

University of Khartoum
Investment Administration

Pre-Feasibility Study
For

Baghdadi Trust,

Khartoum Central Business District

May 2010

1. Project Description

In 1917, the University of Khartoum received a generous endowment from Ahmad Hashim Al-Baghdadi, a wealthy merchant, in the form of seven shops and commercial establishment in Khartoum that have a combined area of 4,280 square meters, and ten shops in Omdurman market that have a combined area of about 1,000 square meters. The beneficiary of this trust is the Faculty of Medicine and its students. Since then, the University has not been able to develop the trust to maximize its revenues. The present document presents a pre-feasibility study for a proposed development of three prime sites of Al-Baghdadi trust located in Khartoum's central business district (CBD) into mixed-use developments.

As shown in Figure 1, the project comprises three sites as follows:

1. The first site, commonly known as Al-Fawwal, is located at the intersection of Abdel-Moneim Mohammad and Sinkat streets west of the United Nations Square. It has an area of 881 sq.m.
2. The second site, commonly known as Al-Halawani, is located between Al-Gamhorria and Al-Barlaman Streets west of Abdel-Moneim Mohammad Street. It has an area of 1,494 sq.m.
3. The third site has no particular name and is located east of the Industrial Bank and south of the United Nations Square. It has an area of 1,378 sq.m.



Figure 1: Project Locations

1. Al-Halawani

2. Al-Fawwal

3. Al-Baghdadi South U.N. Square

2. Functions and Spaces

Located in the business and commercial hub of Khartoum, the proposed project is intended to serve as a mixed-use development in each of the three sites. Each of them will be composed of a basement floor that will accommodate car parking, plant and building services; a ground and first floors that will accommodate show rooms and shops; rentable office space on the second, third and fourth floors; and five typical floors that could accommodate rentable flats (Figure 2). The following table presents the proposed land uses in each floor in each building and the rentable space thereof.

In the following sections we will deal with each of the three sub-projects separately analyzing for each one the assumptions considered, the expected revenue and the economical indicators.

