports avifauna typical of tropical dry deciduous

forests, including a large number of resident Galliformes such as Painted Spurfowl Galloperdixhunulata, Indian Peafowl Pavo cristatus, Grey Francolin Francolinus pondicerianus and, raptors such as the Crested Serpent-Eagle Spilornis cheela, and White-eyed Buzzard Butastur teesa. Various flycatcher species including the Asian Paradise flycatcher (Terpsiphone paradise paradisi), Verditer Flycatcher (Eumyias thalassina), Red-throated flycatcher (Ficedula parva), Black-naped Monarch flycatcher (Hypothymis azurea) and Tickell's Blue-Flycatcher (Cyornis tickelliae) are found here. Small streams help support species like the Tickell's Blue-Flycatcher and migratory species such as the Verditer Flycatcher that do not prefer open habitats.

The Racquet-tailed drongo (*Dicrurus paradiseus*) and the Black-hooded Oriole (*Oriolus xanthornus*), White-Bellied Drongos *Dicrurus caerulescens*, the Coppersmith (*Megalaima haemacephala*). Black-hooded Orioles and the occasional Brown-capped PygmyWoodpecker *Dendrocopos nanus* and Orange-headed ground thrush (*Zoothera citrina cyanotus*) are also found. And large groups of Rusty-tailed Flycatchers *Muscicapa ruficauda* in bamboo scrub.

Drier patches of the sanctuary form an ideal habitat for larks and pipits, and probably wheatears. There is an abundance of Ashy-crowned sparrow larks (*Eremopteryx grisea*) along with the Paddyfield Pipit (*Anthus rufulus*) apart from several spotted doves (*Streptopelia chinensis*), and other ubiquitous species like the common tailorbird (*Orthotomus sutorius*) and Indian roller (*Coracias benghalensis*). Painted Spurfowl (*Galloperdix lunulata*), a species endemic to Central India. Small flocks of this bird can be spotted at dawn and dusk close to the road near Ghorakatora as well as on the road close to, and beyond the forest guest house, and other parts of the sanctuary.

A total of 183 species of bird were recorded by TERI during field visits conducted in the Rajgir wildlife sanctuary (2014). Two species of bee-eaters; small green bee-eater (*Merops orientalis*) and the blue-tailed green eater (*Merops philippinus*) were reported from this area during the surveys while four species of kingfisher Common Kingfisher (Small Blue Kingfisher) *Alcedo atthis*, Stork-billed Kingfisher (*Halcyon capensis*), White-throated Kingfisher (*Halcyon smyrnensis*) and the Pied Kingfisher (*Ceryle rudis*) can be found here.

During the winter season migratory birds like the Northern Pintail (Anas acuta), Red-crested Pochard (Rhodonessa rufina), Ruddy Shelduck (Tadorna ferruginea) frequent water bodies in, and around Rajgir wildlife sanctuary. There is a good diversity of migratory birds in the Basuri Talab waterbody. The small patches of grasslands inside and outside the Mrig Vihar provide a safe haven for grassland birds like the Painted Sandgrouse (Pterocles indicus), Red Junglefowl (Gallus gallus), Grey Francolin (Francolinus pondicerianus) and Common Quail (Coturnix coturnix). Very large flocks of Yellow-footed Green Pigeons (Treron phoenicoptera) come in to roost in the trees adjoining the grassland in the Mrig Vihar, a spectacular sight at dusk.

Several owl species like the Barn Owl (*Tyto alba*), Collared Scops Owl (*Otus bakkamoena*), Mottled wood owl (*Trix ocellata*) and Brown Hawk Owl (*Ninox scutulata*) are seen roosting near the waterbodies and adjacent areas. An active nest of the Peregrine falcon (*Falco peregrinus*) and several nesting sites of the Rock Eagle Owl (*Bubo bengalensis*) along the edges of the hills and escarpments were recorded by TERI. This sanctuary also has several other raptor species including the Crested Serpent Eagle and the Eurasian Sparrowhawk, apart from the ubiquitous Shikra. Painted Storks and Asian Openbilled storks are seen along with the woollynecked storks in the fields bordering the sanctuary. Vulture species are not spotted in this area except the Egyptian vulture (*Neophron percnopterus*).

