PRIME MINISTER'S OFFICE
TANZANIA INVESTMENT CENTRE

FILE BEGINS | ENDS | PART

FILE TITLE

CONFIDENTIAL

FILE NUMBER
TIC/ PP. 10 04/672

INDEX HEADINGS

PART

FILE NUMBER
TIC/ PP. 10 04/672

Officer or Section	For Action F/M	Initials	Date	Action taken Vide F/M	Officer or Section	For Action F/M	Initials	Date	Action taken Vide F/M	Officer or Section	For Action F/M	Initials	Date	Action taken Vide F/M
DIF	f1	SW	23/3/09	[illegible]										
ZMC ARIN	f1	G	23/3/09	[illegible]										
DAF	f1	G	6/4/09											
EXD	f2	G	13/8/09	[illegible]										
DIF	f5	SW	17/6/09	G										
ADRM	f5	G	17/6/09	[illegible]										
DIF	f7	DR	26/10/10	[illegible]										
DIF	f7	G	26/10/10	[illegible]										
A/DIF	f7	[illegible]	26/11/2010	[illegible]										

FORTUNE QUARRY (T) COMP
LTD

EXD

The approved project has fulfilled the investment requirements, which are: -

(a) Minimum finance investment threshold has been exceeded, the project expects to invest .....b-267.....

(b) Legal entity has been incorporated under certificate No. .....70200..... of .....18/05/2007.....

Based on the above, the letter of approval is hereby submitted for signature in order for the project to comply with the requirements of Section 17 of Tanzania Investment Act, 1997.

Submitted for signature.

N. A. Senzia
DIF

6th April 2009

EXD

In response to the TIC letter of registration dated.....6th April 2009.....

the project has submitted the required documents namely: -

(a) Company Board Resolution.

(b) Reference letter/Financing from.....ITHBIBA Africen Bank.....

(c) .....Lease Agreement.....

With the above submission EXD is requested to sign Certificate of Incentives No. .....041672..... herein attached.

15/04/09

DIF

FORTUNE QUARRY (T) COMPANY LIMITED

(1)

Box 1038 Dodoma

Date: 20th March 2009

The Executive Director
Tanzania Investment Centre
P.O. Box 938
Dar es Salaam
TANZANIA

TANZANIA INVESTMENT CENTRE
23 MAR 2009
TANZANIA

Dear Sir,

RE: APPLICATION FOR TIC CERTIFICATE OF INCENTIVES

We submit our application for TIC Certificate of Incentives to facilitate establishment of a project for manufacturing of building materials in Dodoma.

Attached herewith please find the following basic documents for your kind approval:

1. Duly completed and signed Application Form
2. A copy of our Certificate of Incorporation
3. A copy of the company's Memorandum and Articles of Association
4. Company Board Resolution to register with TIC
5. Copies of our Business Plan
6. Reference letter from our bankers
7. Evidence of land ownership for project location

Thanking you for your kind cooperation.

Yours' sincerely
FORTUNE QUARRY (T) COMPANY LIMITED

Eng. Hassan Saad
DIRECTOR

LEASE AGREEMENT

This lease agreement has been entered, signed and delivered this 20th day of March 2009

BETWEEN

FORTUNE QUARRY (T) COMPANY LIMITED, a limited company incorporated in Tanzania under the Companies Act Cap 12 R.E 2002, with its seats situated in Dodoma P.O.Box 1038, DODOMA, Tanzania (hereinafter to be referred to as the LESSEE, an expression unless otherwise constructed shall include its directors, employees, agents and executors) on one party.

AND

Eng. RICHARD PETER MUSHI. Of P.O.Box 4111 Dar es Salaam (hereinafter to be referred to as the LESSOR. an expression which shall exclude any third parties thereto) on the other party.

WHEREAS the **LESSEE** is in requirement of a Land at Chigongwe Village, Dodoma to install his stone crusher and plants, for the use of aggregate and sub-bases for Dodoma University, civil works and building and

WHEREAS the **LESSOR** is the lawful owner of such LAND at Chigongue Village (hereinafter referred to as the Land) and he is voluntarily willing to lease the same to the **LESSEE.**

They have agreed on the following terms and conditions:

1. That the LESSOR shall lease the Land to the LESSE for a term of fifteen (15) years at a harvest of Tshs one million (1,000,000) per annum which shall be paid at the beginning of the execution of this agreement, which is expected to be on the 20th day of March 2009.

2. That the said Land shall be solely used for installation of Stone Crusher, blocks factory, Asphalt and ready mix concrete plants.
3. In case the said Land to be used for other purpose other than what is contained in articles (2) above permission shall be sought from the **LESSOR.**

4. All installation and operating costs shall be born by the LESSEE, and the LESSOR shall not be liable for any miscarriage of the project, neither shall his rent payment be affected in any way whatsoever.

5. Both parties to the contract covenant to observe whatever has been agreed upon so as to lead to harmonious and peaceful enjoyment of the Land .

6. TERMINATION

This agreement shall terminate in either of the following circumstances:

i. In the event that the LESSEE feels that he is operating at loss to the extend that such loss to the extend that such loss may lead to bankruptcy, or irreparable loss
ii. On the expiry of three months notice of the intention to terminate the contract.

7. **SETTLEMENT OF DISPUTES**

If any dispute arises, the same shall be settled amicably by mutual discussion, and if to the contrary the discussion fail to produce any agreement, either party will have the option to go for arbitration as per applicable laws of Tanzania, the Arbitration ordinance Cap 5 and the decision of the arbitrators shall not be final nor shall it be binding both parties and any party may refer the matter to the court of law.

8. **FORCE MAJEURE**

In the case of "force major" which causes delay to performance of work under contract the **LESSEE** shall bear all costs and the **LESSOR** shall not be concerned in any way.

9. all notices instructions, correspondences or any other written documentation concerning the contract shall either be in English or Kiswahili, both languages having equal application

10. APPLICABLE LAW

This agreement shall in all respects be contracted and operated in accordance with the laws of Tanzania

11. CONFIDENTIALITY

All parties to this contract agree and convenient that no disclosure to any third parties of any information arising from this contract shall be made without prior permission of the other party and in the event of divulging the same the injured party shall be deemed for compensation

In execution of this agreement both parties have entered their respective hands in the following manner

FORTUNE QUARRY (T) COMPANY LIMITED
P. O. BOX 1038 DODOMA TANZANIA

FORTUNE QUARRY (T) COMPANY LIMITED
Represented by Mr. LIN YIGUO this 20th day of March 2009

.....
THE LESSOR

FORTUNE QUARRY (T) COMPANY LIMITED
P. O. BOX 1038 DODOMA TANZANIA

In the presence of:
Name: Thaddeus Mpinga
Signature: .....
Qualification: Legal Officer-Authentic Attorneys
Date: .....

AUTHENTIC ATTORNEYS & CONSULTANTS
P. O. Box 11547 DAR ES SALAAM

2. Eng Richard Peter Mushi

.....
THE LESSEE

In the presence of:
Name: Thaddeus Mpinga
Signature: .....
Qualification: Legal Officer-Authentic Attorneys
Date: 20/3/2009

AUTHENTIC ATTORNEYS & CONSULTANTS
P. O. Box 11547 DAR ES SALAAM

STAMP DUTY 2006
TANZANIA

FORTUNE QUARRY (T) COMPANY LIMITED

EXTRACT FROM A MEETING OF THE BOARD OF DIRECTORS AND SHAREHOLDERS OF

FORTUNE QUARRY (T) COMPANY LIMITED

AT A DULY CONVENED AND CONSTITUTED MEETING OF THE BOARD OF DIRECTORS OF FORTUNE QUARRY (T) COMPANY LIMITED HELD AT THE REGISTERED OFFICES OF THE COMPANY ON THE 19TH DAY OF MARCH 2009, THE FOLLOWING RESOLUTIONS WERE PASSED:

1. THAT FUNDS AMOUNTING US$ 6,267,150 BE CONTRIBUTED BY SHAREHOLDERS TO FINANCE ESTABLISHMENT OF A BUILDING MATERIALS MANUFACTURING PROJECT.

