

Part II

Project Information Memorandum

Setting up Gau Vigyan and Prodyogiki Sansthan

1.0 Project Overview

Uttarakhand has a chain of Ayurvedic centers engaged in Research and production of ayurvedic medicines. One area where the research activities have not been taken up in the State is Panchagavya - five outputs from a Cow. These are Cow urine, Cow dung, Milk, Curd and Ghee.

The initial research has shown that Panchagavya has tremendous medicinal value and various extracts from it could be used to develop a variety of medicines.

Further, in the State, there is a dearth of Professionals engaged in scientific research in the field of Cow and its products.

It is proposed that the selected developer (the “Concessionaire”) would set up the Cow Research & Education Centre (Gau Vigyan Prodyogiki Evam Anushndhan Sansthan), as per permissible laws and subsequently operate and maintain the same for a specified period from the date of signing of the Concession Agreement and at the end of this period, hand back the facility to ULDB.

2.0 Site

A land measuring 10 acres is available with the Government for this project at Pashulok, Virbhadra, Rishikesh. This land would be **leased** by the Government of Uttarakhand on long term or leave-license basis and the selected Private Operator would be invited to build the Cow Research & Education Centre on BOT basis.

3.0 General Concept Plan

3.1 For the design of the Gau Vigyan Prodyogiki Evam Anushndhan Sansthan, following are the main activity zones for which the design and construction needs to be planned:

1. Administrative Wing
2. Research Facility
3. Academic Wing including Library
4. Panchgavya products manufacturing facility
5. Museum
6. Cow Shed and grazing area

4.0 Details of proposed facilities

The tentative area for various activity zones has been estimated as under. The Selected operator is free to make changes and discuss the same with ULDB/GoUK before finalization. The below mentioned built up area are the minimum which the developer needs to meet.

Summary of Area (Sq Mtrs)

S No	Description	Coverage	FAR	Builtup	Floors	Area/floor	Open Area	Total
1	Administrative Office	60%	1.5	1,516	3	505	337	842
2	Laboratory	60%	1.5	1,253	3	418	278	696
3	Library	60%	1.5	546	3	182	121	303
4	Cow Sheds and Museum					33,628	33,628	33,628
5	Manufacturing Unit	60%	1.5	345	3	115	77	192
6	Green Area					4,796	4,796	4,796
TOTAL				3,660		39,644	39,237	40,457

Total Land 10.00 Acres

The Details of above activity zones are as under:

Administrative Office

S.No	Description	Numbers	Unit Area	Total Area
			Sq Mtr	Sq Mtr
1	Director Office	1	28	28
2	P.S Office	1	14	14
3	Sr Scientist Room	6	20	120
4	Scientist Room	10	20	200
5	Research Associate Room	16	18	288
6	Office	1	28	28
7	Open Air Theatre	1	63	63
8	Exhibition Hall	1	88	88
9	V.I.P Lounge	1	36	36
10	Toilets	10	5	45
11	Cafeteria	1	100	100
12	Passages/Staircase etc	50%		505

1,516

Laboratory

1	Laboratory	4	64	258
2	Lab Incharge	4	10	42
3	Lab Office	1	12	12
1	Demonstration room	2	70	140
2	Hall	2	120	240
4	Store	1	9	9
5	Store II	2	3	6
6	Equipment Store	1	10	10
7	Record Store	1	12	12
8	Record Room	1	14	14
9	Retiring Room	1	9	9
10	Test Animal	4	3	12
11	Central Workshop	1	50	50
12	Toilets	5	5	23
13	Passages/Staircase etc	50%		418

1,253**Library**

1	Reading Hall	1	80	80
2	Committee Hall	1	88	88
3	Stack Area	1	57	57
4	Binder Section	1	20	20
5	Room for the librarian	1	18	18
6	Issue/collection desk	1	18	18
7	Photocopy Room	1	15	15
8	Video & Cassette	1	50	50
9	Toilets	4	5	18
10	Passages/Staircase etc	50%		182

546

Cow Sheds and Museum

1	Museum	1	250	250
2	Open Cow Sheds	1	500	500
3	Closed Cow Sheds	1	500	500
4	Mini Cattle Feed Store	1	10	10
5	Cow Grazing Area	1	16,184	16,184
6	Fodder growing Area	1	16,184	16,184

