الأعمال المتقدمة للإستشارات المالية والإدارية
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PROJECT PROFILE
FOR
BARBED WIRE MANUFACTURING UNIT

CONTENTS

1. INTRODUCTION

Sultanate of Oman has witnessed a steady growth in Industrial, Manufacturing and the Construction sector over the last few years. Government spending on investments were continuing for improving the overall infrastructure of the country. This has eventually led to the growth in industrial, commercial and residential projects in the Sultanate.

The demand for barbed wire market is linked with the growth of above referred sectors and has grown significantly over the last few years. However, the recent oil market slump will have an impact on the overall economy and in turn on developmental projects. This will further percolate down and will have its impact on the barbed wire market.

But by providing the product at "affordable rates" and at "desired quality, there exists a reasonable market (illustrated further in the following sections) for the proposed barbed wire project.

2. MARKET ANALYSIS

2.1. PRODUCTS AND USES

Barbed wires are the fencing material used to protect the boundaries using sharp edges or points arranged at regular intervals along the wire strands. The major advantage of Barbed wire as against other fencing is it is inexpensive when compared to other fencing methods. Barbed wire fencing requires only fence posts, wire, and fixing devices such as staples. It is simple to construct and quick to erect.

Barbed wires are used for fencing large industrial projects, sheds, warehouses, farms, residential buildings etc. The advantage of using barbed wires for fencing especially in remote places is that a person or an animal trying to pass through or over barbed wire will suffer discomfort and possibly injury. Thus it is one of the most protective and cheaper fencing modes available in the market.

2.2. DEMAND ESTIMATES FOR BARBED WIRE PRODUCTS

2.2.1. Demand Estimation

The demand estimates have been established based on the Net Imports of barbed wire into the Sultanate.

2.2.2. Trade Statistics of Barbed Wire – HS Code: 731300

The Import of barbed wires into Oman from different countries from year 2010 to 2014 is detailed in the table below:

Exporters	Imported Quantity in Tons				
	2010	2011	2012	2013	2014
China	70	3	2,216	2,844	39,562
UAE	2,861	6,521	5,347	1,831	488
Turkey	58	9	0	28	90
India	27	38	101	165	59
Taipei, Chinese	0	0	0	0	43

Exporters	Imported Quantity in Tons				
	2010	2011	2012	2013	2014
Bahrain	0	0	0	0	7
South Africa	0	0	0	0	4
Others	14	81	54	74	0
TOTAL	**3,030**	**6,652**	**7,718**	**4,942**	**40,253**

The Export of barbed wires from Oman is very minimal and the details for the years 2010 to 2014 are in the table below:

Importers	Exported Quantity in Tons				
	2010	2011	2012	2013	2014
Bahrain	0	0	0	0	24
UAE	24	426	2	2	17
Others	12	173	13	3	0
TOTAL	**36**	**599**	**15**	**5**	**41**

2.2.3. Summary of Net Import of Barbed Wire Products in the Sultanate

The summary of net import of barbed wires into the sultanate is given in the table below:

HSC: 7313 – Wire barbed, twisted for Fencing (*In Tons*)					
Details	**2010**	**2011**	**2012**	**2013**	**2014**
Import	3,030	6,652	7,718	4,942	40,253
Export	36	599	15	5	41
Net Import	**2,994**	**6,053**	**7,703**	**4,937**	**40,212**

Source: UN Trade Data

2.2.4. Market Overview

Demand for barbed wire is driven by the growth in the construction of residential, commercial, hospitality, industrial and institutional building complexes and in other sectors where inexpensive fencing is required. However, with the recent slump in the Oil market, the growth in the above referred sectors is expected to decline over the next few years and is

expected to stabilise by year 2018. The same trend can be expected in the barbed wire market.

But for the proposed project with an installed capacity of 300 tons per annum, it can be seen from the tables above that this capacity is just 0.75% of the total barbed wires import into the sultanate. As the highlighted market share of the proposed project is very minimal, it can be easily achieved through effective sales and marketing.

3. TECHNICAL ANALYSIS

3.1. LAND & BUILDING

The proposed small scale barbed wire facility will be on an Industrial Shed with a total land area of 300 Sq. m. and with building and civil works mounting to 200 sq. m. Details are in Annexure 1.1. and Annexure 1.2.

3.2. MANUFACTURING PROCESS

The barbed wires are made using automatic barbed wire making machines. The barbed wire is made out of 12/14 SWG MS Galvanized wires. While two main line wires are fed into the machines through its axes, another wire is fed across into the pair of line wires to form barbs at required intervals.

The line wires twine themselves automatically around the point wire after forming the desired barbs strands. The feeding, wire cutting are completely automatic and are controlled by gear movements driven by electric motor of required capacity.

3.3. MACHINERY & PLANT CAPACITY

The annual production capacity is estimated at 300 tons per annum. The details of capacity and the capacity utilisation for various years are given in the table below:

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Installed capacity (Tons)	300	300	300	300	300
Capacity utilisation	80%	90%	90%	90%	90%
Actual Production considered for financial Projection (Tons)	240	270	270	270	270

3.4. VEHICLES

The vehicles are required for movement of raw materials and internal material movement. Details of Vehicles are provided in Annexure 1.4.

3.5. RAW MATERIALS AND CONSUMABLES

Raw materials include Galvanized SWG 12 wires (2.6 mm thick) apart from other required consumables.

3.6. UTILITIES

3.6.1. Water

Water is required for processing as well as general consumption. It is estimated that 150 cubic metre of water is required per annum.

3.6.2. Electricity

Electricity is used for machine operations and for general purpose lighting. The connected load is around 25 kVA.

3.7. MANPOWER

The total manpower required for the operation in the normal year is 5.