2. THAT ENG. HASSAN SAAD IS THE PRINCIPAL OFFICER TO OVERSEE IMPLEMENTATION OF THE PROJECT.

3. THAT THE PROJECT BE REGISTERED WITH TANZANIA INVESTMENT CENTRE SO AS TO ENJOY FULLY INVESTMENT INCENTIVES, BENEFITS AND PROTECTION AS STATUTORILY PROVIDED FOR UNDER TANZANIA INVESTMENT ACT, 1997.

CERTIFIED TRUE EXTRACT
(By order of the Board)

---------- ----------

CHAIRMAN **SECRETARY**

Habib African Bank Limited

India Street P. O. Box 70086 Dar-es-Salaam, Tanzania.
Telephone: 255(22) 2111107/ 9 Facsimile: 255(22) 2111014.

Ref: HABL/786/OPR/159
Date: December 16, 2008

TO WHOM IT MAY CONCERN

This is to confirm that Mr. Hassan Saad of Dar es Salaam is maintaining a US Dollar Current Account Number 0044873-0011 with our bank since October 16th, 2008.

The above information is provided at the request of our customer and without any guarantee or responsibility on the part of this bank or its officers.

Halima Kinabo
Asst. Manager

Catherine Mkello
Snr. Supervisor

TANZANIA

Certificate of Incorporation

Section 15

No **70200**

I HEREBY CERTIFY THAT

FORTUNE QUARRY (T) COMPANY `IMITED =========

==========

is this day incorporated under the Companies Act 2002 and that the Company is Limited

Given under my hand at Dar es salaam

this **18TH** day of **MARCH**

TWO THOUSAND AND NINE

Assist.Registrar of Companies

JTM

Form PA 1 Serial No. 5691 TIC N 07801

TANZANIA INVESTMENT CENTRE

REGISTRATION FORM

FOR

CERTIFICATE OF INCENTIVES

(Tanzania Investment Act 1997, Section 17 and 18, and the Investment Regulations: Regulation 42, Government Notice No. 318A of 2002)

Tanzania Investment Centre
9A & B Shaaban Robert Street
P. O. Box 938
DAR ES SALAAM
Tel. 022 2116328
Fax. 022 2118253
e-mail: information@tic.co.tz
Website: www.tic.co.tz

(Please fill the form in duplicate)

UNITED REPUBLIC OF TANZANIA

THE TANZANIA INVESTMENT ACT
(No. 26 of 1997)

APPLICATION FOR REGISTRATION
(Made under Regulation 42)

To: The Executive Director
Tanzania Investment Centre
P. O. Box 938
DAR ES SALAAM
Tanzania

1. I/We .....HASSAN SAAD.....

(diretor/directors/agent of ..FORTUNE QUARRY (T) Co. LTD.....

(name of business enterprise) apply for registration of CERTIFICATE OF INCENTIVES

under Section 17 of the Act and Part IV of the Investment Regulations, 2002.

2. The registered office of the company will be situated at .....DODOMA.....

.....

Copies of the following documents are attached to this application:

(i) The Memorandum and Articles of Association/or partnership agreement

(ii) Certificate of Incorporation/Registration

(iii) A copy of the Project Profile or Feasibility Study showing the implementation period, programme of implementation and operative date

(iv) Evidence of financing and evidence of land ownership for the project

3. The Head Office of the Company will be situated at .....DODOMA.....

4. The Principal Officers of the Company are .....HASSAN SAAD....,.....

...LIN YIGUO....., TO TAO.....

.....

5. Auditors of the Company are ....MANGESHO.....

.....

6. The authorized share capital of the Company is Tshs./~~US$~~ ....3,000,000/=.....

.....

.....

7. The intended capital investment of the Company in terms of Section 2(2) of the Act is ~~Tshs~~./US$ .....6,267,150.....

8. The month and day of the financial year end is .....31st DECEMBER.....

Note: ***failure to provide all the required information will result in the return of the application by the Centre.***

I/We enclose a cheque/cash made payable to the **Tanzania Investment Centre** for ~~Tshs~~./US$ .....100..... Being the Registration Fees. ***In the event this application is unsuccessful we understand that this fee will not be refunded.***

I, ...HASSAN SAAD..... of Post Office Number ....1038 DODOMA ..... do solemnly and sincerely declare that I am a director/~~duly authorized agent~~ of ...FORTUNE QUARRY (T) CO. LTD.....

AND that all the requirements of the Tanzania Investment Act, 1997 in respect of matters precedent to the registration of the business enterprise under the Act and incidental thereto have been complied with, **AND** I make this solemn declaration conscientiously believing the same to be true.

Declared at Dar es Salaam }
}
The 23 day of MARCH 2009 }

.....
Applicant

Before me:

GRACE GODFREY MALEKA
Advocate, Notary Public &
Commissioner for Oaths
P. O. Box 13108
DAR ES SALAAM

.....
Commissioner for Oaths

Attach only where applicable, otherwise indicate "N/A"

APPLICATION SUMMARY

Company Name: FORTUNE QUARRY (T.) Co. LIMITED

Certificate of Incorporation Number: 70200 Status: NEW

Certificate of Incorporation Date: 18TH MARCH 2009

Post Box: 1038

Town: DODOMA

Sector: MANUFACTURING **Sub-Sector:** BUILDING MATERIALS

Investment Financing Plan in Million US$/Tshs.

Foreign Equity	Local Equity	Foreign Loan	Local Loan
6,267,150	0	0	0

Project Objectives: TO ESTABLISH A PROJECT FOR MANUFACTURING OF BUILDING MATERIALS

Capacity: 200 T/ DAY

Employment: Foreign: 5 Local: 66 Total: 71

Implementation Period: 5 YEARS

Project Location

Site/Plot/Block No.: CHIGONGWE

Street: CHIGONGWE District: DODOMA Region: DODOMA
(Attach sketch map showing project location)

Shareholders	Nationality	%
MR WANG SIEN	CHINESE	20
MR LIN YIGUO	CHINESE	20
MR WANG ZHOUJUN	CHINESE	15
MR CHEN GUONYIN	CHINESE	15
MR TO TAO	CHINESE	15
MR HASSAN SAAD	LEBANESE	8
M/S XIA WENQIN	CHINESE	4
MR LUO MINGJIE	CHINESE	1
MR XIE HONGBO	CHINESE	1
MR RICHARD MUSHI	TANZANIAN	1

Investment Breakdown **US$/~~Tshs.~~M**

Land/Building	647,150
Plant	4,255,000
Vehicles	840,000
Furniture & Fittings	55,000
Pre-expenses	120,000
Others	50,000
Working Capital	300,000
TOTAL	6,267,150

Contact Details:

Name: HASSAN SAAD Title: MANAGING DIRECTOR

Telephone: 0784458843 Fax: .....

