

# BRIEF REPORT ON THE BIO-DIVERSITY OF THE STUDY AREA

FOR  
MINING OF BOULDER, GRAVEL & SAND MINERAL FROM MINES/QUARRIES OF  
'YAMUNANAGAR-BAILGARH NORTH BLOCK-1' AT VILLAGE-BAILGARH, TEHSIL-  
CHHACHHRAULI OF YAMUNANAGAR DISTRICT AND HARYANA STATE COVER 44.0 HA OF  
AREA.

PROJECT PROPONENT

: M/S CALLEIS REALTECH PRIVATE LIMITED  
60, Vasant Marg, Vasant Vihar, 2<sup>nd</sup> Floor, New Delhi-110057

# **BRIEF REPORT ON BIO-DIVERSITY OF THE STUDY AREA**

for Mining of Boulder, GRAVEL & Sand Mineral from Mines/Quarries of 'Yamunanagar-Bailgarh North Block-1' at Village-Bailgarh, Tehsil-Chhachhrauli of Yamunanagar District and Haryana State cover 44.0 ha of area.

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## **1. INTRODUCTION**

The demand for sand, gravel and boulders is increasing day by day construction activities & infrastructure development. With the rapid pace of development and industrialization, the demand of building material has enhanced manifold in the last 10-15 years and the demand of minor mineral has risen mainly in infrastructure activities like roads, highways, buildings & townships. Mining of minor minerals not only narrows the gap between the demand and supply of building material but also enhances employment opportunities and economic growth of the region. Besides, the production will also give benefit to the State in the form of revenue generation. Also, the mine management will conduct medical camps at regular intervals.

The project has been proposed for an annual production of 2.14 Million Tonnes of Boulder, Gravel & Sand by open cast semi mechanized method as per approved mine plan in river bed. The mine lease area is a river bed. The organization is a private company. The project cost is Rs. 3001.0 lac.

The entire mineral produced will be used in construction of roads, buildings and other infrastructures. The entire mineral will be solid to buyers in NCR, Haryana, UP, Punjab etc thereby bridging the gap between demand and supply of these minor minerals in the region. This will also generate much needed employment to the local people. Ecology of the area will get a boost and there will be an overall growth of the region in terms of standard of living, education, health and transport.

Mining in river bed will be limited to 3.0 m depth or above ground water table. No overburden or wastes will be generated as the minerals are exposed in the river bed. The mined minerals will be loaded in trucks. The trucks and equipments will be on hire basis or in-house depending upon requirement. The movement of trucks after mineral loading will be through approach roads connecting to tar roads. Mine area will have well connected to main highways namely National Highway 73A.

## **2. WORLD OF STUDY**

The very existence of a nation depends on its economic growth. The global interactions are such that an extremely rapid pace has been set for economic growth which has resulted in uncontrolled exploitation of available resources for speeding up industrialization, especially in developing countries. But in doing so it is adversely affecting the environment. It is now realized that a proper emphasis on environment is must for sustainable development. Environment and development should be considered as mutually complementary, interdependent, and an instrument of reinforcing the quality of wild life.

Biodiversity Impact Assessment will help to respond to the challenges of the times. The identification and appraisal of various impacts from the proposed project activities on the regional wildlife (Flora and Fauna) with their conservation strategy will be made to minimize the adverse impact on environment.

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### **3. ABOUT YAMUNANAGR DISTRICT**

Yamunanagar district came into existence on 1<sup>st</sup> November, 1989. Its area is 1756 square km, in which 441 Panchayats, 655 Villages, 4 tehsils namely Jagadhri, Chhachhraul, Bilaspur & Radar and two Sub-Tehsils namely Sadhaura & Mustafabad are existed. Before being named Yamunanagar it was know as Abdullapur. Large part of the district lies under the Shiwalik foothills. Sugarcane, wheat and rice are its main crops. It is an important industrial town having metal, utensil and plywood industries. Large industries like Shri Gopal Paper Mills and Saraswati Sugar Mills (biggest Sugar mill in Asia) are also located here.