4. FINANCIAL ANALYSIS

4.1. PROJECT COST

The total cost of the project is estimated at RO 71,100. Details are given in Annexure – 1. The break-up is given below:

Details	Amount (RO)
Plant & Machinery	26,000
Vehicles and Internal Transport	12,100
Furniture & Office Equipment	6,000
Pre- Operative Expenses	9,000
Contingency & Escalation	3,000
Sub Total	***56,100***
Working Capital	15,000
TOTAL CAPITAL	**71,100**

4.1.1. Land & Building

The total extent of land is 300 Sq. M which will be taken on lease. Details are provided in Annexure 1.1 and 1.2.

4.1.2. Plant & Machinery

The total cost of plant and machinery is estimated at RO 26,000. Details are given in Annexure- 1.3.

4.1.3. Vehicles & Internal Transport

The total cost of vehicles and internal transport is estimated at RO 12,100. Details are given in Annexure- 1.4.

4.1.4. Furniture & Office Equipments

The total cost of furniture and office equipment is estimated at RO 6,000. Details are given in Annexure- 1.5.

4.1.5. Pre Operative Expenses

The pre-operative expenses include expenses for feasibility study, interest during project implementation, salaries and wages of project staff, travel and communication, legal fees, audit fees and other miscellaneous expenses. The total pre-operative expenses are estimated at R.O 9,000. Details are given in Annexure- 1.6.

4.1.6. Contingency & Escalation

A provision of 5 % of the estimated cost of items including building, plant & machinery, vehicles etc., is provided in the Project cost towards price escalation and any unforeseen expenses. This works out to RO 3,000. Details are given in Annexure- 1.7

4.1.7. Working Capital

Following assumptions are made for computation of working capital.

Details	Period
Accounts Receivable	1 Month
Raw Materials	1 Month
Consumables & packing	1 Month
Utilities	1 Month
Factory Wages	1 Month
Administration Expenses	1 Month
Sales Expenses	1 Month
Work in Progress	2 Days
Finished Goods	10 Days
Finance Cost	1 Month
PAYABLES	
Raw Materials	1 Month

The working capital requirements for the first 4 years of operation are given below. The working capital requirement in the first year comes to RO 15,000. Details are given in Annexure 1.8.

Particulars	Year 1	2	3	4
Working Capital Requirement (RO '000)	15	16	16	17

4.2. MEANS OF FINANCE

It is proposed to finance the Project as indicated in the following table.

Means of Finance	Amount (RO)
Equity Capital (20% of Project Cost)	14,200
Term Loan from Al Raffd Fund	46,300
Commercial Loan for Working Capital	10,500
TOTAL	**71,000**

It is proposed that the total project cost of RO 71,000 will be financed by owner's fund [equity] to the tune of RO 14,200, term loan with an interest of 3% for RO 46,300 and commercial borrowings for working capital at RO 10,500. The working capital loan is expected to carry interest @ 6% per annum.

It is to be noted that as the project is proposed under SME (Small and Medium Business Enterprises) sector, the promoter can avail funding facility from various sources like Al Raff'd Fund, Sharakah Fund, Oman Development Bank or through other commercial banks offering support to SMEs by providing lesser interest rates. The term loans are available at minimal interest rates in the range of 1% to 3%. Conservatively, the project considers an interest rate of 3%. Similarly, the funding institution expects a promoter contribution of 5 – 10% only under various schemes. For financial projections, the calculations consider a promoter's contribution of 20% of the total project cost.

4.3. COST OF SALES

The cost of sale has been projected for the first ten years of operation (Annexure-2) and those of first five years are summarized as below:

(Figures are in RO '000)

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Raw Materials	53	59	59	59	59
Utilities	1	1	1	1	1
Factory Wages	16	16	16	17	17
PRIME COST	**70**	**76**	**77**	**77**	**78**
Rent for land	9	9	9	9	9
Factory Overheads	1	2	2	2	2
Misc. Factory Exp.	1	1	1	1	1
FACTORY COST	**81**	**88**	**88**	**89**	**89**
Admin. Salaries	18	19	19	20	20
Admin. Expenses	4	4	4	5	5
TOTAL ADMIN EXPENSES	**22**	**23**	**24**	**24**	**25**
OPERATING COST	**103**	**110**	**112**	**113**	**114**
Finance cost					
Int on Institutional finance	1	1	1	1	1
Int on working capital	1	1	1	1	1
Total finance cost	2	2	2	2	1
Non cash expenses					
Depreciation	7	7	7	7	7
Prelim Expenses written off	9	0	0	0	0
Total Cost	**121**	**119**	**121**	**122**	**123**

4.3.1. Raw Materials

The cost of raw materials & consumables works out to RO 65,936. Please refer Annexure 2.1 for details.

4.3.2. Utilities

The total cost of utilities for working in full capacity is RO 1,021. The basis of estimate is given in Annexure – 2.2.

4.3.3. Salaries & Wages

The cost of salaries and wages in the normal year of operation is RO 34,000. Details are given in Annexure 2.3.

4.3.4. Factory Overheads

The annual expenses include repairs and maintenance, civil repairs, cost of spares, spare parts, insurance and vehicle expense and the same is estimated at RO 1,475 for the first year, RO 1,547 for the second and RO 1,619 for the third year. Details are given in Annexure- 2.4.

4.3.5. Administrative Expenses

The basis of estimates of administrative expenses inclusive of salaries & wages is given in Annexure 2.5 and it works out to RO 22,000. Administrative expense includes salaries and benefits, rents and food, vehicle expenses, communication related expenses, stationery, etc.

4.3.6. Depreciation

Depreciation works out to RO 7,125. Depreciation calculation is given in annexure- 2.6. The following are the rates considered for the calculation of depreciation.

Assets	Life (years)	% of depreciation
Buildings	20	5
Plant & Machinery	10	10
Technical Know-How	10	10
Vehicles and Internal Transport	4	25
Furniture & Office Equipment	5	20

4.3.7. Loan & Interest Calculation

Interest rate for term loan and loan for working capital is taken at 3% and 6% respectively. Details of interest calculations are given in Annexure- 2.7.

4.4. INCOME TAX

No income tax is considered for the proposed project.