Email: HSAAD950@HOTMAIL.COM

Payments to be made payable to:

TANZANIA INVESTMENT CENTRE
STANDARD CHARTERED BANK TANZANIA LTD.
SWIFT ADDRESS: **SCBLTZTX**
ACCOUNT NO.: **8702006002000**

SKETCH MAP SHOWING PROJECT LOCATION

UGANDA

D.R. CONGO

RWANDA

BURUNDI

KENYA

D.R. CONGO

TANZANIA

ZAMBIA

MALAWI

MSUMBIJI

041672

JAMHURI YA MUUNGANO WA TANZANIA
THE UNITED REPUBLIC OF TANZANIA
STAKABADHI YA SERIKALI
EXCHEQUER RECEIPT

30325459 **1**

TFN. 614 (Rev. 8.94)

NIMEPOKEA KWA
Received from FORTUNE QUARRY (T) CO. LTD

KIASI *Amount*

Shs.								Cts.
USD	=	=	=	=	750	=	=	=

JUMLA YA SHILINGI (Kwa maneno)
The Sum of Shillings (Words) US DOLLAR SEVEN HUNDRED FIFTY ONLY

NA SENTI
And Cents

KWA MALIPO YA
In Respect of CERTIFICATE OF INCENTIVES

For Executive Director
Tanzania Investment Centre

KWA FEDHA TASLIM/HUNDI NAMBA
By Cash/Cheque No. CASH

KITUO - *Station*

SAHIHI YA MPOKEAJI - *Receiving Officer's Signature*

CHEO - *Title* ACC.

TAREHE - *Date* 03 APR. 2009

DSM.

Govt. Press, Dsm.

5

4

TICC/PP.10/041672/2 6 April 2009

Managing Director,
Fortune Quarry (T) Company Limited,
P.O. Box 1038,
DODOMA

RE: CERTIFICATE OF INCENTIVES FOR INVESTMENT IN THE ESTABLISHMENT OF A PROJECT FOR MANUFACTURING OF BUILDING MATERIALS

We wish to acknowledge receipt of your project proposal to manufacture building materials as presented in the TIC P.A. 1 Form No. 07801 and Feasibility Study with a projected investment of USD 6.267 m.

We have studied your project proposal and are pleased to inform you that your investment proposal is now officially registered and therefore your project will be granted a CERTIFICATE OF INCENTIVES, given under authority conferred upon TIC under Part III, Section 17 (1-8) of the Tanzania Investment Act, 1997.

You will be required to submit to the Centre a Progress Report on the implementation of the project after every six months for our information and review. Guidelines for the preparation of the report are contained in annexture 2 also attached to this letter. Please do not hesitate to contact the Centre for any clarification if the need arises. Please also note that a facilitation fee equivalent to US$ 750.00 is payable at the ruling exchange rate before your Certificate of Incentives is prepared. Please arrange to make payments at your earliest convenience. Please make deposit direct to the bank as per bank details below:

Tanzania Investment Centre
Standard Chartered Bank (T) Ltd
US Dollar A/C 8702006002000
T.Shs. A/C 0102006002000

..../2

TICC/PP.10/041672/2 6 April 2009

We wish you every success in the implementation of the project.

Yours sincerely,
Tanzania Investment Centre

B. D. Chonjo
For: Executive Director

Copy to: Permanent Secretary,
Ministry of Finance and Economic Affairs,
P. O. Box 9111,
DAR ES SALAAM

Permanent Secretary,
Ministry of Industry, Trade and Marketing,
P.O. Box 9503,
DAR ES SALAAM

Commissioner General,
Tanzania Revenue Authority,
P. O. Box 11491,
DAR ES SALAAM

TIC Evaluation Report

Name of the Company

Fortune Quary (T) Co Ltd

Post Box	Chigongwe	COI Number	70200	Contact	Hassan Saad
Post Office	1038	COI Date	18/03/2009	Designation	Managing Director
Region	Dodoma	Application F. No	07801	Phone	0
Country	Tanzania	Status	New	Direct Phone	0
		Sector	Manufacturing	Cell Phone	0784 458843
		Sub Sector	Building Materials	Fax	0
		File No	041672	E-Mail Address	Hsaad@Hotmail.Com

Project Location	
Plot/Block	Chigongwe
Street	Chigongwe
District	Dodoma Rural
Region	Dodoma

Investment Finance Plan in Millions USD

Foreign Equity	Local Equity	Foreign Loan	Local Loan
6.267	0	0	0

Shareholders Detail

Name	Nationality	(%)
Richard Mushi	Tanzanian	1
Xie Hongbo	Chinese	1
Luo Mingjie	Chinese	1
Xia Wenqin	Chinese	4
Hassan Saad	Lebanese	8
To Tao	Chinese	15
Chen Guonyin	Chinese	15
Wang Zhoujun	Chinese	15
Lin Yiguo	Chinese	20
Wang Sien	Chinese	20

Investment Breakdown (USD Million)

Land/Building	0.647
Plant	4.255
Vehicles	0.84
Furniture & Fittings	0.055
Pre-expenses	0.12
Others	0.05
Working Capital	0.3
Total	6.267

Employment	71	Evaluated By	,Zakaria kingu
Capacity	200	Drawn By	Sarah Registry
Project Turn Over			

Description

To establish a project for manufacturing of building materials including Aggregates, Vibrated Building Blocks, Paving Blocks, Asphalt and Concrete

Recomendations

Be approved subject to providing evidence as required by section 17 of Tanzania Investmnet Act 1997

Decision

Approved Ali Idd 3/4

FORTUNE QUARRY (T) COMPANY LIMITED

TIN. NO: 107 – 847 – 197 VRN: 40 – 003452 P

P. O. Box: 1038 - Dodoma - Tanzania

June 12, 2009

REF: Fortune /MIN/TIC/01/09

The Commissioner for Customs and Excise
P.O Box 9053
Dar es Salaam

u.f.s The Director
Tanzania Investment Centre
P. O Box 938
Dar es Salaam

RE: APPLICATION FOR EXEMPTION

We have the honor to introduce ourselves to you as a newly incorporated company with Certificate of Incorporation No. 70200 dated 18th March 2009, whose objectives among others is to carry out the business of quarry product, ready mix concrete and asphalt to be used in civil works and road construction.

The quarry site is to be established in Chigongwe Village, Dodoma Municipality, and we also have Certificate of Incentives No. 041672 dated 15th April 2009.

We are now applying for tax relief so as to enable us to start production of the abovementioned building materials, where are in needs for the construction projects taking place include the University of Dodoma, the Dodoma Airport, and different roads within Dodoma Municipality.

In this respect we have got the exemption of the mining machinery only under the mining Act 1998 as attached herein.

The project is to be completed in three years time starting on July 2009, and shall create employment for more than 100 people; hence we shall contribute to the lessening of the unemployment gap in the country.

Mjimpya, Chenja Str 20A,
Block no. 15- Dodoma
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works.*

In implementing this project, we are planning to import the following machinery and equipment:

A – Concrete Blocks Machines:

S/N	PARTICULARS	Units Required
1	Concrete Mixer 2 cubic meter	1
2	Block Moulds	50
3	Transport Vehicle	2
4	Pipe Moulds	10
5	Vibrating Machines Maker	15

B – Ready Mix Concrete Machines:

S/N	PARTICULARS	Units Required
1	Complete Concrete Mixer Plant 30 tons per hour	1
2	Transport Vehicles	3
3	Pump 60 meters	1
4	Mobile Transit Mixer Vehicle of 15 tons	6

C – Asphalt Concrete Machines:

S/N	PARTICULARS	Units Required
1	Complete Asphalt Mixer Plant 60 tons/hour	1
2	Generator 350 KVA	40
3	Transport Vehicle	2
4	Tipper Trucks of 15 tons	20

D – House and Office:

S/N	PARTICULARS	Units Required
1	Pre-Fabricated Office and House Units	20
2	Air Conditions – Wall and Split Units	10
3	Air Conditions – Horizontal Units	10
4	Computers	10
5	Printers	5
6	Photocopy machine	1

Mjimpya, Chenja Str 20A,
Block no. 15- Dodoma
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works.*

Therefore, we are applying for the necessary tax exemption of importation duties for the equipment, machinery and vehicles listed above.

