EXECUTIVE SUMMARY

OF

DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

FOR

PUBLIC HEARING

OF

Proposed 2 KLPD Malt Spirit Plant, 2 KLPD Cane juice based Rum Plant & 2 KLPD Craft Gin Plant along with Pilot Plant for Fermentation & Bottling Plant

At

Plot No. 2A, Sector 4, IIE – Escort Farm, Kashipur,

District Udham Singh Nagar, Uttarakhand

APPLICANT

M/s. Himalaya Wine Company Pvt. Ltd.

Regd. Office: DD-29, Nehru Enclave, Kalkaji, New Delhi -110019

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EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

Himalaya Wine Company Pvt. Ltd. is proposing 2 KLPD Malt Spirit Plant, 2 KLPD Cane juice based Rum Plant & 2 KLPD Craft Gin plant along with Pilot Plant for fermentation & Bottling Plant at Plot No. 2A, Sector 4, IIE (Integrated Industrial Estate) Escort Farm, Kashipur, District Udham Singh Nagar, Uttarakhand. The project site lies in IIE (Integrated Industrial Estate) Escort Farm, Kashipur. The land is already under the possession of Company.

As per EIA Notification dated 14th Sep., 2006 and as amended on 13th June, 2019, the project falls under Category "B", Project or Activity '5(g)' Distilleries (Non Molasses based distilleries ≤ 200 KLPD). The project caters to Category "B" but due to absence of SEIAA or SEAC at Uttarakhand, this project will be considered as Category "A" and ToR letter was granted by MoEFCC, New Delhi.

Application for ToR was uploaded on MoEFCC, New Delhi Parivesh portal on 22nd January, 2022. Standard ToR has been issued by MoEFCC vide letter no. IA-J-11011/19/2022-IA-II(I) dated 01st February, 2022 for the preparation of EIA/EMP Report.