Yamuna Nagar district is bounded by the state of Himachal Pradesh in the north, by the state of Uttar Pradesh in the east and south east by the districts of Yamuna Nagar and Kurukshetra in the south west and by Ambala district in the west. The district has a sub-tropical continental monsoon climate where we find seasonal rhythm, hot summer, cool winter, unreliable rainfall and great variation in temperature. In winters, frost sometimes occurs during December and January. The district also gets occasional winter rains from cyclones. The rain fall is mostly restricted to rainy season. The district has Shivalik hills and foot hill rolling plain in the north and north- east, and flood - plain along the Yamuna river in the east and south- east. The important rivers/ streams of the district are Yamuna, Sarasvati, Chautang, Rakshi, Somb, Boli, etc.

Yamuna River after rising from the snow-clad peaks of the middle Himalayas at Yamnotri, enters the district from its northeastern corner through a narrow corridor in the Siwaliks. It is a perennial river. Boli Nadi joins the Somb nadi near Dadupur and then the combined Somb and Boli nadi join the Yamuna River at Mehar Majra. The Rakshi stream takes its birth in the rolling foot hill plain while the Chautang and Sarasvati rivers originate in the lower hills. Generally, the slope of the district is from north-east to south- west, in which direction most of rivers/nadis/ rainfed torrents flow down.

The soils in the district are mainly silty loam (Khadar), loam (Bhangar and Nardak), and light loam (Seoti). The soils as classified by the national bureau of soil survey and land use planning (ICAR), Nagpur, the district has mainly udalfs, aquents-fluvents and ochrepts-orthents types of soils.

The underground water in the district is generally fresh and suitable for domestic and irrigation purposes. The district has favorable climate for the growth of rich vegetation due to reasonably good rainfall and elevation. Shisham (*Dalbergia sissoo*), Kikar (*Acacia nilotica*), Aam (*Mangifera indica*), Jamun (*Syzygium cumini*), Pipal (*Ficus religiosa*), Bodh (*Ficus bengalensis*), Neem (*Azadirachta indica*), etc. are the important tree species grown in the area. Safeda (*Eucalyptus hybrid*) has been introduced since 1963 in forest areas as well as on private land and popular is also grown on private land and also along the road routes. The natural vegetation is mainly of forest growth and its degradation stages. Tropical dry deciduous forests and sub-tropical forests are found here.

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### **4. KALESAR WILDLIFE SANCTUARY & NATIONAL PARK IN YAMUNANAGAR DISTRICT**

**Kalesar National Park** is situated in the foot hills of Shiwalik ranges of mighty Himalayas. On map it is located between 30°18' to 30°27' North latitude & 77°25' to 77°35' East longitude. It falls under Yamunanagar district of Haryana and sharing boundary with three states viz., Himachal Pradesh & Uttaranchal & U.P. The Yamuna river forms the Eastern boundary with Uttar Pradesh, the main Shiwalik ridge separates state boundary among Haryana, Himachal Pradesh & Uttaranchal in the north. Kalesar National Park is named after the Kaleshar (Shiva) temple located in protected area. The whole area is full of bio-diversity having dense Sal forest, Khair forest and patches of grass lands, which supports an amazing variety of plants and animal species.

The park was declared as National Park on 8<sup>th</sup> December 2003 vide S.O 144/C.A.53/72/S/35/2003 having an area of 11570 acres. Just adjacent to the National Park is Kalesar Wildlife Sanctuary and it was notified on 13<sup>th</sup> December 1996 vide S.O 161/C.A.53/72/S.26/A/96 and 121-Ft-4-2000/749 date 13.01.200, having an area of 13209 acres. The distance map in respect of proposed mine project is enclosed as **Annex 1**. The individual maps of the said sanctuary and national park are enclosed as **Annex 2 & Annex 3**.

Yamunanagar-Ponta Sahib state highway passes through the Kalesar National Park. It is around 45 KM from Yamunanagar, 15 KM from Ponta and 55 KM from Dehradun. It is well connected by road and having good services from Yamuna Nagar and Ponta Sahib. The nearest railway station is at Yamunanagar.

### **Statement of Significance**

Kalesar National Park has got a lot of significance in terms of bio-diversity and ecological stability in this part of the country. In terms of bio-diversity it is a storehouse of numerous medicinal plants. It houses many threatened animals like Leopard, Goral, Barking deer, Sambar, Chital, Python, King Cobra, Monitor lizard etc. Occasionally Tigers and Elephants visit this park from Rajaji National Park. If little improvement in habitat management is done in this park, tigers and elephants may stay throughout the year. So this park is very important in conservation of highly threatened animals like tiger and elephant. This habitat can provide an alternate home for these two animals coming from Rajaji National Park. The Shiwaliks formed by debris from the older Himalayan ranges, are composed of sedimentary rocks such as sandstone, clays & conglomerates & is a highly fragile system. Extensive erosion takes place due to rapid runoff during heavy rains. Gullies and landslides are common and the valley bottoms and nullahs are mostly strewn with boulders and pebbles. During monsoon torrents carry boulders & muddy water and cause flash floods in the plains. So this protected area plays a vital role in preventing that kind of flash floods and helps in maintaining ecological stability. In Haryana it is the only National Park

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having good natural forest supporting such a large bio-diversity. So it has got a special significance in terms of conservation, education, tourism and research opportunities.