It is our sincere hope that, you shall consider our application, so that we may contribute towards development of the construction industry in Tanzania.

Many thanks for your kind understanding and cooperation.

Yours truly,

Eng. Hassan Saad

Managing Director

FORTUNE QUARRY (T) COMPANY LIMITED
P. O. BOX 1038
DODOMA
TANZANIA

Mjimpya, Chenja Str 20A,
Block no. 15- Dodoma
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works.*

TANZANIA

Certificate of Incorporation

Section 15

No **70200**

I HEREBY CERTIFY THAT

FORTUNE QUARRY (T) COMPANY `IMITED =========

==========

is this day incorporated under the Companies Act 2002 and that the Company is Limited

Given under my hand at Dar es salaam

this **18TH** day of **MARCH**

TWO THOUSAND AND NINE

Assist.Registrar of Companies

/JTM

№ 00215506

THE UNITED REPUBLIC OF TANZANIA

For: Executive Director
Tanzania Investment Centre

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: .....041672.....

This is to certify that

FORTUNE QUARRY (T) COMPANY LTD

P.O. BOX 1038

of address DODOMA

has been granted a Certificate of Incentives to invest in a new, ~~rehabilitation/expansion or equity of the~~ enterprise known as

FORTUNE QUARRY (T) COMPANY LTD

Which is located at CHIGONGWE VILLAGE, DODOMA DISTRICT

DODOMA REGION

Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf.

Executive Director

Tanzania Investment Centre
P.O. Box 938, Dar es Salaam

Dated 15TH APRIL 2009

This Certificate is issued in accordance with the provisions of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:—

1.

Shareholders	Nationality	Shareholding (%)
Wang Sien	Chinese	20
Lin Yiguo	Chinese	20
Wang Zhoujun	Chinese	15
Chen Guonyin	Chinese	15
To Tao	Chinese	15
Hassan Saad	Lebanese	8
Xia Wenqin	Chinese	4
Others	Various	3

2. Proposed Activities : To establish a project for manufacturing of building materials including aggregates,building blocks,paving blocks asphalt and concrete

3. Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 6.267m. Local – Total USD 6.267m.

5. Project Financing:
Equity USD 6.267m. Loans – Total USD 6.267m.

6. Source, terms and conditions of loan

7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 6.267m.	–	USD 6.267m.

8. Technology Agreement None

9. Date of TIC Registration: 6th April 2009

10. Implementation period April 2009 - March 2012

11. Operative date April 2012

12. Investment Incentive Grade: As defined in part III Section 19 (1), (2) and Section 20 of the Tanzania Investment Act, 1997

(i) Applicable Import Duty And VAT as per Customs Tariff Act,1976 & VAT Act,199

(ii) Applicable with-holding Tax As per Income Tax Act,2004 (as amended)

(iii) Eligibility of Capital Allowances As per Income Tax Act, 2004 (as amended)

13. Protection of Investment, Arbitration and Transfer of Foreign Currency: as defined in part III Section 21, 22 and 23 of the Act.

14. Conditions attached to this Certificate of Incentives

(i) Date of Commencement of investment has to be notified to the Centre.

(ii) Certificate not to be transferred, assigned or amended

(iii) Failure to commence implementation within two years invalidates Certificate

(iv) Failure to operate investment must be notified to the Centre

(v) Changes in shareholding, project activities and level of invested capital must be notified to the centre

15. Additional conditions attached to Certificate

Finished goods are not allowed under this Certificate

Signed

Executive Director

CTIN.: 00327431

TANZANIA REVENUE AUTHORITY

CERTIFICATE OF REGISTRATION

FOR

TAXPAYER IDENTIFICATION NUMBER (TIN)

(ISSUED UNDER SECTION 133 OF THE INCOME TAX ACT NO. 11 OF 2004)

THIS IS TO CERTIFY THAT

FORTUNE QUARRY (T) COMPANY LIMITED

has been registered with the Tanzania Revenue Authority and assigned the Taxpayer Identification Number

107-847-197

with effect from 25-Mar-2009

JOANNES N. A. MALLY

OFFICIAL SEAL

COMMISSIONER FOR DOMESTIC REVENUE

TANZANIA REVENUE AUTHORITY

TRA/CE/C/1.10/3C 04/05/2009

Managing Director
Fortune Quarry (T) Ltd
P.O Box 1038,
Dar es Salaam.

Dear Sir,

RE: TAX EXEMPTION ON MINING EQUIPMENT FOR MINING OPERATIONS AT CHIGONGWE IN DODOMA REGION: ML 190/2004

We are writing in response to your letter with ref. no. Fortune/MIN/EnERGY/01/09 dated 2nd April 2009, forwarded to this office by the Ministry of Energy and Minerals' letter Ref. No. CDB171/467/01 of April 15, 2009, regarding the captioned subject matter.

Kindly be informed that the Commissioner for Customs and Excise has under powers conferred to him by section 17(4B) of the Financial Laws (Miscellaneous Amendments) Act, 1997 and the 3rd Schedule of VAT Act,1997 granted you tax exemption on mining equipment, plants and materials as per attached list hereto for mining operations.

Clearance of the goods must be supported by VAT Form 220/223/224 dully approved by the Domestic Revenue Office of the area in which your activities are carried out.

However, we have noted that you have two exemption status, that is, under mining Act, 1998 and Tanzania Investment Act, 1997. In this case, we have only approved tax exemption under mining sector.

Goods subject to this tax exemption shall not be disposed off or transferred without prior approval by the Commissioner for Customs and Excise.

Please be informed accordingly.

Yours Sincerely,

Said Athumani
FOR: COMMISSIONER FOR CUSTOMS AND EXCISE

mcm
c.c: Permanent Secretary,
Ministry of Energy and Minerals,
P.O Box 2000,
Dar es Salaam,
c.c: Commissioner for Domestic Revenue,
c.c: Manager- Customs Service Centre,
c.c: Manager- Tax Exemptions,
c.c: Regional Manager, Dodoma,
c.c:General Manager, Tiscan Ltd.

CUSTOMS & EXCISE DEPARTMENT
Sokoine Drive, P.O. Box 9053, Dar es Salaam, Tanzania
Tel: 255-22-2117765 or 255-22-2127783/4/6/8 Fax: 255-22-2138878/2135193

The project is to be completed in three years time starting on May 2009, and shall generate revenues for the proprietors, the government shall earn revenue through taxation and collection of various levies and also we shall create employment for more than 100 people, hence we shall contribute to the lessening of the unemployment gap in the country.