4.5. SALES REALIZATION

The annual sales realization at installed capacity is given as annexure 3.1. The annual sales realization is provided below:

	Year 1	Year 2	Year 3	Year 4	Year 5
Sales – RO '000	115	130	130	130	130

4.6. COST RATIOS

The major cost indicators as a percentage of sales realization are given in Annexure- 3.

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Raw Material / Total Sales	45.8%	45.8%	45.8%	45.8%	45.8%
Utilities / Total Sales	0.7%	0.7%	0.7%	0.7%	0.7%
Factory wages / Total Sales	13.9%	12.3%	12.7%	13.1%	13.5%
Prime Cost / Total Sales	60.4%	58.8%	59.2%	59.6%	60.0%
Factory exp. / Total Sales	9.7%	8.7%	8.8%	8.8%	8.8%
Factory Cost / Total Sales	70.1%	67.6%	68.0%	68.4%	68.8%
Admin. exp. / Total Sales	19.1%	17.5%	18.1%	18.8%	19.4%
Selling exp. / Total Sales	0.0%	0.0%	0.0%	0.0%	0.0%
Finance Cost / Total Sales	1.8%	1.5%	1.4%	1.2%	1.1%
Non-Cash exp. /Total Sales	14.0%	5.5%	5.5%	5.5%	5.5%
Total Cost / Sales	**104%**	**92.1%**	**93.0%**	**93.9%**	**94.8%**

Being an engineering unit with skilled operators employed, the factory wages other than Raw Material costs would be a major cost element.

4.7. NET PROFIT AND PROFITABILITY ANALYSIS

As per the financial projection in Annexure – 3, the venture is financially viable. The summary of the analysis is given under:

(Figures are in RO '000)

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	**115**	**130**	**130**	**130**	**130**
Operating Cost	103	110	112	113	114
PBDIT	**12**	**19**	**18**	**17**	**15**
Depreciation	7	7	7	7	7
Finance Cost	2	2	2	2	1
Prelim Exp. Written Off	9				
Profit after tax	**-6**	**10**	**9**	**8**	**7**

4.8. KEY APPRAISAL CRITERIA

The viability of the project based on major appraisal criteria is given below.

Detail	Value
Total Investment	RO 71,000
Equity Investment	RO 14,200
IRR on total investment	11.6%
Payback period of Total Investment	5 years 5 months
Break Even Point (as % of Capacity)	71.1%
Cash Break Even Point (as % of Capacity)	61.8%

4.9. SENSITIVITY ANALYSIS

A sensitivity analysis has been carried out to determine the susceptibility of the project to changes in main variables. Effect on the IRR on equity investment, based on 10 years of operation due to change in various variables is as follows:

Particulars	Original	RM Cost up by 10%	RM Cost down by 10%	Sales Value down by 10%
IRR on Investment	11.6%	3.2%	4.6%	-6.4%

5. WAY FORWARD FOR PROJECT IMPLEMENTATION

5.1. DUE DILIGENCE

- The cost estimates of Plant and Machinery is based on secondary research and actual cost during implementation stage could change based on various factors like currency exchange rates, machinery suppliers' raw material price increase etc.
- The investor for the project should receive actual quotations from potential machinery suppliers and validate the cost of plant and machinery before implementing the project.
- The study has covered the market aspects through extensive secondary market research and rapid primary research. It is recommended that the entrepreneur conducts his own market research to assess whether he would be able to succeed in capturing the market shares illustrated in the profile

5.2. KEY SUCCESS FACTORS

- Achieving projected sales volumes and ensuring capacity utilisation.
- Sustained Quality of products and services offered ensures market growth. The entrepreneurs should have a comprehensive quality system to cover the entire supply chain (RM sourcing to after sales service).
- The cost of raw material and its variance is another major factor that shall influence the project viability. The entrepreneurs should have an effective system of tracking / monitoring the raw material prices and implement a system of linking RM cost vis-à-vis end product pricing.
- Many SMEs fail due to the absence of accounting systems and practices. Regular accounting, assessing profitability and working capital management are critical for the success of any SME project.

ANNEXURE- 1					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATED PROJECT COST					
S. No.	**Item**	**Refer**		**Amount**	**Remarks**
		App.		**(R.O)**	
A1	**PROJECT COST**				
1	Land Development for Plant Site	1.1	0		Lease Rental
2	Building etc.	1.2	0		Lease Rental
3	Plant & Machinery	1.3	26,000		Estimates
4	Vehicles and Int. Transport	1.4	12,100		Estimates
5	Furniture & Office Equip.	1.5	6,000		Estimates
6	Pre- Operative Expenses	1.6	9,000		Estimates
7	Contingency & Escalation	1.7	3,000		Estimates
	Sub Total		56,100	**56,100**	
A2	**WORKING CAPITAL**		15,267	**15,000**	
A3	**TOTAL**			71,100	
	Say			**71,000**	
B	**MODE OF FINANCE**				
1	Equity			14,200	20% of Total Project Cost
2	Term Loan			46,300	
3	Sub Total			**60,500**	
4	Borrowings for Working Capital (@ 6%)			10,500	70% WC Loan
	TOTAL CAPITAL			**71,000**	

ANNEXURE- 1.1					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATED COST OF LAND & SITE DEVELOPMENT					
S.No.	**Item**	**Unit**	**Q'ty**	**Amount**	**Remarks**
				(R.O)	
A	**LAND**				
1	Land for Plant	Sq. M	300		On lease
	TOTAL	**Sq. M**	**300**	**-**	

ANNEXURE- 1.2				
BARBED WIRE MANUFACTURING UNIT				
ESTIMATED COST OF BUILDING & CIVIL WORKS				
S.No.	**Item**	**Area**	**Amount**	**Remarks**
		(Sq. M)	**RO**	
A	**MAIN PLANT BUILDINGS**			**Will be leased as Industrial Shed at a rate of RO 2.500 per Sq. M. per Month**
1	Production Line	100	-	
	Sub Total	**100**	**-**	
B	**OTHER BUILDINGS**			
1	Stores	20	-	
2	Mechanical Repair Workshop	25	-	
3	Office Building	35	-	
5	Rest Rooms	20	-	
	Sub Total	**100**	**-**	
TOTAL		**200**	**-**	