33,628

Manufacturing Unit

1	Raw Material Store	1	15	15
2	Manufacturing Area	1	100	100
3	Quality Control Laboratory	1	15	15
4	Packing Section	1	50	50
5	Finished Goods Store	1	15	15
6	Office	1	20	20
7	General Store	1	15	15
8	Passages/Staircase etc	50%		115

345

5.0 Site Development related specifications

- i. The developer should provide landscaping, internal road network and parking areas within the site.
- ii. The internal paving to be a combination of black top/concrete road, concrete paving blocks, interlocking paving blocks, landscaped garden and green areas

6.0 Civil and Structural Requirements

- i. The buildings shall be designed in accordance with the latest Indian Standard Codes and shall be designed to resist wind and seismic forces.
- ii. RCC structures shall be designed as per IS 456: 2000
- iii. Steel structures shall be designed in accordance with the provisions of IS 800- 1984. Structural steel shall conform to IS 2062. Tubular sections would conform to IS- 4923. Structural joints shall conform to IS 4000:1992.
- iv. Developer is advised to carry out its own tests and investigations related to soil condition, strata, bearing capacity and other characteristics.

7.0 Air Conditioning

The facility shall be provided with Air-Conditioning as per the relevant standards and specifications of NBC, BIS and other recognised international standards.

8.0 Signages

The developer shall provide signages so as to facilitate necessary information to the visitors regarding amenities and their location. The signages would be provided separately for information signs, facility signs, and other signs.

9.0 Parking Area

- i. Provision of Car parking (in covered/ open), (Conventional /Mechanical) shall be made, as per Local Bye-Laws.
- ii. The Minimum bay dimensions per car space shall be 5.2 m long and 3.25 m wide for basement parking and above ground parking facilities.
- iii. Minimum carriageway of pavement for circulation space within parking facilities shall be 4 m if one way and 6 m if two way.
- iv. All parking spaces shall be paved to withstand vehicle loads and forces due to frequent acceleration and deceleration of vehicles. Parking bays/lots shall have proper cross slope and drainage. They shall be marked with paint as per Indian Standards to demarcate parking and circulation space.

10.0 Fire fighting Facilities

The Developer shall provide the required fire fighting equipment and facilities including fire exits, fire proof doors, etc conforming to the relevant standards and the applicable rules and regulations.

11.0 Sump Tank and Overhead Tank

The Concessionaire shall provide adequate underground/overhead tanks of adequate capacity as per the requirements of the Project Site. Underground tanks shall be of RCC construction.

12.0 Operations and maintenance requirement

The Developer shall perform routine and periodic maintenance activities for the project infrastructure viz, civil, mechanical and electrical works and equipment, furniture for meeting the specified performance standards as given below.

S No	Serviceability indicator	Required Service Level	Permissible Time Limit for repairs/rectifications
1	Boundary Wall shall be without Damage or Breach	Nil	Any damage / breach to the boundary wall shall be rectified within three (3) days of detection.
2	There shall be no standing water on pavement surface or in the centre	Nil	Immediate measures to be taken and water logging should be cleared within four hours.
3	All Toilets and bathrooms shall be clean and functional	A minimum of 95% toilets and urinals shall be functional at any given point of time.	Toilets/Urinals/bathrooms shall be demarked with suitable sign boards. These should be kept clean and hygienic and cleaning shall be done at least twice daily
4	All Information Signage and Display Boards shall be visible, legible and functional.	Maximum 2% number of damaged signage and boards at any given point of time	These shall be cleaned once in a week. Damaged signage and boards shall be replaced, repaired within seven days of its detection
5	Staircases shall be clean and functional	Nil	The staircases shall be cleaned at least four times a day. Damaged handrails, risers or treads shall be repaired within three days of detection.
6	Illumination (Lighting) shall be functional	To meet the required illumination level as per national standards	The ventilators, skylights, etc and other luminaries for artificial lighting shall be cleaned once in seven days to maintain the illumination level.
7	Defects in Electricity gadgetry like bulbs/ lamp shades/ wiring/ etc		Temporary measures in 4 hours and permanent restoration within 3 days
8	Defects in all other utilities like water tap/ tap connections / pipe/ sewer and drainage pipes/ tanks & overflow/ glasses/ window panes/ other building furniture		Timely intervention with Temporary measures within 8 hours, permanent restoration within 7 days, depending on nature and intensity of work.