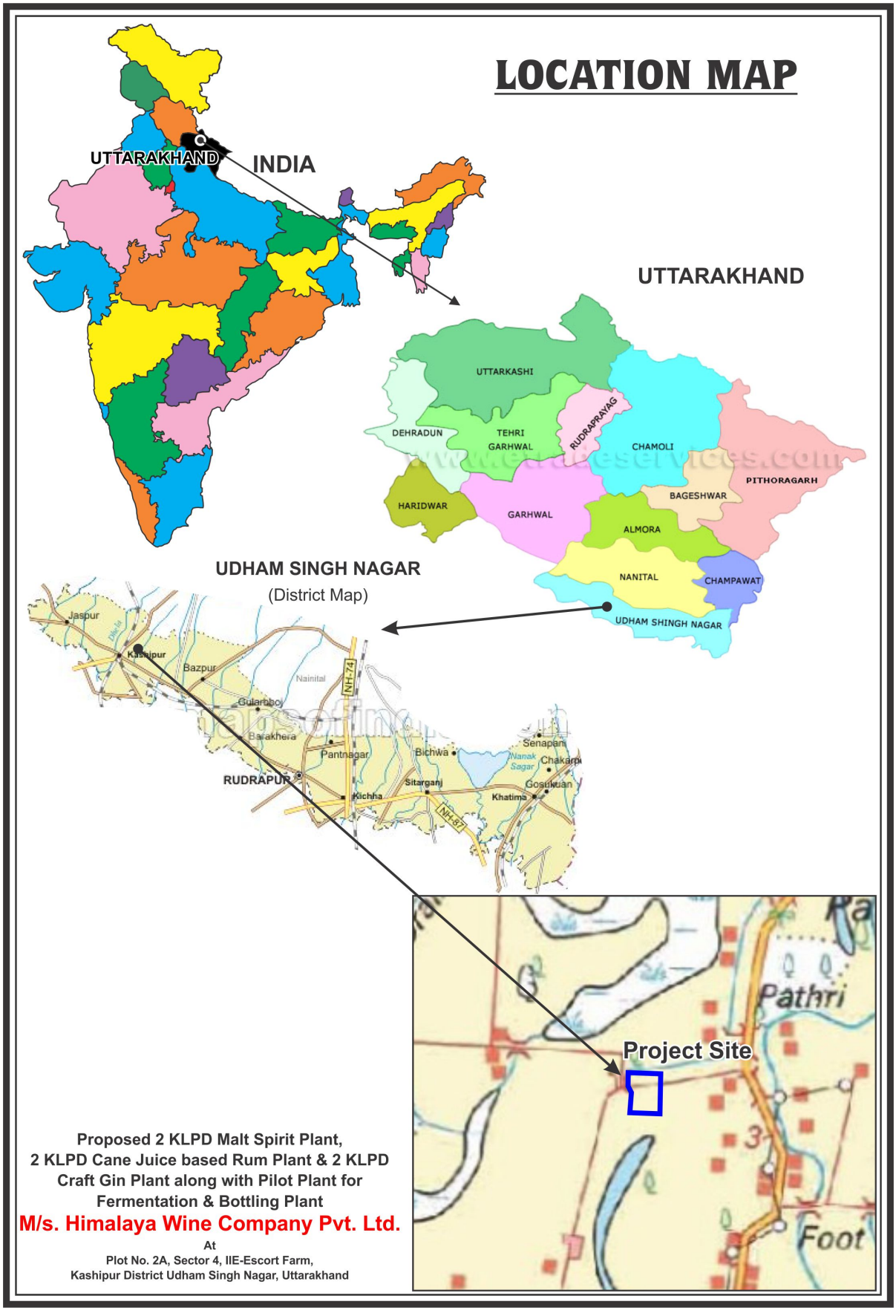
1.2 DETAILS ABOUT THE PROJECT

S. No.	Particulars	Details
A.	**Nature of the Project**	Proposed Malt Spirit Plant, Cane juice based Rum Plant & Craft Gin plant along with Pilot Plant for fermentation & Bottling Plant.
	Size of the Project	Malt Spirit Plant – 2 KLPD, Cane juice based Rum Plant – 2 KLPD & Craft Gin Plant – 2 KLPD
B.	**Location Details**	
1.	Plot No.	Plot No. 2A, Sector 4, IIE-Escort Farm
2.	Tehsil	Kashipur
3.	District	Udham Singh Nagar
4.	State	Uttarakhand
C.	**Geographical Extent of the Plant Site**	
1.	Latitude	29°13'37.35" N to 29°13'40.97" N
2.	Longitude	79^{0}01'37.96'' to 79^{0}01'41.28'' E
3.	Topo sheet No.	53O/3, 53O/4, 53K/15 & 53K/16
D.	**Area Details**	

S. No.	Particulars	Details
1.	Plant Area	0.8533 ha (8533 Sq. meter).
2.	Greenbelt & Plantation Area	33% of the project area will be covered under greenbelt & plantation i.e, 0.281 Ha.
E.	**Environmental Setting Details (*with approximate aerial distance and direction from the project site*)**	
1.	Nearest Town & City	Kashipur (~6.0 km in WSW Direction)
2.	Nearest National Highway / State Highway	NH – 309 (NH -121) (~4.0 km in NW direction) NH -734 (NH-74) (~6.5 km in WSW direction)
3.	Nearest Railway station	Kashipur Railway Station (6.5 km in WSW Direction)
4.	Nearest Airport	Pantnagar Airport (49 km in ESE Direction)
5.	National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km radius	No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. exists within 10 km radius.
6.	Reserved Forests (RF)/ Protected Forests (PF)	Jurka RF (~3.5 km in ENE), Manrur Firozpur (Haldua) RF (~5.0 km in WNW), Ampokhra RF (~6.0 km in North), Jogipura RF (~5.0 km in East), Gulzarpur RF (~5.5 km in ENE), Ampani RF (~8.5 km in NE) & Sehonathpur South RF (~10.0 km in NNW direction)
7.	Water Body (within 10 km radius)	Bahalla Nadi (~2.0 km in WNW), Mahadev Canal (~3.0 km in WSW), Drona Sagar Canal (~4.5 km in WNW), Debka Nadi (~5.0 km in ESE), Burhi Kosi Nadi (~5.0 km in NE), Kosi River (~5.5 km in SE), Tumariya Bahalla Canal (~6.5 km in North), Dhela Nadi (~ 7.5 km in NW), Durgapur Distributary (~8.0 km in West), Karanpur Distributary (~7.5 km in WNW) & Narayanpur Distributary (~9.5 km in ESE)
8.	Seismic Zone	The plant site falls in Seismic Zone - IV as per IS: 1893 (Part-I): 2002.
F.	**Cost details**	
1.	Total Cost of the Project	Rs. 47.7 Crores
2.	Cost for Environmental Protection Measures	Capital Cost: Rs. 3.0 Crores Recurring Cost: Rs. 0.5 Crores/annum
G.	**Working Days**	350 days per annum
H.	**Products Mix**	Malt spirits, Rum, Gin, & Fruit based distilled products