ANNEXURE- 1.3					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATED COST OF PLANT & MACHINERY					
S.No.	**Item**	**Q'ty**	**Rate**	**Amount**	**Remarks**
		(Nos.)	**(RO)**	**(R.O)**	
A	**MAIN PLANT & MACHINERY**				
1	Automatic Barbed Wire Manufacturing Unit	2	6,000	12,000	
2	Bench Grinder				
3	Tensile Strength Testing Machine		7,000	7,000	
4	Other Required Testing Machines (Wrap Torsion Testing)				
5	Weighing Machines				
	Sub total			**19,000**	
B	**MECHANICAL WORKSHOP / SERVICES - Local**				
1	Mechanical Workshop			500	Estimates
2	Electrical & Instrumentation - workshop			500	Estimates
3	Workshop Consumables			500	Estimates
	Sub Total			**1,500**	Sum B1 to B3
C	**AT SITE COST**				
1	Total cost of Imported plant			19,000	A
2	Spares - Import			950	5% of C1
3	Packing, Insurance Forwarding & Freight - Import			798	At 4% of C1 & C2
4	Clearing & Transport to Site			200	At 1% of C1 & C2
5	**CIF cost of Imported Machinery**			**20,948**	**Sum of C1 to C4**
6	Total Cost of Local machinery			1,500	B
7	Spares - Local			500	Lumpsum
8	**Total Cost of Local machinery**			**2,000**	**Sum of D6 to D8**
9	**At Site Cost**			**22,948**	Sum of D5 & D9
D	**ERECTED COST**				
1	At Site Cost			22,948	D10
2	Cost of erection (Including Civil Works)			1,200	At 5% of E1
3	Technical Supervision			2,000	Lumpsum
4	**TOTAL COST**			**26,148**	
	GRAND TOTAL			**26,000**	

ANNEXURE- 1.4					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATED COST OF VEHICLES & INTERNAL TRANSPORT					
S.No.	**Item**	**Q'ty**	**Rate**	**Amount**	**Remarks**
		(Nos.)		**(R.O)**	
A	**VEHICLES**				
1	Pick up Truck	1	6,000	6,000	For Office Use
	Sub Total			**6,000**	
B	**TRANSP. EQUIPMENT/Vehicle**				
1	Fork lifts - 3 T	1	5,000	5,000	
	Sub Total			**5,000**	
	Registration & other Expenses			**1,100**	10% of Above
	TOTAL			**12,100**	

ANNEXURE- 1.5					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATED COST OF FURNITURE & OFFICE EQUIPMENT					
S.No.	**Item**	**Q'ty**	**Rate**	**Amount**	**Remarks**
				(R.O)	
A	**Furniture & Fixtures**				
1	Office Furniture			1,500	
	Sub total			**1,500**	
B	**Office Equipment**				
1	Computers & Printers	2	400	800	
2	Photocopier	1	1,000	1,000	
3	Fax, telephone etc			500	
4	Other Office equipment			500	
5	Air Conditioner	3	250	750	
6	Miscellaneous items			500	
	Sub total			**4,050**	
	TOTAL			5,550	
				6,000	

ANNEXURE- 1.6				
BARBED WIRE MANUFACTURING UNIT				
ESTIMATED COST OF PRE-OPERATIVE EXPENSES				
S.No	**Item**		**Amount**	**Remarks**
		(R.O)	**(R.O)**	
1	Preliminary Expenses		500	Up to formation of Co.
2	Feasibility Studies		1,000	
3	Project Management Expenses		-	
4	Company Employees			
a	Salary & benefits - Plant Manager	1,050		1 Month
b	Salary & benefits - Admin. Staff	1,498		1 Month
c	Visa, Passage etc.	600		For Expatriates at R.O 200/ person
	Sub Total		3,148	
5	Financing Cost			
a	Institutional Loan Interest	695		At 3% for Term Loan for 6 months
b	Mortgage Expenses	232		At 0.5% on Institu: Loan
c	Other Bank Charges	1,000		Lumpsum
	Sub Total		1,926	
6	Communication		600	R.O 100/M for 6 Months
7	Travel		500	Lumpsum
8	Recruitment Charges		300	RO 100 per expat employee
9	Audit Fees, Legal Fees		500	Lumpsum
10	Insurance		52	At 0.2 % of Plant & Bldg.
11	Start Up Expenses		500	Estimate
	Total		9,026	
	Say..		**9,000**	

ANNEXURE- 1.7					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATES OF CONTINGENCY AND ESCALATION					
S. No.	Item	Cost (R.O)	Rate (%)	Provision (R.O)	Remarks
A	**FIXED ASSETS**				
1	Land for Plant Site	0	5.0	-	
2	Building etc.	0	5.0	-	
3	Plant & Machinery	26,000	5.0	1,300	
4	Vehicles and Int. Transport	12,100	5.0	605	
5	Furniture & Office Equip.	6,000	5.0	300	
6	Pre- Operative Expenses	9,000	5.0	450	
	TOTAL			2,655	
				3,000	say

ANNEXURE- 1.8								
BARBED WIRE MANUFACTURING UNIT								
ESTIMATES OF WORKING CAPITAL REQUIREMENTS								
S.No.	**Item**	**Req.**		**1**	**2**	**3**	**4**	**Remarks**
				In RO '000				
1	Acct. Receivable	30	Days	9	9	9	9	Cost of sales - Non C Ex.
2	Raw Materials	30	Days	4	5	5	5	
3	Consumables &Packing	1	Month	0	0	0	0	
4	Utilities	1	Month	0	0	0	0	
5	Factory Wages	1	Month	1	1	1	1	
6	Admin Expenses	1	Month	2	2	2	2	
7	Sales Expenses	1	Month	0	0	0	0	
8	Work in Progress	2	Days	0	0	0	0	At Factory Cost
9	Finished Goods	10	Days	3	3	3	3	At total Cost-Non cash-Selling and Distribution
10	Finance Cost	1	Month	0	0	0	0	At Finance Cost
11	**Total**			**20**	**21**	**21**	**22**	
11	**Payables**		Months					
	Raw Materials	1	Month	4	5	5	5	
	Subtotal			4	5	5	5	
	Total Working capital			**15**	**16**	**16**	**17**	