In implementing this project, we are planning to import the following machinery and equipment:

A - Stone Crusher Equipment:

S/N	PARTICULARS	Units Required
1	Grizzly Feeder	2
2	Jaw Crusher	2
3	Cone Crusher	2
4	Compact Crusher	2
5	Vibrating Screens	4
6	Conveyer Belts	12
7	Motors different sizes	16
8	Belts different sizes	1000 meters
9	Screens different sizes	100 pcs
10	Steel sheets different sizes	100 pcs
11	Steel Angles / Square and Rectangles different sizes	200 pcs
12	Welding rods	1000 kgs
13	Accessories (belt rollers)	1000 pcs
14	Electrical Cables different sizes	300 meters
15	Electrical wires different sizes	100 roles

B – Operating Machines and Machineries:

S/N	PARTICULARS	Units Required
1	Chain Bulldozer	2
2	Chain Excavator with bucket	2
3	Chain Excavator with buckets and Jack Hummer	2
4	Wheel Excavator	2
5	Wheel Loader	4
6	Drilling Machine	2
7	Dumper Truck of 25 tons	6
8	Tipper Truck of 15 tons	6
9	Forklift 10 tons	1
10	Trailer low bed	1
11	Transport Vehicles	~~8~~ 2

Mjimpya, Chenja Str 20A,
Block no. 15- Dodoma
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works.*

Commissioner for Minerals
Ministry of Energy and Minerals
P. O. Box 2000
DAR ES SALAAM

S/N	**PARTICULARS**	**Units Required**
12	Crane 60 Tons	1
13	Compressors	6
14	Water Boozer	2
15	Welding Machine	3
16	Set of Tools	4
17	Electrical Panel Board	2
18	Generator 500 KVA	2
19	Solar Board System	6
20	Generator 20 to 60 KVA	3
21	Weigh Bridge 75 tons	1
22	Machine's Washing Unit	3
23	Workshop machine	1

C – Concrete Blocks Machines:

S/N	PARTICULARS	Units Required
1	Concrete Mixer 2 cubic meter	1
2	Block Moulds	40
3	Pipe Moulds	20
4	Vibrating Machines Maker	10

D – Ready Mix Concrete Machines:

S/N	PARTICULARS	Units Required
1	Complete Concrete Mixer Plant 30 tons / hour	1
2	Pump 60 m	1
3	Mobile Transit Mixer Vehicle of 15 tons	6
4	Clinker grinding mill	1

E – Asphalt Concrete Machines:

S/N	PARTICULARS	Units Required
1	Complete Asphalt Mixer Plant 60 tons / hour	1
2	Generator 600 KVA	1
2	Tipper Trucks of 15 tons	5

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Core activities include:

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- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works.*

Commissioner [illegible]
Ministry of Energy and Minerals
P. O. Box 2000
DAR ES SALAAM

F – House and Office:

S/N	PARTICULARS	Units Required
1	Pre-Fabricated Office and House Units	20
2	Air Conditions – Wall and Split Units	20
3	Air Conditions – Horizontal Units	10
4	Computers	15
5	Printers	~~15~~ 5
6	Photocopy machine	2

Therefore, we are applying for the necessary tax exemption of importation duties for the equipment, machinery and vehicles listed above.

It is our sincere hope that, you shall consider our application, so that we may contribute towards development of the construction industry in Tanzania.

Many thanks for your kind understanding and cooperation.

Yours truly,

Eng. Hassan Saad

Managing Director

FORTUNE QUARRY (T) COMPANY LIMITED
P. O. BOX 1038
DODOMA
TANZANIA

Received
04/05/09

Mjimpya, Chenja Str 20A,
Block no. 15- Dodoma
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works.*

Commissioner for Minerals
Ministry of Energy and Minerals
P. O. Box 2000
DAR ES SALAAM

(b)

TICC/PP.10/041672/6 **23/06/2009**

Commissioner for Customs & Excise,
Tanzania Revenue Authority,
P.O. Box 9053,
DAR ES SALAAM

Dear Sir,

RE: DUTY/VAT EXEMPTION ON THE CAPITAL/DEEMED CAPITAL GOODS OF CERTIFICATE OF INCENTIVES NO. 041672

M/S Fortune Quarry (T) Company Limited is a TIC registered company with certificate of incentives **No. 041672** which is valid up to **March 2012**

The company has been registered with objectives of establishing and operating a project for manufacturing building materials.

Attached herewith please find a list of Capital/ Deemed Capital Goods for Duty and VAT exemption approval.

Yours sincerely
TANZANIA INVESTMENT CENTRE

N.A. Senzia
FOR: EXECUTIVE DIRECTOR

TICC/PP.10/041672/8 **29/11/2010**

The Managing Director,
M/S Fortune Quarry (T) Company Limited,
P.O. Box 1038,
DODOMA

RE: DUTY/VAT EXEMPTION ON THE CAPITAL/DEEMED CAPITAL GOODS OF CERTIFICATE OF INCENTIVES NO. 041672

We are writing in response to your letter vide Ref: Fortune Q/TRA/016/10 of 18th October, 2010 regarding above captioned subject.

Please be informed that in order to process your tax exemption request you are kindly required to submit detailed progress report and photos showing the project status and a list of items so far exempted for our information and review before further processing your request.

Please be guided accordingly

Yours sincerely
TANZANIA INVESTMENT CENTRE

Revocatus Arbogast
FOR: EXECUTIVE DIRECTOR

(7)

FORTUNE QUARRY (T) COMPANY LIMITED

TIN: NO: 107 – 847 – 197 VRN: 40 – 003452 P

P. O. Box: 1038 - Dodoma - Tanzania

18th October 2010

REF: Fortune Q / TRA/016/10

The Commissioner for Customs and Excise
Tanzania Revenue Authority
P.O Box 9053
Dar es Salaam

TANZANIA INVESTMENT CENTRE 26 OCT 2010 TANZANIA

Dear Sir,

RE: DUTY / VAT EXEMPTION ON THE CAPITAL / DEEMED CAPITAL GOODS – CERTIFICATE OF INCENTIVES No. 041672

We are TIC approved project with Certificate of Incentives No. 041672 which is valid up to March 2012.

We have been registered with objectives of establishing a project for manufacturing of building materials including aggregates, building blocks, paving blocks, asphalt and ready mix concrete at our site at Chigongwe Village, Dodoma Municipality.

We are planning to expand our project and please find our attached list of Capital / deemed Capital Goods and TIN for Duty / VAT exemption approval.

Many thanks for your kind understanding and cooperation.

Yours truly,

Eng. Hassan Sagd

Managing Director

FORTUNE QUARRY (T) COMPANY LIMITED P.O.BOX 1038 DODOMA

Area D, Block S, Plot No. 22 - Dodoma
Or Chigongwe Village, Dodoma Region
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works and Prefabricated Houses.*

TANZANIA

Certificate of Incorporation

Section 15

No **70200**

I HEREBY CERTIFY THAT

FORTUNE QUARRY (T) COMPANY `IMITED =========

==========

is this day incorporated under the Companies Act 2002 and that the Company is Limited

Given under my hand at Dar es salaam

this **18TH** day of **MARCH**

TWO THOUSAND AND NINE

Assist.Registrar of Companies

/JTM

CTIN.: 00327431

TANZANIA REVENUE AUTHORITY

CERTIFICATE OF REGISTRATION

FOR

TAXPAYER IDENTIFICATION NUMBER (TIN)

(ISSUED UNDER SECTION 133 OF THE INCOME TAX ACT NO. 11 OF 2004)

THIS IS TO CERTIFY THAT

FORTUNE QUARRY (T) COMPANY LIMITED

has been registered with the Tanzania Revenue Authority and assigned the Taxpayer Identification Number

107-847-197

with effect from 25-Mar-2009

JOANNES N. A. MALLY

OFFICIAL SEAL

COMMISSIONER FOR DOMESTIC REVENUE

NOTE: THE REQUIREMENTS UNDER WHICH THIS CERTIFICATE IS ISSUED ARE STATED OVERLEAF

№ 00215506

THE UNITED REPUBLIC OF TANZANIA

For: Executive Director
Tanzania Investment Centre

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 041672

This is to certify that

FORTUNE QUARRY (T) COMPANY LTD

of address P.O. BOX 1038
DODOMA

has been granted a Certificate of Incentives to invest in a new, ~~rehabilitation/expansion~~ xxxxxxxxxxxxxxxxxxxxxx ~~or equity of the~~ enterprise known as

FORTUNE QUARRY (T) COMPANY LTD

Which is located at CHIGONGWE VILLAGE, DODOMA DISTRICT
DODOMA REGION

Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf.