Source: Pre-feasibility Report

1.3 LOCATION MAP


LOCATION MAP
UTTARAKHAND
INDIA
UTTARAKHAND
UTTARKASHI
DEHRADUN
TEHRI GARHWAL
RUDRAPRAYAG
CHAMOLI
PITHORAGARH
BAGESHWAR
HARIDWAR
GARHWAL
ALMORA
NANITAL
CHAMPAWAT
UDHAM SHINGH NAGAR
UDHAM SINGH NAGAR
(District Map)
Jaspur
Kashipur
Bazpur
Gularbhoj
Nainital
NH-74
Barakhera
Pantnagar
Bichwa
Senapani
Chakarpur
Nanak Sagar
RUDRAPUR
Sitarganj
Kichha
Khatima
Gosaikuan
NH-87
Pathri
Project Site
Foot
Proposed 2 KLPD Malt Spirit Plant,
2 KLPD Cane Juice based Rum Plant & 2 KLPD
Craft Gin Plant along with Pilot Plant for
Fermentation & Bottling Plant
M/s. Himalaya Wine Company Pvt. Ltd.
At
Plot No. 2A, Sector 4, IIE-Escort Farm,
Kashipur District Udham Singh Nagar, Uttarakhand

1.4 Requirements for the Project

1.4.1 Raw Material Requirement

The basic raw material for the manufacturing of Malt spirits will be Barley (Malt). Craft Rum will be produced from Sugar Cane & Craft gin from ENA (Extra Neutral Alcohol, Grain Based). In the present scenario, all the raw materials are easily available in the nearby area. Details regarding quantity of raw materials required, their source, storage and mode of transportation for proposed project are given in the table below:

Table - 1

Raw Material and chemicals requirement

S. No.	Particulars	Total Requirement	Storage	Source & mode of transportation
1	**Barley**	4 TPD	120 T Steel Silo	Barley/Malt supplier via road
2	**Sugar Cane**	30 TPD	10 T Cane godown	Sugar cane from nearby farm via road
3	**Extra Neutral Alcohol**	600 BL/day	25 KL Steel tanks	Grain based ENA from nearby distillery
4	**Chemicals**			
	CIP Chemicals	4 kg/day	60 kg In Stores	Chemicals supplier via road
	Caustic soda	4 kg/day	60 kg Stores/Steel Tanks	Near-by Markets via road
	Enzyme	6 L/day	100 L In Stores	
	Yeast	40 kg/day	500 kg In Stores	

Source: Pre-feasibility Report

1.4.2 Fuel Requirement

Biomass will be used for the proposed boiler of 4 TPH (2 x 2 TPH). Details regarding fuel requirements are given below.

Table- 2

Fuel Requirement

S. No.	Name of Material	Requirement (TPD)	Source of Material
1	Biomass (Bagasse/ cane trash/ wood chips/ Agro waste)	25 TPD	From local suppliers by road

Source: Pre-feasibility Report

1.4.3 Other Basic Requirements

Other basic requirements for the project are given in Table below.

Table – 3
Basic Requirements for the Project

S. No.	Parameters	Quantity Requirement	Source
1.	Fresh Water (KLPD)	64 KLPD	Groundwater
2.	Power (MW)	0.75 MW	Uttarakhand Power Corporation Ltd.
3.	Manpower (persons)	70 persons	Unskilled/ semi- skilled: - local areas; Skilled: - Local & outside areas

Source: Pre-feasibility Report

1.5 PROCESS DESCRIPTION

The process distillery plant comprises of following stages:

1. Malt Spirit Plant
    - Barley Malting
    - Malt storage, conveying and cleaning system. Malt milling system
    - Mashing system
    - Lauter Tun system (for wort separation), wort cooling and process water systems
    - Brewing/Fermenters Wash stills Spirit stills
    - Malt distillation
    - Spirit receivers & effluent receivers

2. Gin Plant
    - Pilot Fermentation system
    - Maceration
    - Craft gin distillation
    - Spirit receivers & effluent receivers, Resting Tanks etc.

