PROJECT REPORT

Of

CRAFT BEER

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding craft beer Manufacturing unit.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

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PROJECT AT GLANCE

1	**Name of Proprietor/Director**	XXXXXXXX	
2	**Firm Name**	XXXXXXXX	
3	**Registered Address**	XXXXXXXX	
4	**Nature of Activity**	XXXXXXXX	
5	**Category of Applicant**	XXXXXXXX	
6	**Location of Unit**	XXXXXXXX	
7	**Cost of Project**	24.00	Rs. In Lakhs
8	**Means of Finance**		
i)	**Own Contribution**	2.40	Rs. In Lakhs
ii)	**Term Loan**	16.55	Rs. In Lakhs
iii)	**Working Capital**	5.05	Rs. In Lakhs
9	**Debt Service Coverage Ratio**	2.83	
10	**Break Even Point**	38%	
11	**Power Requiremnet**	30	KW
12	**Employment**	12	Persons
13	**Major Raw Materials**	Malt(barley),water,hops and yeast	

14 Details of Cost of Project & Means of Finance

Cost of Project **Amount in Lacs**

Particulars	Amount
Land and building	Owned/Leased
Plant & Machinery	17.39
Furniture & Fixture	-
Other Misc Assets	1.00
Working Capital Requirement	5.61
Total	**24.00**

Means of Finance

Particulars	Amount
Own Contribution	2.40
Term Loan	16.55
Working capital Loan	5.05
Total	**24.00**

1. INTRODUCTION

Brewing has been practised since the 6th millennium BC, and archaeological evidence shows that ancient Egypt and Mesopotamia were among the first civilizations to do so. Cuneiform (the oldest known writing) from ancient Mesopotamia contains descriptions of several beer recipes. The brewer's skill was the only occupation in Mesopotamia that had social sanction and divine protection from female deities/goddesses, especially Ninkasi, who oversaw beer production, Siris, who oversaw beer consumption, and Siduri, who oversaw beer enjoyment. Women are typically the primary brewers in pre-industrial eras and in underdeveloped nations.

A craft brewery, sometimes known as a microbrewery, is a brewery that produces modest volumes of beer, generally less than big breweries, and is typically operated by a single person. Breweries of this kind are known for emphasising excitement, innovative tastes, and a wide range of brewing processes. Although traditional artisanal brewing had existed in Europe for centuries and had extended to other nations, the micro brewing movement emerged in the 1970s in both the United States and the United Kingdom. The more inclusive idea of craft brewing evolved as the movement progressed and some brewers increased their output and distribution. A brewpub is a bar that brews its own beer and sells it on site. Malt, water, hops, and yeast have been used to make beer for millennia. To put it another way, the sugars in grains are extracted so that yeast may convert them

to alcohol and carbon dioxide, resulting in the ultimate product: beer. While craft brewing is governed by scientific principles, it also requires creativity, since brewers must experiment with different mixes of grains, hops, yeast, and extracts to create a variety of styles.

Craft beer is distinguished from mass-produced beer by its commitment to innovation. To decrease the price of the finished product, the main domestic beer producers utilise less expensive components, such as rice or maize instead of hops, resulting in a watery, bland beverage. There are a number of beers that readily fall into the 'craft beer' category. Even if a brewer is tiny, traditional, and independent, he or she might still create a poor beer. We've tried a lot of them, so trust us. They are somehow more respected because they are craft brewers, but they still make lousy beer.

2. PRODUCT DESCRIPTION

2.1 PRODUCT USES

Craft beer has a more complex and unique flavour than mass-produced beer. The majority of craft brewers are passionate about their beer's taste and flavour.

2.2 MANUFACTURING PROCESS

Beer is more than just water, hops, malt and yeast. In the beer making process various ingredients are mixed, processed and sometimes the structure of the raw materials is altered. The brewing process is made up of ten production steps from the fresh barley to the finished beer –steps in more detail mentioned below.