### **Boundaries**

The entire National Park & Sanctuary area is duly notified and demarcated on the ground with the help of pillars and natural boundaries like rivers and torrents. To the north of National Park Simbalwada Wildlife Sanctuary (Himachal Pradesh) is there separated by ridge line and marked by pillars. To the East Yamuna river makes boundary of park with Uttar Pradesh. To the south agriculture lands of village's viz., Tajewala Araynwala, Naggal, Tiberian, Khizri, Baghpat, Khillanwala, Kansli, Darpur, Chicken, Jatanwal and Kot are situated. The western side is bounded by the crop fields of villages Faqirmajra and Ibrahimpur.

### **Animals**

Corresponding to the considerable diversity of habitat types, the wild animals of Kalesar protected area show a good variety of species. Although numbers are rather low at present, due to the full protection provided by park authorities, the population will increase to the full carrying capacity of the area within few years. Among herbivores Sambhar is common, especially in the more densely forested areas on gentle slopes, groups of 2 to 4 are often seen. Chital is another common herbivore found in open grassy patches and fire lines. Barking deer is found especially in forest areas with ample ground cover. The Goral is found in the park occupying a specialized niche on the relatively bare rocky slope at the top of Shiwalik ridges.

Antelopes are represented by the Nilgai or Blue bull which occurs in the more open areas bordering Yamuna plain. Wild boar is also fairly common in the park and it also raids on crops. Elephant is an occasional visitor from Rajaji National Park. Elephants used to stay at Kalesar Protected Area for few weeks and used to go back to Rajaji National Park. If good waterholes are made available it may stay for long time.

The Rhesus macaque is most common monkey in the park and most of these were released in the park area from outside. Presently, their number is too high for these monkeys also feed on eggs of Red Jungle fowl, so there is an apprehension that there is a decrease in Red Jungle Fowl number. Most of the time these monkeys attack on villages and also go for crop raids. Among the carnivores in Kalesar Protected Area leopard take pride place. There are about 10-12 leopard in the entire Protected Area. The tiger is also an occasional visitor from Rajaji national park. It stays for few days and goes back. If there is increase in prey base it can permanently stay in the park.

**Kalesar Wildlife Sanctuary** is spread over 13209 ha area along the Yamuna in Yamuna Nagar district of Haryana. The largest sanctuary in state, it is comprised within the National Park. Situated in the foothills of Shiwalik ranges of Himalayas, it is a popular destination for bird-watching.

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Located around 150 kms away from Chandigarh, the park shares boundary with three states viz., Himachal Pradesh, Uttaranchal and Uttar Pradesh. The Yamuna river form the Eastern boundary with Uttar Pradesh, the main Shivalik ridge separates state boundary among Haryana, Himachal Pradesh and Uttaranchal in the north.

Kalesar National Park is named after the Mahakaleshwer Nav grah Temple on the Jagadhri Ponta Road, located in the protected area. The whole area is full of bio-diversity having dens Sal forest, Khair forest and patches of grass lands, which supports rich diversity of flora and fauna.

Kalesar is the only National Park in Haryana that having good natural forest supporting such a large bio-diversity. This is the main reason behind Kalesar getting special significance in terms of conservation, education, tourism and research opportunities. To the north of National Park is Simbalwada Wildlife Sanctuary (Himachal Pradesh) separated by ridge line and marked by pillars. To the East Yamuna river makes boundary of park with Uttar Pradesh. To the south agriculture lands of village's viz., Tajewala Araynwala, Naggal, Tiberian, Khizri, Baghpat, Khillanwala, Kansli, Darpur, Chicken, Jatanwal and Kot are situated. The western side is bounded by the crop fields of villages Faqirmajra and Ibrahimpur.

Inside the Park, there is a 100-year-old colonial dak bungalow located at a picturesque point.