ANNEXURE- 2

BARBED WIRE MANUFACTURING UNIT

COST OF SALE

												Amount In RO '000
	Year of Operation	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	
	Capacity Utilisation	80%	90%	90%	90%	90%	90%	90%	90%	90%	90%	
1	Raw Materials	53	59	59	59	59	59	59	59	59	59	Ref. Annexure 2.1
2	Utilities	1	1	1	1	1	1	1	1	1	1	Ref. Annexure 2.2
3	Factory Wages	16	16	16	17	17	18	19	19	20	20	Ref Annexure 2.3
4	**PRIME COST**	**70**	**76**	**77**	**77**	**78**	**78**	**79**	**79**	**80**	**81**	Sub total of 1 to 3
5	Rent for land	9	9	9	9	9	9	9	9	9	9	At RO 2.5 per Sq m per Month
6	Factory Overheads	1	2	2	2	2	2	2	2	2	2	Ref Annexure 2.4
7	Misc. Factory Exp.	1	1	1	1	1	1	1	1	1	1	At 1% of (4) & (6)
8	**FACTORY COST**	**81**	**88**	**88**	**89**	**89**	**90**	**90**	**91**	**91**	**92**	Sub total of 4 to 7
9	Admin. Salaries	18	19	19	20	20	21	21	22	23	23	Ref Annexure 2.3 & 2.5
10	Admin. Expenses	4	4	4	5	5	5	5	6	6	6	Ref Annexure 2.5
11	**TOTAL ADMIN EXPENSES**	**22**	**23**	**24**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**Sum (9) & (10)**
12	**OPERATING COST**	**103**	**110**	**112**	**113**	**114**	**116**	**117**	**119**	**120**	**122**	Sum 8 + 11
	Finance cost											
13	Int on Institutional finance	1	1	1	1	1	1	0	0	0	0	Ref Annexure 2.8
14	Int on working capital	1	1	1	1	1	1	1	1	1	1	Ref Annexure 2.8
15	Total finance cost	2	2	2	2	1	1	1	1	1	1	Sum 13 + 14
	Non cash expenses											
16	Depreciation	7	7	7	7	7	7	7	7	7	7	Ref Annexure 2.7
17	Prelim Expenses written off	9	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
18	**COST OF SALE**	**121**	**119**	**121**	**122**	**123**	**124**	**125**	**127**	**128**	**129**	Sum 12 + 15 + 16+ 17

ANNEXURE- 2.1						
BARBED WIRE MANUFACTURING UNIT						
ESTIMATED COST OF RAW MATERIAL						
S. No	**Particulars**	**Unit**	**Quantity**	**Rate**	**Amount**	**Remarks**
				RO	**RO**	
A	**RAW MATERIALS**					
1	Steel Wires	Ton	330	174	**57,336**	
3	Other consumables*				**8,600**	
	Sub Total				**65,936**	
	Total				**65,936**	

ANNEXURE- 2.2						
BARBED WIRE MANUFACTURING UNIT						
ESTIMATED COST OF UTILITIES						
S.No.	**Item**	**Unit**	**Qty**	**Rate**	**Amount**	**Remarks**
					(R.O)	
A	**Utilities**					
1	Electricity	KWH	57,600	0.016	922	
2	Water	Cu. M	150	0.66	99	
TOTAL					**1,021**	

ANNEXURE- 2.3

BARBED WIRE MANUFACTURING UNIT

ESTIMATES OF ANNUAL SALARIES AND WAGES

S. No.	Item	No of Personnel		Salary (R.O)		Amount (R.O)	Remarks
A	**PRODUCTION**	**Omanis**	**Expat**	**Omanis**	**Expat**		
1	Plant Manager including Sales and Production Capabilities	0	1	0	750	9,000	
2	Unskilled Labor	0	1	350	180	2,160	
	Sub Total	**0**	**2**			**11,160**	
	Other Benefits @40% over and above Basic Salary					4,464	
	Total Cost					**15,624**	
	Total Manpower Cost for Production					**16,000**	
B	**ADMINISTRATION & ACCOUNTS**						
1	P.R.O.	1	0	600	0	7,200	
2	Office Boy/ Messenger	0	1	0	120	1,440	
3	Drivers	1	0	350	0	4,200	
	Sub Total	**2**	**1**			**12,840**	
	Other Benefits @40% over and above Basic Salary					5,136	
	Total Manpower Cost for Admin & Accounts					**17,976**	
C	**GRAND TOTAL**	**2**	**3**			**33,976**	
	Omanisation Ratio	**40%**					

ANNEXURE- 2.4					
BARBED WIRE MANUFACTURING UNIT					
ESTIMATES OF ANNUAL FACTORY EXPENSES					
S.No.	**Item**	**Year**	**Year**	**Year**	**Remarks**
		1	**2**	**3**	
1	Repairs & Maintenance	130	195	260	At 0.5 , 1.5% & 2% of erected cost of P & M
2	Civil Repairs	-	-	-	At 0.25 % of cost of Building and Civil Works
3	Spare Parts	15	22	29	At 1%, 1.5% and 2% of 'at-site' cost of P & M
4	Insurance	130	130	130	At 0.5 % of cost Building, Plant and Machinery
5	Forklift	1,200	1,200	1,200	RO 100/month
	TOTAL	**1,475**	**1,547**	**1,619**	