S No	Serviceability indicator	Required Service Level	Permissible Time Limit for repairs/rectifications
9	Fire Fighting Equipments shall be functional	Nil	<p>Any damage to firefighting equipment in the facilities and in public spaces shall be rectified within two days of detection.</p> <p>Fire extinguishers shall be replaced before the end of its expiry date.</p> <p>The water tank meant for firefighting purpose shall remain flooded with water to its capacity at all the times.</p>
10	Water Tank shall be clean and functional		Water tank shall be cleaned and disinfected every month (by usage of approved chemicals) to ensure that no inorganic sedimentation takes place.

13.0 Periodic Maintenance Performance Standards

In order to maintain the quality and operational standards of high quality, the periodic maintenance/renewal activities are proposed for the Project as under:

S No	Periodic Renewal Activities	Time limit for renewal
1	Repainting of furniture, signages delineators, markings etc.	Minimum once in a year
2	Repainting of Buildings and all other structures.	Minimum once in three years
3	Repainting of carpentry work like joinery, doors, windows, ventilators, wooden furniture etc in the offices, cabins, booths etc.	Minimum once in three years
4	Mechanical Equipment	Minimum once in a year as per manufacturer's installation, operation and maintenance instruction manual
5	Electrical Equipment	Minimum once in a year as per manufacturer's installation, operation and maintenance instruction manual

14.0 Scientific and laboratory Equipments

The Selected developer will procure brand new equipments for the research laboratory which are commonly used in any modern research facility. The indicative list is given as under: The list is not exhaustive but is minimum requirement for the project.

S.NO	Equipment
1.	Stereo-zoom microscope
2.	Inverted phase contrast microscope
3.	Micromanipulator
4.	Digital image analysis system
5.	Refrigerated centrifuge
6.	Programmable Bio-freezer
7.	3 Gas incubator
8.	Tissue culture facilities
9.	Protein and DNA isolation kit system
10.	Real Time thermo cycler
11.	Thermo-cyclcr
12.	Gel documentation system
13.	Fluorescent activated cell shorter
14.	Sonicator
15.	Lypholyser
16.	HPLC
17.	Western blot analyzer
18.	Automated urine analyzer
19.	Automated hematology analyzer
20.	Spectrophotometer
21.	Automated chemistry analyzer
22.	ELISA
23.	PAGE
24.	Water bath
25.	Triple distillation assembly
26.	Millipore facility
27.	Autoclave
28.	Hot Air Oven
29.	ETO Sterilizer
30.	Incubator
31.	Fumigator
32.	Bio-safety cabinet
33.	Osmometer
34.	Ph meter
35.	Electronic balance

15.0 Go-ark manufacturing units

The minimum equipments/ storage facility required for a “gau-ark” manufacturing unit of 30 liters/hour capacity is as under:

Equipment	Capacity(Ltr)	MOC	Numbers
Distillation Unit	200	SS	1
Storage Drums (RM)	200	HMHDPE	34
Storage Drums (FG)	200	HMHDPE	21
Storage Drums (FG - Transportation)	200	HMHDPE	50
Extra Drums	200	HMHDPE	11
Storage		SS 316	5

16.0 Human Resources

The selected private partner would select and retain adequate number of scientific and support staff for smooth operation of the center. The private partner would ensure good working environment and pay remuneration commensurate with qualification and experience without any discrimination on gender and caste.

a) Research Staff

The minimum number of scientific staff required to be hired is as under:

S No	Description	Numbers
1	Director	1
2	Chief Scientists	2
3	Sr Scientists	4
4	Scientists	15
5	Post Doctoral Fellow	2
6	Sr Research Associate	8
7	Jr Research Associate	8
8	Lab Technician	8
9	Lab Assistant	8
10	Lab Worker	10

The above numbers are minimum indicative. Based on the number and type of research projects the numbers may increase. The support staff would be additional to the above indicated.

b) Industrial Staff

The staff required for operating and managing the “gau-ark” manufacturing units would be at least one (1) operator and two (2) helpers for each 30 Ltrs per hour capacity unit.