### **FAUNA**

It houses many threatened animals like 16 male and female leopards, Ghoral, Barking deer, 19 Panthers, Sambar, Chital, Python, King Cobra, Monitor lizard etc. Occasionally Tigers and Elephants visit this park from Rajaji National Park. So this park is very important in conservation of highly threatened animals like tiger and elephant. This habitat can provide alternate home for these two animals coming from Rajaji National Park.

### **FLORA**

Kalesar Forest has large variety of Flora, mainly the forest has sal trees and Khair, Shisam, Tun, Sain, Chhal, Jhingan, Sain and Amla. Kalesar forest maby the only forest in Haryana with a natural 'sal' tree belt.

## **5. YAMUNANAGAR DISTRICT**

Yamuna Nagar district is divided into one sub-division and six-development blocks viz. Bilaspur, Chachrauli, Jagadhri, Mustafa bad, Radaur and Sadhaura. The district is mainly drained by the rivers Yamuna, Markanda and its tributaries. Markanda is tributary of river Ghaggar and drains major part of the district. The high land between Markanda River and small rivulets of River Yamuna acts as basin boundary between west flowing rivers of Indus system and east flowing rivers of Ganga basin. River

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Yamuna drains eastern part of the district and acts as boundary between Haryana and Uttar Pradesh State.

Yamunanagar district is bestowed with rich water resources, both surface as well as ground water resources. The ground water is major sources of irrigation in the district. Nearly 40% of area irrigated by canal water. Distributaries in the district are 21.45 km long. Two major canals passing through the district are Western Yamuna Canal and augmentation canal.

### **6. GEOMORPHOLOGY AND SOIL TYPES OF YAMUNANAGAR DISTRICT**

The district is divided into four Physiographic units.

- ✓ Siwaliks
- ✓ Dissected Rolling Plains
- ✓ Interfluvial Plains
- ✓ Active and Recent Flood Plains
- ✓ Relict Plains

**Siwaliks Hills:-** Siwalik hill ranges occupy the northern fringe of Yamuna Nagar district and attain the height up to 950m AMSL. The hills are about 500m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

**Kandi Belt:-** A dissected rolling plain in the northern parts of district is a transitional tract between Siwaliks hills and alluvial plains. It is about 25 km wide and elevation varies between 250 and 375m AMSL.

**Interfluvial Plains:-** This tract is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest.

**Active and recent flood plains:-** This plain is narrow tract along river Yamuna in the district.

**Relict wedge plain:-** This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

**Eutrochrepts/Udorthents:-** These are shallow and loamy sands to fine sandy loams, except in depressions, well-drained, non-saline, non-alkali, non-calcareous, mostly base saturated and are classified as loamy skeletal typic, lithyic, eutrochrepts/undorthents. These soils are found in the Siwalik range.

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**Udipsamments/udorthents:-** These are loamy sand to sandy loam deep, excessively or well-drained, non-saline, non-alkali. These are placed under the associations of transitional tract between Siwaliks hills and alluvial plains.

**Psammaquents and Haplaquepts:-** These soils are found in Yamuna Plains.

**Haplaquept:-** These soils are non-saline, alkalinity hazards are classified as typic ustochrepts but water logged soils with loam to clay loam texture showing the effect of glazing, are classified as aeric/typic Haplaquepts. Areas as aeridic soil moisture have soils classified as camborthics and torropsamments.

### 7. WILDLIFE AND ECOLOGY IN YAMUNANAGR & HARYANA

From the wildlife diversity point of view the state can be divided into the following geographical regions, the description of which is given in brief below:-

#### Siwaliks and outer Himalayan Region

The Northern part of the state in Panchkula, Ambala and Yamunanagar districts fall in this category. The general topography of the region is undulating to steep hilly slopes with loose geological formation.

The Shiwalik hill system at places merges with the Himalayan hills. This region is very rich in flora and fauna of the general Shiwalik system. The main vegetation type in this region is of Sal (*Shorea robusta*) forests in the Kalesar valley, Darpur, Chiken, Nagli khol, meharniwala and is of scrub in Sunder Bahadurpur forests. Sal in this region is found on gently sloping and valley parts. The steep hilly and undulating areas have mixed miscellaneous forests of *Anogeissus latifolia* and *Lannea coromandelica species*. In the flatish undulating terrain the main animal found is Cheetal. In parts Black buck, Red jungle fowl and Wild boar. In the hilly and steep miscellaneous forests, the combination of Sambhar, kakkar, Wild boar, Leopard with Red jungle fowl, Kaleej pheasants is found. The area is rich in wildlife and the habitat in the last 20 years has not depleted any significantly. If at all, it has improved may be because of the Joint Forest Management adopted in the state. Wild dogs were found in Kalesar forests, which were exterminated under government orders on public demand.