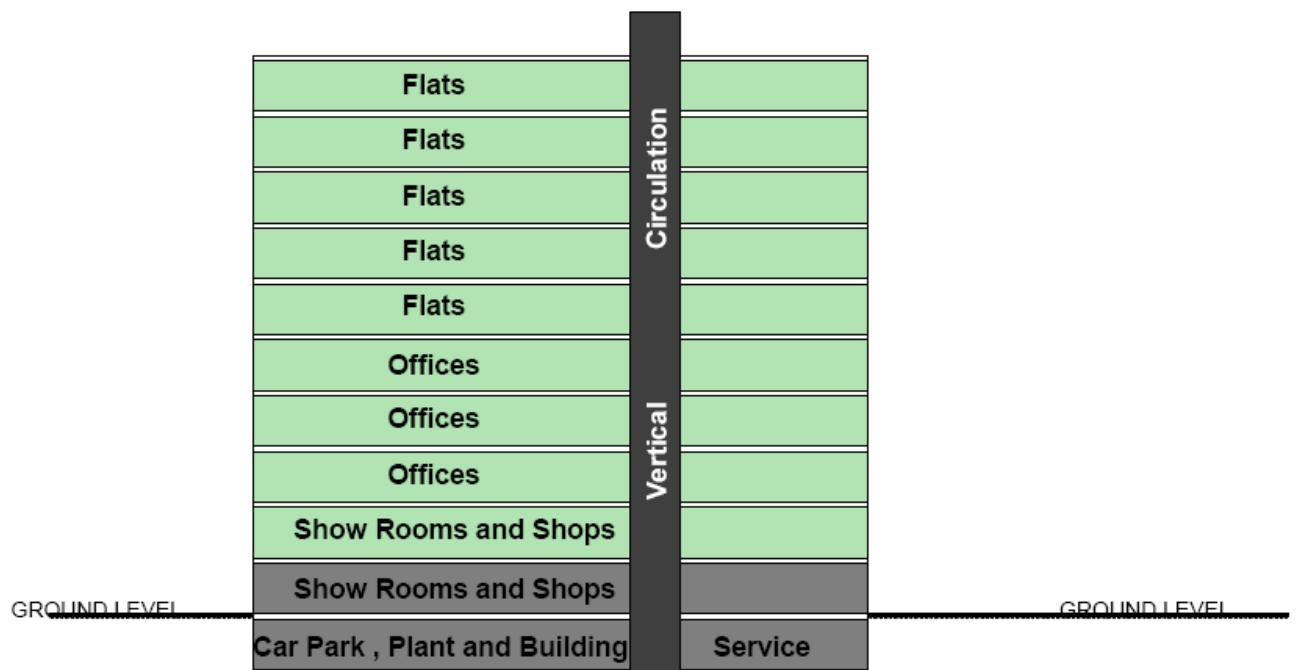


Figure 2: Typical Cross Section of Al-Baghdadi Buildings

Table (1): Project Components and Areas

Level	Baghdadi Trusts					
	Al-Fawwal		Al-Halawani		South U.N. Square	
	Gross Area (m2)	Rentable Area (m2)	Gross Area (m2)	Rentable Area (m2)	Gross Area (m2)	Rentable Area (m2)
Basement	881	700	1,494	1,195	1,378	1,105
Ground Fl.	881	615	1,494	1,045	1,378	965
First Fl.	881	615	1,494	1,045	1,378	965
2 nd – 4 th Fl.	2,643	1,850	4,482	3,135	4,134	2,895
5 th – 9 th Fl.	4,405	3,084	7,470	5,225	6,890	4,825
Total Areas	9,691	6,864	16,434	11,645	15,158	10,752

A. Feasibility Analysis for Al-Fawwal Project

A.1. Assumptions

The following tables show the assumptions on which the analysis for Al-Fawwal project is based;

Table (2): Cost Estimate for Al-Fawwal Project

Item	Description	Area m2	Rate (\$)	Total
1	Land	881	1,500	1,321,500
2	Basement	881	500	440,500
3	Ground+1st Floors	1,762	700	1,233,400
4	2 nd – 4 th Fl.	2,643	750	1,982,250
5	5 th – 9 th Fl.	4,405	750	3,303,750
7	Main Services Supply			100,000
8	Total Construction Cost Including Land	8,381,400	USD\$	
9	Total Construction Cost Excluding Land	7,059,900	USD\$	

Table (3): Finance Components

Construction Cost Estimate	8,381,400
Cost of Land	1,321,500
Land Cost To Construction Cost Ratio	0.16
Equity to Loan Ratio	0.16
Required Finance	7,059,900

Table (4): Expected Net Income and Annual Growth

Item	Retail Space	Offices	Residential Apartments	Total
Area	1230	1850	3084	6164
Monthly Rent US\$/m2	15	12	10	
Annual Rent US\$/m2	180	144	120	
Income	221,400	266,400	370,080	857,880
Vacancy	20%	15.0%	0%	
Net Income	177,120	226,440	370,080	773,640
Rent Growth	8.0%	8.0%	10.0%	

Table (5): Operating, Maintenance, and Management Cost Estimates

Variable	Retail	Hotel Apt.	Residential Apt.	Total
Services	6%	8%	8%	
Management	2%	2%	2%	
% of Operating & Maintenance Cost	8%	10%	10%	
Maintenance & Operating Cost	29,606	17,712	22,644	69,962

Table (6): Net Operating Income NOI in year1 before and after Taxes

Item	Retail	Hotel Apt.	Residential Apt.	Total
NOI year 1	340,474	159,408	203,796	703,678
Tax Rate	10%	10%	10%	
Taxes	15,941	20,380	34,047	70,368
CFAT	143,467	183,416	306,426	633,310

A.2. Extraction and Analysis of Economic Indicators for Al-Fawwal Project

Based on all the pre-mentioned assumptions, the next part of the study shows the general calculations of the investment analysis. It gives the details of expected income, costs, and loan repayment (Tables 2 - 6). The analysis assumptions form a basis for the extraction of the economic indicators of the investment as a criterion for decision making. Table (7) shows details of these indicators, which are shown for both the total capital and equity. Taxes are also considered in the economical indicators.

Table (7): Return Calculations and Economic Indicators for the Project (5.5% cost of finance)

Item	Total Capital Calculations	Equity Calculations	Total Capital After Tax
ΣCF	27,230,097	17,840,430	24,919,062
P.V. Of Total Capital (Initial Investment)	-8,381,400	-1,321,500	-8,381,400
ΣDCF	10,610,347	4,433,999	8,581,498
NPV of Total Capital	2,228,947	3,112,499	200,098
IRR of Total Capital	15.5%	26.87%	14.36%
Profitability (With Discounting)	126.6%	335.5%	102.4%
Profitability (Without Discounting)	324.9%	1350.0%	297.3%
Pay Back Period (Without Discounting)	9 Yrs	-	9.5 Yrs
Pay Back Period (With Discounting)	10 Yrs	-	10 Yrs

Based on the economic indicators shown in Table (7) the project is considered feasible given all the project assumptions. The profitability of the proposed project is expected to be 127% and 336% for total capital and equity respectively. The rate of return, for total capital and equity (15.5% and 26.9% respectively), falls within the acceptable range.