### Strength of Rajgir Wildlife Sanctuary

- · Scenic landscape of Rajgir Wildlife Sanctuary have beautiful forests
- Number of small seasonal river due to the unique geological characteristics of the area
- Rajgir wildlife Sanctuary also is of prime religious and cultural significance important to Buddhists, Jains and Hindus alike, and is dotted with numerous shrines, relics and

monuments to the past. Notification as a wildlife sanctuary which enables a set of regulations to be imposed for its protection

# Weaknesses of Rajgir Wildlife Sanctuary

- Shortage of frontline staff as no recruitment has taken place for a long time.
- · In addition, the influx of thousands of visitors every year to visit the many historical and religious monuments and shrines and the absence of any regulating mechanisms puts enormous pressure on an already stressed ecosystem.
- · Compounding this is a severe shortage of forest staff to monitor and regulate resource \*extraction and manage ecotourism. The sanctuary is also surrounded on all four sides by habitation, agriculture and development, which makes the designation of an effective buffer difficult.
- · Lack of trained frontline staff and energetic workforce
- Dependence of local people on the sanctuary for fuel wood and grazing
- · Easy access for cattle grazing and fuel wood, Medicinal Plants extraction
- Lack of co-ordination among the line departments
- Absence of eco-tourism initiatives

#### Threats

- Influence of over tourism.
- Illegal extraction of wood for fuel and medicinal Plants.

#### Opportunities

- Willingness of local people to join hands with the department for conservation.
- Immense scope of ecotourism development.

# OPINION OF THE DCF CONCERENED:

The Proposed project area is situated within Rajgir protected Forest notification C/F-7068-3438.R.O.No. CF17069/55-3966, DATED 19th DECEMBER 1955 in which the present proposal for total about 0.4938 ha is submitted for diversion. The proposed area is also part of Rajgir WLS was notified as Rajgir Wildlife Sanctuary (WLS) under section 18 of the Wildlife (Protection) Act 1972 vide S. O. No 727 dated 25.05.1978. This sanctuary was subsequently renamed 'Pant Wildlife Sanctuary, Rajgir' vide Forest and Environment Department, Government of Bihar Notification No. 4118 dated 13.09.1988. Final notification of this sanctuary has been carried out (No 181, 21/5/2010). The Department of Environment and Forests, Government of Bihar vide Resolution No. Vanya Prani-01/2010 177 (E)/ Patna-15 dated 29.03.2016 again renamed Pant Wildlife Sanctuary as Rajgir Wildlife Sanctuary. Intensive survey and field assessment has been undertaken from 13.09.2018 and 16.09.2018 in Proposed area.

The site is a heritage site of Sikh Community with shrine consisting of an old Gurudwara and a small tank - named Guru Nank Shital Kund. It is believed that the progenitor of Sikhism -Guru Nanak Dev had visited this place during his lifetime centuries ago.

This site in close vicinity of Brahmkund hot springs, another famous tourist site of Rajgir and situated opposite to Brahmakund Park.

In This case there is no question of any possible alternative because this religious heritage destination of Sikh Community is existing at this location from historical times and is centuries old. Due to intense faith and sentimental attachment of the Sikh community, alternative site is not

The Sikh pilgrimage site is historical and already in use by Sikh community for centuries; in recent times, the Gurudwara building constructed believed to be approx 90 years (ago with occasional extensions/expansions (No written proof available). The Sikh Community led by Gurudwara Prabandhak Committee, Takth Sri Harmandir Shahib, Patna city ,Patna, with support of State Government's Tourism intends to develop and maintain the shrine with essential facilities

The area of diversion of 0.4938 ha user agency requires forest/Sanctuary land does not proposed for felling of any tree species presence. Since the user agency proposed for development for existing structures, no need of damage if any Forest Land. No endangered and rare tree/ species found in the proposed area. In all places the weeds and grass of grazing height also person present and few ornamental plants and common trees like neem, Chakundi etc. present in the site.

The major forest type of the surrounding proposed area is 5/DS1 Dry Deciduous Scrub Forests and the predominant 5B/C2 Northern Dry Mixed Deciduous Forests.