#### The Indo-Gangetic Plains

Vast area of the state falls in the category. The land is highly productive. The terrain is flatish and is predominantly under agricultural use. The original forest vegetation comprise. Dhak, Shisham, *Acacia leucophloea*, *Acacia nilotica* with thorny shrub vegetation of *Capparis horrida*. Most of this area has been brought under cultivation. Lower parts of Ambala with the entire districts of Yamunanagar, Kurukshetra, Karnal, Panipat, Sonipat, Faridabad and Northern part of Jhajjar and Jind districts fall in this category. This area was one rich in wild animals, which are now confirmed only to very small pockets of forest vegetation left. Notable wild animal of this region is Black buck in Karnal, panipat, Sonipat districts, even up to Jind district. Hog deer is found only in Saraswati Wildlife Sanctuary in the

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State. Nilgai is present throughout the state especially in and around block forests. The excessive use of pesticides in this agriculturally prosperous belt has adversely affected the wild animal population, especially the bird population.

### **The Thar Desert Region**

Parts of Jhajjar district and the districts of Rewari, Mahendergarh, Hisar, Sirsa, Bhiwani fall in this category. The terrain basically is undulating and the soil is sandy. The vegetation comprises *Acacia nilotica*, *Prosopis cineraria*, *Acacia leucophloea* with shrubs of *Capparis aphylla*, *Calotropis procera*, *Zizphus mauritiana* and *Salvadora oleoides*. The typical animal association of this region is of Chinkara and Monitor lizard. This area once supported a sizable lion population. The record of hunting of lions in Hisar are available.

### **The Aravali Hill System**

The North-Western tail of Aravali hills is in Delhi. A sizable part of this hilly system (estimated to around 60,000 ha) falls in Haryana. The rocky hills of Aravalis which once supported a good forests of *Alnus pendula* have been highly degraded. Some stock of this vegetation is available even now. Some protection has been afforded to this vegetation during the project period of Aravali Afforestation Project. These hills which now support some. Hyena, Jackal and Fox population had once supported Tiger population. The Panthers as well as tigers occasionally visit the area from the adjoining hills in Rajasthan.

### **Socio-economic Profile**

In the Shiwalik region, there are pockets predominantly inhabited by the Muslim community and Gujjars. Since the area does not support good agriculture, dependence of the local community on the forest and wildlife resources is probably the maximum in the state. The Gujjar rear cattle and practice grazing of animals in the forest. Some people indulge in illicit felling of Khair and other trees. The practice of construction of dams for harvesting of water and use of water for irrigation of agricultural lands in the gently rolling hills and adjoining plain areas is transforming the local economy. In pockets in this region also live the people belonging to 'Deh', 'Bangale', 'Shikligar', 'Bawaria' community who indulge in wild animal offences. These communities traditionally lived by hunting of wild animals, big and small.

Wild boar occurring in the forest causes damage to agriculture crop in this area. The people of this region have been representing and agitating to allow hunting of wild boar to prevent the damage to agricultural crops. However, if any such permission is issued to local people other animals will also be vulnerable to killing. Hence no such decision to allow hunting of wild boar has been taken in the state.

### **Ecological Profile**

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The various ecosystems and the type of floral and faunal association occurring in the state are enumerated below: (an attempt has been made to make this list as exhaustive as possible but possibility of findings some other smaller associations cannot be ruled out).