ANNEXURE- 2.5				
BARBED WIRE MANUFACTURING UNIT				
ESTIMATES OF ANNUAL ADMINISTRATIVE EXPENSES				
S.No.	**Item**	**Amount**		**Remarks**
		(R.O)		
1	Salaries & Benefits		17,976	
2	Telephone, Fax, internet etc.		600	At RO 50 /Month
3	Electricity & Water		240	At RO 20 /Month
4	Vehicle Expenses & Petrol			
a	Pickup Truck	600		RO 50 per month
	Sub Total		600	
5	Stationery, Postage etc.		240	At R.O 20/Month
6	Trade license/government fee		500	Lumpsum
7	Travel & Recruitment		500	Lumpsum
8	Legal, Audit Fees		500	Lumpsum
9	Insurance on fixed assets and employee medical		500	
10	Miscellaneous		184	At 5 % of above
	Total		**22,000**	

ANNEXURE- 2.6						
BARBED WIRE MANUFACTURING UNIT						
DEPRECIATION CALCULATIONS						
S. No	**Item**	**Cost**	**Rate**	**S.V.**	**Amount**	**Renewals**
			(%)	**(R.O)**	**(R.O)**	
A	**FIXED ASSETS**					
1	Land for Plant Site	-	0	0	-	Nil
2	Building etc.	-	5	0	-	Nil
3	Plant & Machinery	26,000	10	0	2,600	Year 11
4	Vehicles and Int. Transp.	12,100	25	6050	3,025	Years 5, 9
5	Furniture & Office Equip.	6,000	20	0	1,200	Years 6, 11
6	Contingency & Escalation	3,000	10	0	300	Nil
7	Sub Total	47,100		6050	**7,125**	
B	**PRELIM &PRE OPE: EXP**	9000	100	0	**9,000**	Nil
C	**WORKING CAPITAL**					
1	Working Capital	16622	0	16622	-	
D	**TOTAL**			**22,672**	**16,125**	
	Less Balance Loan			**11,145**		
E	**SALVAGE VALUE**			**11,528**		
	Note: S.V. = Salvage Value at the end of 10th year.					

ANNEXURE- 2.7									
BARBED WIRE MANUFACTURING UNIT									
LOAN & INTEREST CALCULATIONS									
	Term Loan				WC Loan		Interest		
No	Year	Prn	Int	Rep	Prn	Int	TL	WC	Rep
	7		3%			6%			
1		46	0.7		11	0.3			
2	1	46	0.7		11	0.3	**1.4**	**0.6**	**0**
3		46	0.7	3	11	0.3			
4	2	43	0.6	3	11	0.3	**1.3**	**0.6**	**7**
5		40	0.6	3	11	0.3			
6	3	36	0.5	3	11	0.3	**1.1**	**0.7**	**7**
7		33	0.5	3	11	0.3			
8	4	30	0.4	3	11	0.3	**0.9**	**0.7**	**7**
9		26	0.4	3	11	0.3			
10	5	23	0.3	3	11	0.3	**0.7**	**0.7**	**7**
11		20	0.3	3	11	0.3			
12	6	17	0.2	3	11	0.3	**0.5**	**0.7**	**7**
13		13	0.2	3	11	0.3			
14	7	10	0.1	3	11	0.3	**0.3**	**0.7**	**7**
15		7	0.1	3	11	0.3			
16	8	3	0.0	3	11	0.3	**0.1**	**0.7**	**7**
17		0	0.0		11	0.3			
18	9	0	0.0		11	0.3	**0.0**	**0.7**	**0**
19		0	0.0		11	0.3			
20	10	0	0.0		11	0.3	**0.0**	**0.7**	**0**

ANNEXURE- 3												
BARBED WIRE MANUFACTURING UNIT												
ESTIMATED WORKING RESULTS												
	Year of Operation >>>		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	
	Installed Capacity (MT)												
	Capacity Utilisation		80%	90%	90%	90%	90%	90%	90%	90%	90%	90%	
	Production (MT)		-	-	-	-	-	-	-	-	-	-	
No	**Item**	**In R.O'000**											**Remarks**
1	**Operating Cost**		103	110	112	113	114	116	117	119	120	122	Ref Annexure 2
2	**Expected Sales**												
a	Domestic sale		115	130	130	130	130	130	130	130	130	130	Refer 3.1
b	Export sale		-	-	-	-	-	-	-	-	-	-	Refer 3.1
	Total Sales		**115**	**130**	**130**	**130**	**130**	**130**	**130**	**130**	**130**	**130**	(2a+2b)
3	**Profit before Int & dep**		**12**	**19**	**18**	**17**	**15**	**14**	**13**	**11**	**10**	**8**	Item (2-1)
4	Depreciation		7	7	7	7	7	7	7	7	7	7	Ref Annexure 2.7
5	Finance Cost		2	2	2	2	1	1	1	1	1	1	Ref Annexure 2.8
6	**Operating profit**		**3**	**10**	**9**	**8**	**7**	**6**	**4**	**3**	**2**	**0.14**	Sum of (3 - 4 - 5)
7	Other income if any								0				
8	Prelim Expenses written off		9	-	-	-	-	-	-	-	-	-	Ref Annexure 2.7
9	Profit/Loss before tax		-6	10	9	8	7	6	4	3	2	0	Sum of (6 - 7 - 8)
10	Income Tax												NA
11	**Profit after tax**		**-6**	**10**	**9**	**8**	**7**	**6**	**4**	**3**	**2**	**0**	
12	Statutory reserve		0	1	1	1	1	1	0	0	0	0	
13	Profit for appropriation		-6	9	8	7	6	5	4	3	2	0	
14	Dividend		0	0	0	0	0	0	0	0	0	0	
15	General reserve		-6	9	8	7	6	5	4	3	2	0	Difference (13) - (14)
16	**Net cash accruals**		**10**	**17**	**16**	**15**	**14**	**13**	**11**	**10**	**9**	**7**	