B. Feasibility Analysis for AI-Halawani Project

B.1. Assumptions

The following tables show the assumptions on which the analysis for AI-Halawani project is based;

Table (8): Cost Estimate for AI-Halawani Project

Item	Description	Area m2	Rate (\$)	Total (\$)
1	Land	1,494	1,500	2,241,000
2	Basement	1,494	500	747,000
3	Ground + 1st Floors	2,988	700	2,091,600
4	2nd – 4th Fl.	4,482	750	3,361,500
5	5th – 9th Fl.	7,470	750	5,602,500
6	Main Services Supply			100,000
7	Total Construction Cost Including Land			14,143,600
8	Total Construction Cost Excluding Land			11,902,600

Table (9): Finance Components

Construction Cost Estimate	14,143,600
Cost of Land	2,241,000
Land Cost To Construction Cost Ratio	0.16
Equity to Loan Ratio	0.16
Required Finance	11,902,600

Table (10): Expected Net Income and Annual Growth

Item	Retail Space	Offices	Residential Apartments	Total
Area (m2)	2090	3135	5225	10,450
Monthly Rent US\$/m2	15	12	10	
Annual Rent US\$/m2	180	144	120	
Income	376,200	451,440	627,000	1,454,640
Vacancy	20%	15%	0%	
Net Income	300,960	383,724	627,000	1,311,684

Rent Growth	8.0%	8.0%	10.0%	
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Table (11): Operating, Maintenance, and Management Cost Estimates

Variable	Retail	Offices	Residential Apt.	Total
Services	6%	8%	8%	
Management	2%	2%	2%	
% of Operating & Maintenance Cost	8%	10%	10%	
Maintenance & Operating Cost	50,160	30,096	38,372	118,628

Table (12): Net Operating Income NOI in year 1 before and after Taxes

Item	Retail	Offices	Residential Apt.	Total
NOI year 1	576,840	270,864	345,352	1,193,056
Tax Rate	10%	10%	10%	
Taxes	27,086	34,535	57,684	119,306
CFAT	243,778	310,816	519,156	1,073,750

B.2. Extraction and Analysis of Economic Indicators for Al-Halawani Project

Based on all the above-mentioned assumptions, the following part of the study shows the general calculations of the investment analysis. It gives the details of expected income, costs, and loan repayment (Tables 8 - 12). The analysis assumptions form a basis for the extraction of the economic indicators of the investment as a criterion for decision-making. Table (13) shows details of these indicators. The indicators are shown for both the total capital and equity. Taxes are also considered in the economical indicators.

Based on the economic indicators shown in Table (13), the project is considered feasible given all the project assumptions. The profitability of the proposed project is expected to be 129% and 336% for total capital and equity respectively. The rate of return, for total capital and equity (15.8% and 26.95 respectively), falls within the acceptable range.

Table (13-2): Return Calculations and Economic Indicators for the Project (5.5% cost of finance)

Item	Total Capital Calculations	Equity Calculations	Total Capital After Tax
ΣCF	26,087,554	30,202,428	42,127,555
P.V. Of Total Capital (Initial Investment)	-7,940,900	-2,241,000	-
ΣDCF	10,242,479	7,527,198	14,516,763
NPV of Total Capital	2,301,579	5,286,198	373,163
IRR of Total Capital	15.8%	26.95%	14.39%
Profitability (With Discounting)	129.0%	335.9%	102.6%
Profitability (Without Discounting)	328.5%	1347.7%	297.9%
Pay Back Period (Without Discounting)	9 Yrs	-	9.5 Yrs
Pay Back Period (With Discounting)	10 Yrs	-	10 Yrs

C. Feasibility Analysis for South U.N. Square Project

C.1. Assumptions

The following tables show the assumptions on which the analysis for South U.N. Square project is based;