Executive Director

Tanzania Investment Centre
P.O. Box 938, Dar es Salaam

Dated 15TH APRIL 2009

This Certificate is issued in accordance with the provisions of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:—

1.

Shareholders	Nationality	Shareholding (%)
Wang Sien	Chinese	20
Lin Yiguo	Chinese	20
Wang Choujun	Chinese	12
Chen Guonvin	Chinese	12
To Tao	Chinese	15
Hassan Saad	Lebanese	8
Xia Wenqin	Chinese	4
Others	Various	3

2. Proposed Activities : To establish a project for manufacturing of building materials including aggregates, building blocks, paving blocks asphalt and concrete

3. Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 6.267m. Local – Total USD 6.267m.

5. Project Financing:
Equity USD 6.267m. Loans – Total USD 6.267m.

6. Source, terms and conditions of loan

7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 6.267m.	–	USD 6.267m.

8. Technology Agreement None

9. Date of TIC Registration: 6th April 2009

10. Implementation period April 2009 – March 2012

11. Operative date April 2012

12. Investment Incentive Grade: As defined in part III Section 19 (1), (2) and Section 20 of the Tanzania Investment Act, 1997

(i) Applicable Import Duty And VAT as per Customs Tariff Act, 1976 & VAT Act, 199

(ii) Applicable with-holding Tax As per Income Tax Act, 2004 (as amended)

(iii) Eligibility of Capital Allowances As per Income Tax Act, 2004 (as amended)

13. Protection of Investment, Arbitration and Transfer of Foreign Currency: as defined in part III Section 21, 22 and 23 of the Act.

14. Conditions attached to this Certificate of Incentives

(i) Date of Commencement of investment has to be notified to the Centre.

(ii) Certificate not to be transferred, assigned or amended

(iii) Failure to commence implementation within two years invalidates Certificate

(iv) Failure to operate investment must be notified to the Centre

(v) Changes in shareholding, project activities and level of invested capital must be notified to the centre

15. Additional conditions attached to Certificate

Finished goods are not allowed under this Certificate

Signed
Executive Director

CONSENT TO TRANSFER MINING LICENCE

I, The Deputy Commissioner for Minerals, pursuant to Section 9(2) of the Mining Act, 1998 hereby consent the transfer of title, rights and obligations under the Mining Licence No. 190/2004 from **BAHATI INVESTMENT AND MINING GENERAL COMPANY LIMITED to FORTUNE QUARRY (T) COMPANY LIMITED.**

The foregoing transfer has been duly recorded on terms and conditions contained in the above Mining Licence.

IN WITNESS WHEREOF this consent to transfer Mining Licence has been duly recorded

this...23rd.....day of.....MARCH.....2009.

Hamisi M. Komba
DEPUTY COMMISSIONER FOR MINERALS

FORTUNE QUARRY (T) COMPANY LIMITED

TIN. NO: 107 – 847 – 197 VRN: 40 – 003452 P

P. O. Box: 1038 - Dodoma - Tanzania

No.	ITEMS	ITEM GROUP	Quantity
1	VIBRATING FEEDER ZSW490*110	EQUIPMENT	1
2	JAW CRUSHERPE750*1060	MACHINES	2
3	channel steel	TOOLS	40 pcs
4	flange beam	TOOLS	3 pcs
5	welded pipe	TOOLS	40 pcs
6	rectangular pipe	TOOLS	25 pcs
7	steel plate	TOOLS	30 pcs
8	angle steel	TOOLS	50 pcs
9	conveyor	TOOLS	100 m
10	electromotor	EQUIPMENT	10 pcs
11	quarteringhammer housing	TOOLS	2 pcs
12	electric block	TOOLS	2 pcs
13	oil cylinder assembly	TOOLS	2 pcs
14	drilling steel	TOOLS	10 pcs
15	roller wheel	TOOLS	5 pcs
16	lamina dentalis	TOOLS	5 pcs
17	electric closet	TOOLS	2 pcs
18	reduction box	TOOLS	2 pcs

AREA D, BLOCK S, PLOT No. 22 - DODOMA
OR Chigongwe Village- Dodoma
Off. Cell: +255 (0)784 458 843
P.O.Box: 1038 Dodoma -Tanzania
Email: fortune_tz@yahoo.com

Core activities include:

- *Production of Aggregates & Hollow Bricks*
- *Importers of Heavy Duty Machines for Road Construction and Mining Industries*
- *Engineering Consultancy in Buildings and Road improvement works and Prefabricated Houses.*

No.	ITEMS	ITEM GROUP	Quantity
19	air compressor	EQUIPMENT	2 pcs
20	grindingwheel	TOOLS	100 pcs
21	grinding machine	EQUIPMENT	2 pcs
22	cutting machine	EQUIPMENT	2 pcs
23	flexovit	TOOLS	200 pcs
24	electric drill	MACHINES	2 pcs
25	engine parts (intake valve,con-bearing and so on)	TOOLS	5 pcs
26	electric closet	TOOLS	5 pcs
27	protection switch	TOOLS	50 pcs
28	reduction box	TOOLS	2 pcs
29	glue	TOOLS	20 barrels
30	roller wheel	TOOLS	500 pcs
31	chain wheel	TOOLS	50 pcs
32	chain	TOOLS	50 pcs
33	belt roller	TOOLS	10 pcs
34	belt	TOOLS	50 pcs
35	bracket	TOOLS	500 pcs
36	electric cable	TOOLS	500 m
37	air filter	TOOLS	25 pcs
38	diesel filter	TOOLS	30 pcs
39	oil filter	TOOLS	50 pcs
40	track roller assembly	TOOLS	10 pcs
41	track roller screw	TOOLS	60 pcs

AREA D, BLOCK S, PLOT No. 22 - DODOMA
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Core activities include:

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- *Engineering Consultancy in Buildings and Road improvement works and Prefabricated Houses.*

No.	ITEMS	ITEM GROUP	Quantity
42	gearpump	EQUIPMENT	5 pcs
43	welding rod	~~TOOLS~~	20 pcs
44	drilling steel	TOOLS	100 pcs
45	drill bit	TOOLS	20 pcs
46	rubber tube	TOOLS	100 m
47	water pump	EQUIPMENT	3 pcs
48	electrode pliers	TOOLS	50 pcs
49	bohrschaft	TOOLS	10 pcs
50	work gloves	~~TOOLS~~	2000 pairs
51	respirator	TOOLS	2000 pcs
52	safety helmet	~~TOOLS~~	50 pcs
53	lamina dentalis	TOOLS	20 pcs
54	excvavtor dipperteeth	TOOLS	$150.00
55	CRUSHER PARTS (scaleboard,backplate, trolley ,bush and so on)	~~TOOLS~~	10 pcs
56	parts for truck (valve rocker and so on)	~~TOOLS~~	10 pcs

AREA D, BLOCK S, PLOT No. 22 - DODOMA
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Core activities include:

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- *Engineering Consultancy in Buildings and Road improvement works and Prefabricated Houses.*

№ 00215506

THE UNITED REPUBLIC OF TANZANIA

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: .....041672.....

This is to certify that

.....

FORTUNE QUARRY (T) COMPANY LTD

.....

.....

P.O. BOX 1038

of address .....

DODOMA

.....

has been granted a Certificate of Incentives to invest in a new, rehabilitation /expansion or equity of the enterprise known as

FORTUNE QUARRY (T) COMPANY LTD

.....

CHIGONGWE VILLAGE, DODOMA DISTRICT

Which is located at .....

DODOMA REGION

.....

Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf.

.....