ANNEXURE- 3.1											
BARBED WIRE MANUFACTURING UNIT											
ESTIMATES OF SALES REALIZATION											
	Details	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
	Installed capacity	300	**tons per annum**								
	Capacity Utilisation (%)	80%	90%	90%	90%	90%	90%	90%	90%	90%	90%
	Production (Tons)	**240**	**270**	**270**	**270**	**270**	**270**	**270**	**270**	**270**	**270**
		RO/Ton									
	Sales Realization / ton	480	480	480	480	480	480	480	480	480	480
		RO' 000									
	Total Sales Revenue	**115**	**130**	**130**	**130**	**130**	**130**	**130**	**130**	**130**	**130**

ANNEXURE- 4													
BARBED WIRE MANUFACTURING UNIT													
PROJECTED CASH FLOW STATEMENT													
	Year of Operation	**0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	
No	**Item**	**In R.O'000**											**Remarks**
A	**CASH INFLOW**												
1	Equity	14	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
2	Profit before Tax & Interest		-4	12	11	10	8	7	5	4	2	1	Ref Annexure 3
3	Depreciation	0	7	7	7	7	7	7	7	7	7	7	Ref Annexure 2.7
4	Preliminary expenses written off		9	-	-	-	-	-	-	-	-	-	Ref Annexure 2.7
5	Increase in Other term loan	0	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
6	Increase in Institutional Loan	46	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
7	Increase in W C loan	11	0	1	0	0	0	0	0	0	0	0	Ref Annexure 1
8	Other income	0											Ref Annexure 3
9	Sub Total	71	12	20	18	17	15	14	13	11	10	8	Sum of A1 to A8
B	**CASH OUTFLOW**												
1	Capital Project expenditure	47	0	0	0	0	12	6	0	0	12	0	Ref Annexure 1& 2.7
2	Other normal cap exp	9	0	0	0	0	0						Ref Annexure 1& 2.7
3	Increase in Working Cap:	15		1	0	0	0	0	0	0	0	0	Ref Annexure 1.7
4	Decrease in Institutional Loan	0	0	7	7	7	7	7	7	7	0	0	Ref Annexure 2.8
5	Decrease in Other term loan		0	0	0	0	0	0	0	0	0	0	
6	Interest on term loans		1	1	1	1	1	1	0	0	0	0	Ref Annexure 2.8
7	Interest on work cap loan		1	1	1	1	1	1	1	1	1	1	Ref Annexure 2.8
8	Income Tax	0	0	0	0	0	0	0	0	0	0	0	Ref Annexure 3.2
9	Dividend	0	0	0	0	0	0	0	0	0	0	0	Provision
10	Sub Total	71	2	10	9	8	20	14	8	7	13	1	Sum of B1 to B9
	OPENING BALANCE	**-**	**(0)**	**10**	**21**	**30**	**38**	**33**	**34**	**38**	**42**	**39**	
C	**SURPLUS**	**(0)**	**10**	**10**	**9**	**8**	**(5)**	**0**	**5**	**4**	**(3)**	**7**	Difference(A9)-(B10)
D	**CLOSING BALANCE**	**(0)**	**10**	**21**	**30**	**38**	**33**	**34**	**38**	**42**	**39**	**46**	

ANNEXURE- 5													
BARBED WIRE MANUFACTURING UNIT													
INTERNAL RATE OF RETURN ON TOTAL CAPITAL													
No	**Year of Operation**	**0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	
	Item	**In R.O'000**											**Remarks**
A	**CASH INFLOW**												
1	Net Profit bef. Tax		-6	10	9	8	7	6	4	3	2	0	Refer Annexure - 3
2	Depreciation	0	7	7	7	7	7	7	7	7	7	7	Ref Annexure 2.7
3	Prelim Exp written off		9	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
4	Finance Cost	0	2	2	2	2	1	1	1	1	1	1	Ref Annexure 2.8
5	Salvage Value	0	0	0	0	0	0	0	0	0	0	12	Ref Annexure 2.7
6	Sub Total	0	12	19	18	17	15	14	13	11	10	19	Sum of A1 to A5
B	**CASH OUTFLOW**												
1	Capital Project expenditure	47	0	0	0	0	12	6	0	0	12	0	Refer Annexure - 1
2	Other normal cap exp	9	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 1
3	Working Capital	15	0	1	0	0	0	0	0	0	0	0	Refer Annexure - 1
4	Income Tax		0	0	0	0	0	0	0	0	0	0	Refer Annexure - 3.2
5	Sub Total	71	0	1	0	0	12	6	0	0	12	0	Sum of B1 to B4
C	**NET CASHFLOW (AT)**	**(71)**	**12**	**18**	**18**	**16**	**3**	**8**	**13**	**11**	**(3)**	**19**	
D	**NET CASH FLOW(PT)**	**(71)**	**12**	**18**	**18**	**16**	**3**	**8**	**13**	**11**	**(3)**	**19**	
E	**INTERNAL RATE OF RETURN ON TOTAL INVESTMENT**							**11.6%**					

ANNEXURE- 6

BARBED WIRE MANUFACTURING UNIT

PROJECTED BALANCE SHEET

No	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	
	Item	**In R.O'000**											**Remarks**
A	**ASSETS EMPLOYED**												
1	**Fixed Assets**												
a	Gross Fixed Assets	47	47	47	47	47	59	65	65	65	77	77	Refer Annexure - 2.7
b	Preliminary expenses	9	0	0	0	0	0	0	0	0	0	0	Refer Annexure- 2.7
c	Acc. Depreciation	0	7	14	21	29	36	43	50	57	64	71	Refer Annexure - 2.7
d	Net Fixed Assets	56	40	33	26	19	24	22	15	8	13	6	
2	**Current Assets**												
a	Cash	0	10	21	30	38	33	34	38	42	39	46	Refer Annexure - 4
b	Other Cur. Assets	15	15	16	16	16	16	16	16	16	16	16	Refer Annexure - 1.7
c	Total Cur. Assets	15	25	37	46	55	50	50	55	58	55	62	
3	**Less: Cur. Liabilities**	0	0	0	0	0	0	0	0	0	0	0	
Total		**71**	**65**	**70**	**72**	**73**	**73**	**72**	**70**	**67**	**68**	**68**	
B	**FINANCED BY**												
1	Equity	14	14	14	14	14	14	14	14	14	14	14	Refer Annexure - 1
2	Statutory reserve		0	1	2	3	3	4	4	5	5	5	
3	General reserves	0	-6	3	12	19	25	30	34	37	38	38	Cu.NP-Cu.Divident
4	Institutional Finance	46	46	40	33	26	20	13	7	0	0	0	Refer Annexure - 2.8
5	Bank Borrowings	11	11	11	11	11	11	11	11	11	11	11	Refer Annexure - 2.8
Total		**71**	**65**	**70**	**72**	**73**	**73**	**72**	**70**	**67**	**68**	**68**	