3. Cane juice based Rum Plant
    - Sugarcane crushing & milling
    - Fermentation
    - Maturation
    - Spirit receivers & effluent receivers

2.0 DESCRIPTION OF ENVIRONMENT

2.1 PRESENTATION OF RESULTS (AIR, NOISE, WATER AND SOIL)

Baseline study of the study area was conducted during Winter Season (December, 2021 to February, 2022). Ambient Air Quality Monitoring reveals that the concentrations of PM10 and PM2.5 for all the 8 AAQM stations were found between 46.3 to 87.4 μg/m3 and 25.5 to 52.1 μg/m3 respectively. The concentrations of SO2 and NO2 were found to be in range of 5.62 to 18.2 μg/m3 and 10.68 to 32.6 μg/m3 respectively.

Ambient noise levels were measured at 8 locations within the 10 km radius area from the project site. Noise levels vary from 51.7 to 58.6 Leq dB (A) during day time and 41.2 to 46.9 Leq dB(A) during night time.

Ground water analysis was done for 8 locations. The pH of the groundwater samples ranged from 7.06 to 7.56 which is within the permissible limit and fairly basic in nature. The total dissolved solids ranged from 218 to 449 mg/l indicating rich dissolved mineral nutrients. This observation is supported by high values of total hardness 190 to 326.7 (mg/l) and total alkalinity 185 to 351.5 (mg/l).

Soil samples were collected from 6 different land use classifications indicating pH value ranging from 7.26 to 7.72 which shows that the soil is moderately alkaline in nature. Soil texture is silt loam and silt clay in all the land use. Available organic matter (0.64% to 1.22%) was medium. Organic carbon ranges from 0.37 % to 0.71% which is high, potassium 243.43 to 318.23 (kg/ha) was moderate; project site being the highest for available potassium, available nitrogen 192.94 to 258.06 (kg/ha) was medium and available phosphorus 61.93 to 79.97 (kg/ha) is high. This indicates that soil fertility is medium to high. NPK fertilizer addition may not be necessary during plantation and greenbelt development in the project site. The average conductivity values are 0.30 to 0.52 (mS/cm) which is average in all locations.

2.2 ENVIRONMENTAL MONITORING PROGRAMME

Details of the environmental monitoring schedule / frequency, which will be undertaken for various environmental components, as per conditions of EC/CTE/CTO are given in Table below**.**

Table - 4
Post Project Monitoring

S. No.	Description	Frequency of Monitoring	Locations of monitoring
1	Ambient Air Quality	As per EC/CTO condition	Within and outside plant area at least 4 locations (1 within and 3 outside the plant area at an angle of 120^0 each) covering upwind and downwind directions
2	Stack Emission Monitoring	Continuous monitoring (Online)	Plant Site (Boiler stacks)
3	Performance Guarantee (PG) test of pollution control equipment	Yearly	All pollution control devices
4	Fugitive emission	As per EC/CTO condition	In the plant site
5	Noise level monitoring	As per EC/CTO condition	Plant boundary & nearby areas
6	Ground water quality	Twice a year (Pre & Post monsoon)	In & around the plant site
7	Effluent quality	Daily (In house laboratory)	ETP/STP Outlet
8	Soil Quality	Yearly	In & around the plant site
9	Medical checkup of employees	Yearly	Nearby hospitals/dispensary/on-site

3.0 PROJECT BENEFITS

The project will result in growth of the surrounding areas by increasing direct and indirect employment opportunities in the region including ancillary development and supporting infrastructure. Development of social infrastructure will be in the form of medical provisions, health centres will be constructed and maintained, education facilities to nearby villagers and formation of self-help groups by Himalaya Wine Company Pvt. Ltd. The state will get revenues in terms of taxes and local people will get direct & indirect

employment. Business opportunities for local community will be available. Environment will be protected primarily while the industrial operations are going on with best mitigation measures to be implemented.