- **Malting:** Malting is the first stage in the manufacture of beer. Fresh barley is first soaked in water before being placed in so-called germination boxes to sprout. The enzymes (amylase) required for starch separation are produced during this phase. The drying process then interrupts the germination process at just the right time (kilning). The green paints are meticulously dried at 80 degrees Celsius and have a somewhat pleasant flavor when dry. The malt sugar is subsequently used to feed yeast cells, which produce alcohol.
- **Milling**: Milling is the second step in the brewing process. The final malt is milled, similar to how wheat is made, to improve its water absorption. Malt mills generate a variety of

crushed malt grades, including husks, groats, meal, semolina, and powder (from the coarse to the finest).

- **Mashing**: Mashing is the third step in the brewing process. In the mash procedure - mashing-in - the milled malt is combined with water. Sugar, protein, and tannin are released as the starch in the grist dissolves. This mashing procedure yields the so-called malt extract.
- **Lautering**: The loudest phase in the beer-making process is the fourth. In the lauter tun, the mash is filtered as the husks sink and the liquid is separated from the solids (spent grains). The term is then utilized in the brewing process, with the wasted grains often being used as cattle fodder.
- **Sparging:** Water is added during lautering to extract more of the fermentable sugars from the grain.
- **Word Boiling:** Boiling is the fifth step in the brewing process. The word is boiled and the hops are put in the brewing pan or word kettle. The kind and number of hops used determine the beer's flavour: the more hops used, the bitterer the beer. The word is condensed to the original word when the water evaporates, the malt enzymes are deactivated, and tannin and protein components are separated to create the so-called trub.
- **Word Classification:** Word clarity, also known as drawing off, is the sixth phase in the brewing process. The word is then fed into the vortex, which begins to revolve. Hop particles that haven't dissolved and protein, known as trub, create a cone in the centre of the container, and the clear word may be tapped off to the side. The clear word is then cooled to between 10 and 20 degrees Celsius in the word cooler.
- **Fermentation:** The alcoholic fermentation process is the seventh phase in the beer-making process. This takes place in a fermentation tank with the addition of specific brewing yeast. The malt sugar is converted to alcohol and carbon dioxide by the yeast. The yeast sinks and is collected as soon as the malt sugar has fermented. A top or bottom fermented beer is created depending on the type of yeast and the word preparation employed.
- **Conditioning:** The yeast in beer goes inactive throughout the conditioning process and settles out of the brew, accumulating at the bottom of the tank. Any residual yeast and big proteins are subsequently filtered out of the brew.
- **Filtration:** Filtration is the ninth step in the brewing process. Any components left over after fermentation and secondary fermentation, including as yeast particles, hop resin, and protein, are removed at this stage, and the beer is given its final clear color.

- **Packaging:** The beer is bottled once it has finished conditioning. Beer comes in a variety of containers, including bottles, cans, and kegs. Brewers commonly forcibly carbonate their beer prior to packing since CO2 is allowed to escape during the fermentation process owing to the building of pressure, which may cause the tanks to explode.

3. PROJECT COMPONENTS

3.1 Land & Building

The land required for this manufacturing unit will be approx. around 2000 square feet. Land Purchase and Building Civil Work Cost have not been considered as part of the cost of project. It is expected that the premises will be on rental and approximate rentals assumed of the same will be Rs.30,000 per month.

- Workshop Area- This area includes the setup and foundation space for all equipment's, work floor area, etc. Total workshop area is approx.1000 Sqft.
- Inventory Area- This area includes the storage space for all the raw materials and finished goods. Total inventory area is approx. 500 Sqft.
- Office Area – This space includes staff working region, their accommodation space. Total workshop area is approx. 300 Sqft. This may be considered above the ground floor.
- Parking Space, Electric Mounting Space, and Others. This could be approx. 200 Sqft.

Land and building requirement may vary depending on the size of project.

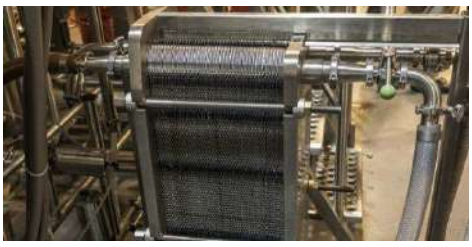
3.2 Plant & Machinery

- **Malt Mill:** Brewery malt mills (malt crushers) are devices that squeeze malt grains finely without harming the grain's outer layers.