Table (14): Cost Estimate for South U.N. Square Project

Item	Description	Area m2	Rate (\$)	Total (\$)
1	Land	1,378	1,500	2,067,000
2	Basement	1,378	500	689,000
3	Ground+1st Floors	2,756	700	1,929,200
4	2nd – 4th Fl.	4,134	750	3,100,500
5	5th – 9th Fl.	6,890	750	5,167,500
7	Main Services Supply			100,000
8	Total Construction Cost Including Land			13,053,200
9	Total Construction Cost Excluding Land			10,986,200

Table (15): Finance Components

Construction Cost Estimate	13,053,200
Cost of Land	2,067,000
Land Cost To Construction Cost Ratio	0.16
Equity to Loan Ratio	0.16
Required Finance	10,986,200

Table (16): Expected Net Income and Annual Growth

Item	Retail Space	Offices	Residential Apartments	Total
Area	1930	2895	4825	9650
Monthly Rent US\$/m2	15	12	10	
Annual Rent US\$/m2	180	144	120	
Income	347,400	416,880	579,000	1,343,280
Vacancy	20%	15.0%	0%	
Net Income	277,920	354,348	579,000	1,211,268
Rent Growth	8.0%	8.0%	10.0%	

Table (17): Operating, Maintenance, and Management Cost Estimates

Variable	Retail	Offices	Residential Apt.	Total
Services	6%	8%	8%	
Management	2%	2%	2%	
% of Operating & Maintenance Cost	8%	10%	10%	
Maintenance & Operating Cost	46,320	27,792	35,435	109,547

Table (18): Net Operating Income NOI in year 1 before and after Taxes

Item	Retail	Offices	Residential Apt.	Total
NOI year 1	532,680	250,128	318,913	1,101,721
Tax Rate	10%	10%	10%	
Taxes	25,013	31,891	53,268	110,172
CFAT	225,115	287,022	479,412	991,549

C.2. Extraction and Analysis of Economic Indicators for South U.N. Square Project

Based on all the above-mentioned assumptions, the following part of the study shows the general calculations of the investment analysis. It gives the details of expected income, costs, and loan repayment (Tables 14 - 18). The analysis assumptions form a basis for the extraction of the economic indicators of the investment as a criterion for decision-making. Table (19) shows details of these indicators that are shown for both the total capital and equity. Taxes are also considered in the economical indicators.

Based on the economical indicators shown in Table (19) the project is considered feasible given all the project assumptions. The profitability of the proposed project is expected to be 129.3% and 336.2% for total capital and equity respectively. The rate of return, for total capital and equity (15.8% and 26.96 respectively), falls within the acceptable range

Table (19-2): Return Calculations and Economic Indicators for the Project (5.5% cost of finance)

Item	Total Capital Calculations	Equity Calculations	Total Capital After Tax
ΣCF	40,704,956	27,880,399	38,887,323
P.V. Of Total Capital (Initial Investment)	-	-	-
	12,364,200	-2,067,000	13,053,200
ΣDCF	15,991,462	6,949,965	13,401,338
NPVofTotalCapital	3,627,262	4,882,965	348,138
IRR of Total Capital	15.8%	26.96%	14.4%
Profitability(WithDiscounting)	129.3%	336.2%	102.7%
Profitability (Without Discounting)	329.2%	1348.8%	297.9%
PayBackPeriod(WithoutDiscounting)	8.5 Yrs	-	9 Yrs
Pay Back Period (With Discounting)	10 Yrs	-	10 Yrs

Summary

According to all the information, assumptions, calculations, and project alternatives, on which the analysis is based, the three projects are considered feasible with reasonable rates of return. All the assumptions are based on the economic performance and trends in the real estate market in Khartoum State. Decision-makers are supposed to consider these assumptions when they plan for the investment.

The study is summarized as follow:

The three projects are located in the hub of Khartoum in highly accessible locations with areas ranging between 881 to 1,494 m². The average price of land in the area of the projects is about 1500\$ per square meter.

The study assumed that the project is equity-loan financed. The land value represents the equity meanwhile the construction cost represent the required loan.

The cost of finance required for construction is assumed to be at an annual rate of 5.5%.

The loan is assumed be re-paid after the construction and two years of operation at 2 years intervals.

The construction is expected to have a duration of 24 months.

The equity share is represented in the value of land.

The study considered the feasibility of the investment with regard to Governmental taxes.

The project is considered feasible given all the assumptions and functional components for both the total capital and equity.