4.0 ENVIRONMENT MANAGEMENT PLAN

The environment management plan is as given below: -

Particulars	Details
Air quality management	➢ Bag Filter with stack of adequate height will be installed with the proposed boiler (2x2 TPH) to control the particulate and gaseous emissions due to combustion of fuel. ➢ DG Sets will have adequate stack height as per CPCB guidelines. ➢ Roads within the plant will be concreted to control the fugitive emissions. ➢ Adequate greenbelt will be developed in the plant area. ➢ Online Stack Monitoring system will be installed. ➢ The overall quality of the ambient air will be monitored and maintained within the limit prescribed by CPCB/SPCB after the commencement of the operations of proposed project.
Water quality management	➢ Production facilities are designed based on achieving "Zero Effluent Discharge" norms. ➢ Coloured effluent i.e. spent wash & washings from Malt Spirit Plant / Craft rum plant/Pilot Fermentation plant etc shall be concentrated into solids with Evaporator followed by drying in the sludge drying beds. ➢ Effluent i.e. process Condensates, spent lees & washings etc. will be treated in C.P.U. (Capacity 150 KLPD) & the treated water will be recycled back to process plant. ➢ Wet cake (DWGS) (4 TPD) will be utilized as Cattle, poultry and fish feed ingredients. ➢ Solids removed from Cane juice & Malt spent wash (3 TPD) shall be sold off as organic manure. ➢ Sewage from domestic activity will be treated in proposed sewage treatment plant (Capacity 5 KLPD). ➢ Rainwater harvesting will be done within the plant premises.
Noise Management	➢ Personal Protective Equipment like earplugs and earmuffs will be provided to the workers exposed to high noise level. ➢ Proper maintenance, oiling and greasing of machines at regular intervals will be done to reduce generation of noise. ➢ Greenbelt inside the plant premises and at the plant boundary will be developed& maintained. ➢ Regular monitoring of noise level is will be carried out in and around plant premises to find out any high noise level zones and measures will be implemented accordingly. ➢ Regular auditing of process area to find out any loosened nuts/bolts/joints to avoid unnecessary noise.

Solid & Hazardous Waste Management	➢ Solid waste from the operations generally comprises of fibres and proteins in the form of DWGS (4 TPD), which will be ideally used as Cattle Feed. ➢ ETP sludge will be used as manure. ➢ Fly ash (4 TPD) generated from the proposed boiler will be supplied to brick/cement manufacturers. ➢ Used oil & grease (0.2 KL/annum) generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.
Greenbelt development	➢ Out of the total plant area of 8533 Sq. meter, 2815 Sq. meter i.e. 33% will be developed under greenbelt & plantation. ➢ Native plant species will be planted in consultation with local DFO. ➢ Greenbelt will be developed as per Central Pollution Control Board (CPCB) guidelines. ➢ Greenbelt development along with the road & plant boundary will attenuate noise level, arrest dust and improve the environment in surrounding. ➢ Greenbelt & plantation development will begin simultaneously with the initiation of construction activities of the proposed unit.
Odour management	➢ Adequate greenbelt all around the periphery of the plant will be maintained. ➢ Better housekeeping will maintain good hygiene condition by regular steaming of all fermentation equipment. ➢ Longer storages of any product/by-products will be avoided & use of efficient biocides to control bacterial contamination. ➢ Regular use of eco friendly disinfectants in the drains to avoid generation of putrefying micro-organisms.
Occupational health & safety	➢ Occupational health surveillance program will be taken as a regular exercise for all the employees and their records maintained. ➢ Proper storage and handling precautions will be taken. The storage area will be kept cool, dry and well ventilated and away from the source of heat, flame or oxidizers. ➢ Use of Personal Protective Equipment (PPEs) will be encouraged. Proper training program on use of PPEs, characteristics of the material handled and safety precautions will be arranged. ➢ Fire safety measures will be incorporated within the factory premises. All the fire extinguishing media such as water, dry chemicals, CO2, sand, dolomite, foam, etc. will be kept in vital locations. ➢ Mock drill will be arranged for the worker to test the effectiveness of the training program time to time and the way to react in case of emergency. ➢ Safety precautions will be displayed in the premises on the banners, boards, etc.

5.0 CONCLUSION

The proposed project will prove beneficial to the local people as more infrastructure development, improvement in education and health facilities, roads, availability of drinking water, etc. in near-by villages will be done.

There will be no significant impact on the area, as adequate preventive measures will be adopted to maintain the various pollutants within permissible limits. Regular monitoring of all the components of environment will be done. Increased social welfare measures taken by the company that will bring development in the near-by villages.

Greenbelt development around the area will be also taken up as an effective pollution mitigation technique, as well as to control the pollutants.