- **Mash tun-** Mash tuns are important parts of a brewhouse because they mix grain that has been cracked in a grain mill with metered hot water to convert complicated starches into more easily fermentable simple sugars.

- **Filtration system-** For basic, medium, and fine beer filtration, kieselguhr filters are the most often used method. The filtering media is diatomaceous earth (kieselguhr). This is a coarsely crushed combination of ancient seaweed shells.

- **Heat exchanger-** A heat exchanger is a brewery piece of equipment that swiftly raises or lowers the temperature of wort or beer.



- **Beer fermentation Tank-** Fermentation Containers, commonly known as fermenters or FVs (and sometimes written fermenters), are the tanks, barrels, or other vessels in which wort ferments into beer.

- **Kiln-** Kilning is the process of drying and developing malty, biscuit-like tastes from sprouted barley. Pale malt makes up the majority of malt in today's beers.

- **Lauter Tun-** The Lauter Tun is a vessel used to separate the wort from the mash solids. It usually has a false bottom with a slotted, perforated floor that retains the spent milled grains while enabling the wort to filter through the grain bed and gather in the area beneath; the wort then flows to the brew kettle.

- **Beer filling Machine:** Packaging of bottled beer typically involves drawing the product from a holding tank and filling it into bottles in a filling machine (**filler**), which are then capped, labeled and packed into cases or cartons.

Machine	Quantity	Price
Malt Mill	1	2,80,000
Mash Tun	1	1,50,000
Filtration System	1	1,00,000
Heat exchanger	1	2,74,000
Beer fermentation Tank	1	85,000
Kiln	1	3,20,000
Lauter Tun-	1	2,50,000
Beer filling Machine	1	2,80,000
TOTAL		**17,39,000**

Note: Total Machinery cost shall be Rs 17.39 lakhs (Approx.) excluding GST and Transportation Cost.

4 LICENSE & APPROVALS

Basic registration required in this project:

- MSME Udyam registration
- GST registration
- NOC for fire safety board and Pollution Control Board
- Trade License
- Factory License (Optional)
- Liquor License
- Import/Export License (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if required.

Projected Balance Sheet

PROJECTED BALANCE SHEET					(in Lacs)
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Liabilities					
Capital					
Opening balance		2.70	4.71	7.18	9.96
Add:- Own Capital	2.40				
Add:- Retained Profit	5.30	7.11	8.57	11.38	13.21
Less:- Drawings	5.00	5.10	6.10	8.60	10.20
Closing Balance	**2.70**	**4.71**	**7.18**	**9.96**	**12.97**
Term Loan	14.71	11.03	7.36	3.68	-
Working Capital Limit	5.05	5.05	5.05	5.05	5.05
Sundry Creditors	0.75	0.84	0.93	1.03	1.14
Provisions & Other Liability	0.20	0.24	0.29	0.35	0.41
TOTAL :	**23.41**	**21.87**	**20.81**	**20.06**	**19.57**
Assets					
Fixed Assets (Gross)	18.39	18.39	18.39	18.39	18.39
Gross Dep.	2.76	5.10	7.10	8.79	10.23
Net Fixed Assets	**15.63**	**13.29**	**11.29**	**9.60**	**8.16**
Current Assets					
Sundry Debtors	2.90	3.33	3.69	4.08	4.50
Stock in Hand	3.46	3.85	4.26	4.69	5.14
Cash and Bank	0.22	0.10	0.17	0.19	0.17
Loans & Advances /Other Current Assets	1.20	1.30	1.40	1.50	1.60
TOTAL :	**23.41**	**21.87**	**20.81**	**20.06**	**19.57**