ANNEXURE - 7											
BARBED WIRE MANUFACTURING UNIT											
RATIO ANALYSIS											
S. No	**Years of Operation**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A	**COST RATIOS**										
1	Raw Material / Total Sales	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%
2	Utilities / Total Sales	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
3	Factory wages / Total Sales	13.9%	12.3%	12.7%	13.1%	13.5%	13.9%	14.3%	14.7%	15.2%	15.6%
4	Prime Cost / Total Sales	60.4%	58.8%	59.2%	59.6%	60.0%	60.4%	60.8%	61.2%	61.7%	62.1%
5	Factory exp. / Total Sales	9.7%	8.7%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%
6	Factory Cost / Total Sales	70.1%	67.6%	68.0%	68.4%	68.8%	69.2%	69.6%	70.1%	70.5%	71.0%
7	Administrative exp. / Total Sales	19.1%	17.5%	18.1%	18.8%	19.4%	20.0%	20.7%	21.4%	22.2%	22.9%
8	Selling exp. / Total Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	Finance Cost / Total Sales	1.8%	1.5%	1.4%	1.2%	1.1%	0.9%	0.8%	0.6%	0.5%	0.5%
10	Non-Cash exp. /Total Sales	14.0%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
11	**Total Cost / Sales**	**104.9%**	**92.1%**	**93.0%**	**93.9%**	**94.8%**	**95.7%**	**96.6%**	**97.6%**	**98.7%**	**99.9%**
B	**PROFITABILITY RATIOS**										
1	PBDIT / Sales	10.8%	14.9%	13.8%	12.9%	11.8%	10.8%	9.7%	8.5%	7.3%	6.1%
2	Operating profit / Sales	2.9%	7.9%	7.0%	6.1%	5.2%	4.3%	3.4%	2.4%	1.3%	0.1%
3	PAT / Sales	-4.9%	7.9%	7.0%	6.1%	5.2%	4.3%	3.4%	2.4%	1.3%	0.1%

ANNEXURE- 8				
BARBED WIRE MANUFACTURING UNIT				
BREAK EVEN ANALYSIS				
S. No	**Item**	**Year 1**	**Year 6**	**Remarks**
		In R.O '000		
A	**FIXED COST**			
1	Production Wages	16	18	Refer Annexure - 2
2	Factory Overheads	1	2	Refer Annexure - 2
3	Misc. Factory Exp.	1	1	Refer Annexure - 2
4	Admin. Expenses	22	26	Refer Annexure - 2
5	Sales Expenses	0	0	Refer Annexure - 2
6	Depreciation	9	7	Refer Annexure - 2
7	Prelim. Expenses written off	9	0	Refer Annexure - 2
8	Financing Cost	2	1	Refer Annexure - 2
9	Income Tax	0	0	Refer Annexure - 2
	Sub Total	**60**	**55**	
B	**VARIABLE COST**			
1	Raw materials	53	59	Refer Annexure - 2
2	Utilities	1	1	Refer Annexure - 2
3	Misc. Expenses	0	0	
	Sub Total	**54**	**60**	
C	**SALES**	115	130	Refer Annexure - 3
D	**CONTRIBUTION**	62	69	Difference C - B
E	**BREAK EVEN POINT**	98%	78.9	As % of Production
			71.1%	As % of Capacity
F	**CASH BEP**	68.5	68.7	As % of Production
			61.8%	As % of Capacity

ANNEXURE- 9						
BARBED WIRE MANUFACTURING UNIT						
SENSITIVITY ANALYSIS (IRR FOR 10 YEARS)						
S. No.	Item	Projection	Change in One			All Three
		No Change	Variable at a Time			Combined
A	VARIABLE	Original	Reduction in Volume	Increase in RM Cost	Reduction in Sales Realization	Combined
			In Tons	Cost	Value	All three
B	PESSIMISTIC					
	Change		5%	5%	5%	All three
C	OPTIMISTIC					
	Change		5%	5%	5%	All three
D	IRR - PESSIMISTIC PROJECTION					
1	IRR on Investment	11.6	3.2	4.6	-6.4	3.2
E	IRR - OPTIMISTIC PROJECTION					
1	IRR on Investment	11.6	18.7	17.7	24.2	29.1

ANNEXURE- 10												
BARBED WIRE MANUFACTURING UNIT												
DEBT SERVICE COVERAGE RATIO												
No	**Years of Operation**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	Item	**In R.O'000**										
1	Profit after tax		-6	10	9	8	7	6	4	3	2	0
2	Depreciation		7	7	7	7	7	7	7	7	7	7
3	Preliminary exp. Written off		9	0	0	0	0	0	0	0	0	0
4	Interest		2	2	2	2	1	1	1	1	1	1
5	Total		12	19	18	17	15	14	13	11	10	8
1	Annual repayment		0	7	7	7	7	7	7	7	0	0
2	Interest		2	2	2	2	1	1	1	1	1	1
3	Total		2	9	8	8	8	8	8	7	1	1
	D.S.C.R		6.17	2.25	2.13	2.02	1.91	1.78	1.64	1.48	14.22	11.86
	WT. AVERAGE D.S.C.R	**2.22**										