Executive Director

Tanzania Investment Centre
P.O. Box 938, Dar es Salaam

Dated 15TH APRIL 2009 .....

This Certificate is issued in accordance with the provisions of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:—

1.

Shareholders	Nationality	Shareholding (%)
Wang Sien	Chinese	20
Lin Yiguo	Chinese	20
Wang Choujun	Chinese	15
Chen Guonyin	Chinese	15
To Tao	Chinese	15
Hassan Saad	Lebanese	8
Xia Wenqin	Chinese	4
Others	Various	3

2. Proposed Activities : To establish a project for manufacturing of building materials including aggregates, building blocks, paving blocks, asphalt and concrete

3. Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 6.267m. Local – Total USD 6.267m.

5. Project Financing:
Equity USD 6.267m. Loans – Total USD 6.267m.

6. Source, terms and conditions of loan

7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 6.267m.	–	USD 6.267m.

8. Technology Agreement None

9. Date of TIC Registration: 6th April 2009

10. Implementation period April 2009 – March 2012

11. Operative date April 2012

12. Investment Incentive Grade: As defined in part III Section 19 (1), (2) and Section 20 of the Tanzania Investment Act, 1997

(i) Applicable Import Duty And VAT as per Customs Tariff Act, 1976 & VAT Act, 1997

(ii) Applicable with-holding Tax As per Income Tax Act, 2004 (as amended)

(iii) Eligibility of Capital Allowances As per Income Tax Act, 2004 (as amended)

13. Protection of Investment, Arbitration and Transfer of Foreign Currency: as defined in part III Section 21, 22 and 23 of the Act.

14. Conditions attached to this Certificate of Incentives

(i) Date of Commencement of investment has to be notified to the Centre.

(ii) Certificate not to be transferred, assigned or amended

(iii) Failure to commence implementation within two years invalidates Certificate

(iv) Failure to operate investment must be notified to the Centre

(v) Changes in shareholding, project activities and level of invested capital must be notified to the centre

15. Additional conditions attached to Certificate

Finished goods are not allowed under this Certificate

Signed .....
Executive Director

THE COMPANIES ACT, 2002

COMPANY LIMITED BY SHARES

MEMORANDUM

AND

ARTICLES OF ASSOCIATION

OF

FORTUNE QUARRY (T) COMPANY LIMITED

Incorporated at this .....day of.....2009

DRAWN BY:
MR. WANG SIEN
(SUBSCRIBER)
P.O. BOX 1038
DODOMA.

THE COMPANIES ACT, 2002

COMPANY LIMITED BY SHARES

MEMORANDUM

AND

ARTICLES OF ASSOCIATION

OF

FORTUNE QUARRY (T) COMPANY LIMITED

Incorporated at this .....day of.....2009

DRAWN BY:
MR. WANG SIEN
(SUBSCRIBER)
P.O. BOX 1038
DODOMA.

THE COMPANIES ACT, 2002

COMPANY LIMITED BY SHARES

MEMORANDUM OF ASSOCIATION

OF

FORTUNE QUARRY (T) COMPANY LIMITED

1. The name of the company **"FORTUNE QUARRY (T) COMPANY LIMITED"**

2. The Registered office of the Company will be situated in Tanzania.

3. The objects for which the Company is established are:-

(a) To carry on the trade or business of builders and contractors for construction work of any kind, and for the alterations, improvements and destruction of any building or structure and to carry on the trade or business of civil, constructional, electric and general engineers, and to enter into any contracts in relations to, and to alter, repair, pull down and restore, either alone or jointly with any other persons, firms, or companies, works of all descriptions, including but not limited to roads, bridges, warehouses, factories, mills, wharves, docks, piers, godowns dwelling houses, flats, hotels, safari and game lodges, engines, machinery railways, tramways, rolling stocks, ships and vessels of every description, electric works, water works, drainage and sewerage works and buildings and structures of every description.

(b) To carry on the business quarry master and stone merchants and to buy, sale, get work shaper, hew, carve, polish, crush and prepare for market or use, stones of all kinds and also to carry on the business of road and pavement makers and repairers and manufacturers of and dealers in lime, cement, mortar and sane, asphalt, bitumen, gravel, stones and concrete materials of all kinds and description and all other kinds of which stone is required.

(c) To engage in and carry on the business of civil mechanical and electrical engineers, and sanitary engineers, electronic engineers and provide engineering services generally of whatever nature including designing of related systems and equipment, and installing, inspecting and repairing such systems and equipment and to engage in the manufacture, assembly and distribution of related machinery equipment and component.

(d) To carry on the business of builders and civil contractors, engineers, founders, construct, maintain, repairs, pull down and restore either alone or jointly and establish jointly ventures with other companies, persons works or all descriptions including ginneries oil mills, textiles, factories, engines, roads, bridges, machineries and houses, offices, workshops, buildings and premises and any fixed or movable machineries, tools, plant, implements, patterns, stock-in-trade, patents and patent rights, technical know-how, goodwill liabilities and engagements of or connected with workshops.

(e) To carry on business as general traders, importers and exporters of building materials, hardware, bricks, tiles, corrugated iron, metal materials, machines and materials for road, rail making and other related equipments for building purposes of all kinds.

(f) To establish workshops for training of heavy duty construction equipment handling and safety measures, high of construction equipment, construction labour and general advisory services.

(g) To engage and or carry on the business of general civil works, engineering, buildings, road constructions renovations, office partitioners, decoratories, maintainers of dilapidated buildings,

plumbing, furniture manufactures, suppliers and exporters, residential and office furnishers and general to be designers and fabricators of all kinds of gadgets whatsoever, to be timber processors, sawmillers and suppliers of all kinds of timber to be hardware and building materials suppliers, manufactures of electrical equipments and suppliers.

(h) To carry on the business of management of all kind of construction works and construction management, property management, real estate and any related works thereto.

(i) To carry on the business of building contractors, mansory and general construction contractors and among other things to construct, execute, carry out, equip, improve, work and advertise railways, tramways, docks habours, sharves, canals, water-courses, irrigations, reclamations, sewage, drainage and other sanitary works, water, gas, electric and other supply works, houses building and erections of every kind.

(j) To carry on the business of architectural work and technical drawings on building and contractors, mansory and general construction contractors and where necessary to give consultation on the same.

(k) To provide consultancy on construction, architecture, structural designs and engineering, construction labour management, estate plans and soil testing.

(l) To carry on the business of real estate agents, property managers, and realty administrators of buildings, services of letting or valuation, builders, contractors for construction works, renovation, decoration and demolition and to purchase otherwise acquire land for houses, offices, workshops and building premises.

(m) To carry on the business as traders, suppliers, general merchants, importers, exporters, stockists, wholesalers, retailers and dealers in all types of electrical goods, hardware, building materials, spare parts and maintenance, tyres, tubes, tools and accessories for all types of automotive, motor vehicles, scrapers, agricultural machinery, implements, equipment, all kinds of industrial projects machinery and equipment, timber, fishing gears, groceries, computers, office equipments, cooking oils, salts, foodstuffs, cosmetics, oils, paints, spirits sheets, hinges, screws, iron mongery, textiles piece goods, all types of leather goods, shoes, bags and other similar goods.

(n) To carry on the business of importers, exports, general merchants, general store-keepers, universal providers, wholesale and/or retail traders, dealers of weighing scales, inkjet technology, moisture analysis, lab equipment, solar technology, hardware, piece wood, paints, glassware, crockery, cutlery, ironmongery, turners and other household fittings and requirements, other articles and commodities of personal, household use and consumption provisions, textiles, groceries, medicines, drugs, wines spirits, liquors, chemical, surgical, option, photographic and other instruments, apparatus and materials, motor vehicles, automobiles and generally in all manufactured goods of all types and merchandise of all kinds.