Projected Profitability

PROJECTED PROFITABILITY STATEMENT					(in Lacs)
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Capacity Utilisation %	**50%**	**53%**	**56%**	**59%**	**62%**
SALES					
Gross Sale					
Craft Beer	87.00	99.98	110.68	122.51	134.94
Total	**87.00**	**99.98**	**110.68**	**122.51**	**134.94**
COST OF SALES					
Raw Material Consumed	45.00	50.35	56.00	61.95	68.20
Electricity Expenses	2.88	3.05	3.23	3.40	3.57
Depreciation	2.76	2.34	1.99	1.69	1.44
Wages & labour	16.08	18.01	20.17	22.19	24.41
Repair & maintenance	1.31	1.50	1.66	1.84	2.02
Packaging	4.35	5.00	5.53	6.13	6.75
Cost of Production	72.37	80.26	88.58	97.19	106.39
Add: Opening Stock	-	2.41	2.68	2.95	3.24
Less: Closing Stock	2.41	2.68	2.95	3.24	3.55
Cost of Sales	69.96	79.99	88.31	96.91	106.08
GROSS PROFIT	**17.04**	**19.99**	**22.38**	**25.61**	**28.86**
	19.59%	**19.99%**	**20.22%**	**20.90%**	**21.39%**
Salary to Staff	4.14	4.55	5.10	5.36	5.89
Interest on Term Loan	1.63	1.43	1.03	0.62	0.22
Interest on working Capital	0.56	0.56	0.56	0.56	0.56
Rent	3.60	3.78	3.97	4.17	4.38
Selling & Administrative Exp.	1.74	2.00	2.21	2.45	2.70
TOTAL	**11.66**	**12.32**	**12.87**	**13.15**	**13.74**
NET PROFIT	5.38	7.67	9.51	12.45	15.12
	6.18%	**7.67%**	**8.59%**	**10.16%**	**11.20%**
Taxation	0.08	0.55	0.94	1.08	1.91
PROFIT (After Tax)	5.30	7.11	8.57	11.38	13.21

Projected Cash Flow Statement

PROJECTED CASH FLOW STATEMENT					**(in Lacs)**
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
SOURCES OF FUND					
Own Margin	2.40				
Net Profit	5.38	7.67	9.51	12.45	15.12
Depreciation & Exp. W/off	2.76	2.34	1.99	1.69	1.44
Increase in Cash Credit	5.05	-	-	-	-
Increase In Term Loan	16.55	-	-	-	-
Increase in Creditors	0.75	0.09	0.09	0.10	0.10
Increase in Provisions & Oth labilities	0.20	0.04	0.05	0.06	0.07
	-				
TOTAL :	**33.09**	**10.14**	**11.64**	**14.30**	**16.73**
APPLICATION OF FUND					
Increase in Fixed Assets	18.39				
Increase in Stock	3.46	0.39	0.41	0.43	0.45
Increase in Debtors	2.90	0.43	0.36	0.39	0.41
Repayment of Term Loan	1.84	3.68	3.68	3.68	3.68
Loans & Advances /Other Current Assets	1.20	0.10	0.10	0.10	0.10
Drawings	5.00	5.10	6.10	8.60	10.20
Taxation	0.08	0.55	0.94	1.08	1.91
TOTAL :	**32.87**	**10.25**	**11.58**	**14.28**	**16.75**
Opening Cash & Bank Balance	-	0.22	0.10	0.17	0.19
Add : Surplus	0.22	(0.11)	0.06	0.03	(0.02)
Closing Cash & Bank Balance	**0.22**	**0.10**	**0.17**	**0.19**	**0.17**

DSCR

CALCULATION OF D.S.C.R					
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
CASH ACCRUALS	8.06	9.46	10.56	13.07	14.65
Interest on Term Loan	1.63	1.43	1.03	0.62	0.22
Total	9.68	10.89	11.59	13.69	14.87
REPAYMENT					
Instalment of Term Loan	1.84	3.68	3.68	3.68	3.68
Interest on Term Loan	1.63	1.43	1.03	0.62	0.22
Total	3.47	5.11	4.71	4.30	3.90
DEBT SERVICE COVERAGE RATIO	**2.79**	**2.13**	**2.46**	**3.18**	**3.82**
AVERAGE D.S.C.R.					**2.83**