The details break up of forest land required for Grunanak Sheetal Kund Renovation and Development at Rajgir - Notified PF of Rajgir Wildlife Sanctuary

Sr. No.	Status of the land	Item / Building etc.	Area	Remarks
1 00	The Rest of	Gurudwara building	(IN Ha.)	Kemarks
2			0 .0395 ha	
	Notified as Rajgir PF & which is part of Rajgir	Park/ Land Scape area	0.0883 ha	
3		GuruNanak Sheetal Kund-	0.026 ha	out of which 0.00606 ha was gov. land allotted to Gurunanal Sheetal Kund but par
				of Eco-sensitive zone of Rajgir Wildlife
4	Wildlife	Langar Space - Open shade	0.0325 ha	Sanctuary
5	Sanctuary	Family House of sewadar/Rajgir	0.0399 ha	
)	Sunctuary	Guest Room	0.0316 ha	
7		Toilets	0.007436 ha	
		Open Area (Court yard etc.)		
		Parking	0.19656 ha	
-		TOTAL	0.03811 ha	
200			0.4999 ha	*
		Deduct area of GuruNanak Sheetal	0.4938	
		Kund due to land belongs to original kund area.	0.006065	
		Actual forest area required in Ha	0.4938 Wh	

- 0.4938 Ha land is mainly required by the user agency to complete the project. No other alternative to the user agency to avoid this bare minimum land.
- The alignment selected in this present project is situated within the Rajgir PF which is part
  of Rajgir Wildlife Sanctuary and alongside the existing notified forest road i.e. Rajgir Vanganga (Part of Rajgir Gaya NH-82)
- So this present alignment is smallest and only available alignment for easy execution without any damage to forest area.
- The proposal forest land are notified as protected forest and falls within the Rajgir Wildlife Sanctuary and 0.006069 ha was gov. land allotted to Gurunanak Sheetal Kund but part of Eco-sensitive zone of Rajgir Wildlife Sanctuary. As per the final notification of the Eco sensitive Zone (S.O. 71(E) [10.01.2017] Final Notification declaring Eco Sensitive Zone around Rajgir Wildlife Sanctuary, Bihar) an area up to 1 km in all villages and up to 100 m in Nagar Panchayat, Rajgir, from the boundary of the protected area of the Rajgir WLS, Rajgir has been notified as an Eco-sensitive Zone.
- The undersigned is of opinion that the instant proposed project will no way affect the distribution or movement of any wild animal found in the areas where it is found. So far no such any cases of wildlife death reported in the in the proposed site. Generally the project area vulnerable to medium soil erosion due to intrinsic geological features of the substrate

during rainy season. The requirement of forest land as proposed by the user agency is unavoidable and barest minimum of the project and only viable option.

- The existing structures namely Gurudwara building, Park/ Land Scope, Guru Nanak Sheetal Kund, Langar Space Open shade, Family House of sewadar/Rajgir, Guest Room, Toilets, Open Area (Court yard etc.) and parking area will be renovated are developed by the Agency. It is Sikh Pilgrimage where it is said that Guru nank Came here is constructed a Gurudwara since 100 yrs. It is related to heartily religious manners. Many national & international Sikh & tourist come & visit this place.
- There is no record available in this office to find out exact period during which the existing structures were constructed. But during the year 2013 some construction works as were initiated by some of the Gurudwara people against the Forest Case 15-P/2013 (offence report no. 100988 dated 23.10.2013) was initiated their after the construction work stopped.

With the growth of pilgrimage in recent times the use area of the Gurudwara has increased and the essential and incidental visitor facilities have to be provided as it is impractical to provide such facilities outside and at location separate and distant from this heritage site with which the deep faith and sentiments of the Sikh community is intensely associated. The project proposal consists of providing such facilities over minimum required area (0.4938 ha) in the Rajgir Wildlife Sanctuary located just at its boundary, and also in the already tourism use zone of Rajgir town. In the light of the above mentioned facts and keeping the fact that as per the prescribed provisions I recommend positively for the approval of this instant proposal. Therefore this instant proposal may be approved with necessary conditions and directions. The user Agency has to obtain Forest Clearance also.

Dr. NESAMANI. K. Divisional Forest Officer, Nalanda Forest Dvivi Bharsharif.

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