### Forest Eco-system

- (a) The Shiwalik Sal forests of kalesar Wildlife Sanctuary is characterized by Panther-Cheetal-Wild boar-Sambhar-barking deer-Red jungle Fowl-Peafowl-Blue jay-Hornbill-Treepie-Woodpeckers.
- (b) Chir Forests of Morni areas characterized by Panther-Wild boar-Barking deer-Red Jungle Fowl-Peafowl-Blue jay-Hornbill-Treepie-woodpeckers.
- (c) Northern tropical mixed deciduous forests of Panchkula and Yamunanagar districts are characterized by Leopard-Sambhar-Barking deer-Ghoral-Wild boar-Nilgai-Jackal-Hare-Fox-Reptiles.
- (d) *Anogeissus pendula* forests of Aravalli hills in Gurgaon district are characterized by Panther (rare)-Hyena-Nilgai-Common langur-Hare-Jackal.
- (e) The bamboo forests of Thadugarh forests in Panchkula district are characterized by Leopard-Sambhar-Barking deer-Wild boar-Porcupine-Red Jungle Fowl-Kaleej Pheasant. In additions, Langur, Monkey, porcupine, Partridges, Quails etc are common in these places.
- (f) *Salvadora* forests of Nimbi-Duloth of Mahendergarh district with Capparis aphylla and Acacia Senegal are characterized by Chinkara-Nilgai-Fox-Jackal-hare-Monitor lizard-spiny tailed lizard.
- (g) *Comiphora* forests of Madhavgarh in Mahendergarh district are characterized by Chinkara-Nilgai-Fox-Jackal-hare-Monitor lizard-spiny tailed lizard, Sandgrouses-Partridges, Quails.
- (h) *Sterculia and Acacia Senegal* forests of Khol of Rewari district area characterized by Chinkara-Nilgai-Fox-Jackal-hare-Monitor lizard-spiny tailed lizard-Partridges-Quails-Green pigeons-Peafowl.
- (i) *Phoenix* forests of Faridabad district characterized by Hyena-Nilgai-jackal-hare-Partridges-Quails.
- (j) *Prosopis cineraria and Tamarix articulate* forests of Mahendergarh district area characterized by Chinkara-Hyena-Nilgai-Hare-Jackal-Fox-Partridges-Quails.
- (k) *Acacia Jacquemontii-Gymnosporia-Bauhinia*-Bhood scrub forests in the foothills of Aravallis are characterized by Nilgai-Chinkara-hare.

### Grass Land Eco-system

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Kans and Munj grass lands in the stream bed of Tangri in Panchkula-Ambala districts and in the stream bed of Sahibi river in Rewari district are characterized by Black buck-partridges-Hare and Reptiles.

### Wetlands Eco-system

(a) Wetland ecosystem of Sultanpur in Gurgaon district is the home of bird migration in Haryana.

Pelicans, Flamingos, Comb ducks, Shovellers, Ibises, Geese and a large number of other water birds visit this Park in winter. Sarus



crane breeds here.

(b) Wetland ecosystem of Bhindawas in Jhajjar district is characterized by large number of migratory birds.

### Desert Eco-system

These are semi-arid ecosystem like Bhiwani, Rewari and Mahendergarh districts. These are characterized by the presence of Chinkara-Desert fox-Hyena.

### Mountain Eco-system

This has been covered under forested hill ecosystem.

### Riverian Eco-system

This is present along the Yamuna and Ghaggar Rivers and is characterized by Otters (now rare), Tortoise-Black buck.

## 8. IMPACT ON FLORA AND FAUNA

Approximately 44.0 ha of area was sanctioned to the proponent as a mine lease area for extraction of Minor Minerals (Boulder, Gravel & Sand) from the river of Yamuna. Any forest area is not involve in the mine lease area. The project is away any type of protected areas and forest. The mining will be carried out by open cast semi mechanized method as per the approved mine plan. Mostly protected forests &

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## **BRIEF REPORT ON BIO-DIVERSITY OF THE STUDY AREA**

for Mining of Boulder, GRAVEL & Sand Mineral from Mines/Quarries of 'Yamunanagar-Bailgarh North Block-1' at Village-Bailgarh, Tehsil-Chhachhrauli of Yamunanagar District and Haryana State cover 44.0 ha of area.

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revenue forests are present towards North, North-Eastern & East sides of the project area. The mine lease area is a river bed area and it is away from the any protected areas. The Kalesar Wildlife Sanctuary & Kalesar national park are available within the study area i.e. 10 km radius of mine lease area which are 8.0 km in NNE direction and 9.3 km in NNE direction respectively.

The mining activity will insignificant effect on the existing flora and fauna. The purpose of the project itself is to save the flora around the project area from river widening, excessive erosion and floods. It was found that the proposed mining activity will not have any significant impact on the biological environment of the region.

### **9. CONCLUSION**

The project is a river bed mining project and minerals will be transported to the particular area through kuccha road. The proponent will sprinkling the water on the kuccha road from water tanker for stop dust falling.

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