Repayment schedule

REPAYMENT SCHEDULE OF TERM LOAN							
					Interest		11.00%
Year	**Particulars**	**Amount**	**Addition**	**Total**	**Interest**	**Repayment**	**Closing Balance**
1st	Opening Balance						
	1st month	-	16.55	16.55	-	-	16.55
	2nd month	16.55	-	16.55	0.15	-	16.55
	3rd month	16.55	-	16.55	0.15	-	16.55
	4th month	16.55	-	16.55	0.15		16.55
	5th month	16.55	-	16.55	0.15		16.55
	6th month	16.55	-	16.55	0.15		16.55
	7th month	16.55	-	16.55	0.15	0.31	16.24
	8th month	16.24	-	16.24	0.15	0.31	15.94
	9th month	15.94	-	15.94	0.15	0.31	15.63
	10th month	15.63	-	15.63	0.14	0.31	15.33
	11th month	15.33	-	15.33	0.14	0.31	15.02
	12th month	15.02	-	15.02	0.14	0.31	14.71
					1.63	**1.84**	
2nd	Opening Balance						
	1st month	14.71	-	14.71	0.13	0.31	14.41
	2nd month	14.41	-	14.41	0.13	0.31	14.10
	3rd month	14.10	-	14.10	0.13	0.31	13.79
	4th month	13.79	-	13.79	0.13	0.31	13.49
	5th month	13.49	-	13.49	0.12	0.31	13.18
	6th month	13.18	-	13.18	0.12	0.31	12.87

	7th month	12.87	-	12.87	0.12	0.31	12.57
	8th month	12.57	-	12.57	0.12	0.31	12.26
	9th month	12.26	-	12.26	0.11	0.31	11.95
	10th month	11.95	-	11.95	0.11	0.31	11.65
	11th month	11.65	-	11.65	0.11	0.31	11.34
	12th month	11.34	-	11.34	0.10	0.31	11.03
					1.43	**3.68**	
3rd	Opening Balance						
	1st month	11.03	-	11.03	0.10	0.31	10.73
	2nd month	10.73	-	10.73	0.10	0.31	10.42
	3rd month	10.42	-	10.42	0.10	0.31	10.11
	4th month	10.11	-	10.11	0.09	0.31	9.81
	5th month	9.81	-	9.81	0.09	0.31	9.50
	6th month	9.50	-	9.50	0.09	0.31	9.20
	7th month	9.20	-	9.20	0.08	0.31	8.89
	8th month	8.89	-	8.89	0.08	0.31	8.58
	9th month	8.58	-	8.58	0.08	0.31	8.28
	10th month	8.28	-	8.28	0.08	0.31	7.97
	11th month	7.97	-	7.97	0.07	0.31	7.66
	12th month	7.66	-	7.66	0.07	0.31	7.36
					1.03	**3.68**	
4th	Opening Balance						
	1st month	7.36	-	7.36	0.07	0.31	7.05
	2nd month	7.05	-	7.05	0.06	0.31	6.74
	3rd month	6.74	-	6.74	0.06	0.31	6.44

	4th month	6.44	-	6.44	0.06	0.31	6.13
	5th month	6.13	-	6.13	0.06	0.31	5.82
	6th month	5.82	-	5.82	0.05	0.31	5.52
	7th month	5.52	-	5.52	0.05	0.31	5.21
	8th month	5.21	-	5.21	0.05	0.31	4.90
	9th month	4.90	-	4.90	0.04	0.31	4.60
	10th month	4.60	-	4.60	0.04	0.31	4.29
	11th month	4.29	-	4.29	0.04	0.31	3.98
	12th month	3.98	-	3.98	0.04	0.31	3.68
					0.62	**3.68**	
5th	Opening Balance						
	1st month	3.68	-	3.68	0.03	0.31	3.37
	2nd month	3.37	-	3.37	0.03	0.31	3.07
	3rd month	3.07	-	3.07	0.03	0.31	2.76
	4th month	2.76	-	2.76	0.03	0.31	2.45
	5th month	2.45	-	2.45	0.02	0.31	2.15
	6th month	2.15	-	2.15	0.02	0.31	1.84
	7th month	1.84	-	1.84	0.02	0.31	1.53
	8th month	1.53	-	1.53	0.01	0.31	1.23
	9th month	1.23	-	1.23	0.01	0.31	0.92
	10th month	0.92	-	0.92	0.01	0.31	0.61
	11th month	0.61	-	0.61	0.01	0.31	0.31
	12th month	0.31	-	0.31	0.00	0.31	-
					0.22	**3.68**	
	DOOR TO DOOR	60	MONTHS				
	MORATORIUM PERIOD	6	MONTHS				
	REPAYMENT PERIOD	54	MONTHS				

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