(o) To carry on the business of clearing and forwarding agents, commission agents, transporters, freighters, haulers, customs bonded warehouse and godown keepers, cargo and travel agents, insurance agents, tourist agents, manufacturers' representatives, road contractors, cargo superintendents, packers, machinery haulage specialists, warehousemen, engineers, electricians, motor cars, cabs, omnibus, lorries, oil tank and coach proprietors and transporters, civil transport contractor and transporters by any means of conveyance of people and goods in Tanzania and the neighboring countries and in such other place or places as may from time to time determined by the company, engage in and or otherwise carry on the business as transporters and transport agents, freight forwarders.

(p) To carry on all or any of the business of transport, carriage and haulage contractors, owners and charter of road vehicles, aircraft and ships and boats of every description and carriers of goods and passenger by road, rail, water or air and to establish, acquire, maintain and operate transport service of every description both public and private and all services ancillary thereto and for such purposes or as independent undertakings to purchase, take in exchange, charter, hire, build, contract or otherwise acquire and to own, operate, work, manage, maintain, repair, service and deal with and in road vehicles, aircraft and vessels of every supplies therefore and to conduct any such business within the country or any other state in Africa or Europe or Asia and or any other foreign country.

(q) To purchase, take on lease, option or licence, exchange or otherwise acquire in any part of the world ranches farms, lands, concessions, estates, plantations and properties and to cultivate, improve, manage, develop or otherwise turn to account, deal with or dispose of the same in any manner whatsoever, and likewise to acquire and deal with any agricultural, ranching, grazing, plantation, forest, fishing and trading grants, licences, concessions, options rights or privileges.

(r) To establish and carry on the business of ranching and keeping cattle, sheep, pigs, goats, poultry, bee products game, fish, prawns and other livestock of every description, and to sell, breed, export, import, improve, prepare, deal and trade in stock of every description whether live or dead and generally to carry on the business as fisherman, cow-keepers, farmers, millers and market gardeners, and as manufacturers of all kinds. To carry on business as professional hunters, safari contractors, organisers and operators and to equip, organise and arrange hunting, finishing, game and other safaris and expeditions of all kinds and description whatsoever.

(s) To carry business on all or any of the business of manufacturers, representatives, importers, exporters, buyers and sellers (both wholesale and retail) insurance agents, land agents, general merchants, traders and manufacturers and dealers in and agent and representatives for goods, merchandise, materials, furniture, furnishings appliances, equipment, machinery, stores, products, provisions, commodities, substances and effects of all kinds and to establish factories for the manufacture of any of them.

(t) To carry on all or any of the business of stationers, printers, lithographers, stereotypes, electrotypes, engravers, photographic, printer, photo lithographers, typesetting machines operators, die sinker, envelope makers, book binders, account book manufacturers, machine, rulers numerical printers, paper makers, paper baffles and account book makers, box makers, flax and box file makers, cardboard manufactures, type founders, of dealers in playing, visiting, railways, festival invitation, dealers in or manufacturers or any other articles or tings or character similar or analogous to the foregoing or any of them or connected therewith and to deal in the manufacture of and sell by wholesale or retail of school chalks, and secretarial services.

(u) To carry on the business of services, consultancy, types of information technologies, computer systems, conference systems, telecommunication systems, security systems, public address systems, data communication and to train, research, install and after sale services of electronic systems, voice and data networks and any other systems or components which the company may think fit, necessary or incidental to this business.

(v) To carry on the business of miners and mining in all their branches and for the said purpose to peg, purchase, take on lease, or exchange or otherwise acquire concessions, grants, easements, options, claims, properties, cassettes- and effects supposed to contain minerals, diamonds, or other precious stones, and any interest therein, and to explore, mine, work, excise develop and turn to account mines and mining rights and any undertaking connected therewith.

(w) To promote tourism in Tanzania and elsewhere in Africa, to carry on business of travel and tourist agents and tour operators, to promote facilitate traveling to organize hunting, tented-camps, fishing and diving expeditions, safari promoters and undertakers generally and in particular to arrange and

manager hunting safaris, photo safaris adventure tours, fishing trips, handling of game trophies and animal skins, catching, harbouring, transporting, wildlife and marine products of all kind.

(x) To carry on the business of big game hunter, trapping and collection of Wild, live birds for sale and export within outside Tanzania, to sell, improved export, and imports, prepare, deal and trade in carvings, painting, curios, export, and provide game sanctuary facilities and to organize of safaris and expeditions. Discover, hunt, shoot, photograph, capture animals, birds, game and fish of all kinds including reptiles, marine products, pottery crafts, crustacean, salt, mangrove sea shells, groceries, vegetables, cereals goods, fruits and all allied products of every description.

(y) To engage in and carry out the business of proprietors and managers of hotels, restaurants, cafes, road houses, motels, safari and holiday camps, caravan sites, guest houses, apartment housekeepers, refreshment and tea rooms, milk and snacks bars, tavern, beer house and lodging housekeepers and to provide food and catering services to individuals, private and public institutions and to industrial and business concerns.

(z) To carry on the business of garage proprietors and service station for motor vehicles of all kinds, to carry on the safe keeping, cleaning, repairing, refueling, panel beating, spraying and the general care of motor vehicles, aircraft, machinery, equipment and plant whether moved by mechanical power or not, implements, utensils, appliances, apparatus, fuel for internal combustion engines, lubricants, cements, solutions, batteries and accessories and all things capable of being used in connection with the said businesses or in the manufacture or maintenance of such vehicles, machinery, equipment and plant.

(aa) To carry out the business of providing technical and allied services in the field of welding, metal fabrication, non destructive testing, quality assurances, and to provide consultancy in technical services, oil storage tank erections and all other businesses which can be carried out in connection to the above.

(bb) To carry on all any of the wholesale and/or retail as gemstones merchants, jewelers and/or dealers in and/or buy, sell market import export and/or general deal in all or any kinds of gemstones precious and semi-precious stones, gold silver and precious metals of whatsoever kind or description.

(cc) To purchase, take on lease and otherwise acquire for investment or resale any estate, land, buildings, easements and other rights and interests in immovable property or any tenure in Tanzania and elsewhere and to sell let or lease exchange or otherwise dispose of or grant rights over any immovable property, belong to the company.

(dd) To purchase, take or lease or in exchange, hire or otherwise acquire and hold any state or interest in any lands buildings, casements, rights, licenses secret processes, machinery, plants, stock, in trade and real or personal property of any kind.

(ee) To accept payment for any property or rights sold or otherwise disposed or dealt with by the company either in cash, by installment or otherwise or in fully or partly paid up shares of the company or corporation, with or without deferred or preferred or guaranteed rights.

(ff) To carry any other trade or business whatever which can in the opinion of the Board of Directors be advantageously carried on by the Company in connection with the above business or the general business of the company.

(gg) To act as agents for the sale and purchase of any stocks shares or securities or for any other monetary or mercantile transactions.

(hh) To act as executors and trustees of wills and settlements made by customers and others and undertake and execute trusts of all kinds.

(ii) To do all or any of the above things in any part of the world and either as principals, agents, trustees, contractors or otherwise, and either alone or in conjunction with others and either or though agents, sub-contractors, trustees and otherwise.

(jj) To remunerate any person, firm or company rendering services to this company, whether by cash payments or by allotment to him or them of shares or securities of the Company credited and paid in full or in part, otherwise.

(kk) To accept for safe custody and keep for customers of the company all kinds of securities valuables and things.

(ll) To lend money on any terms that may thought fit, and particularly to customers or other person or corporations having dealing with societies and to give any guarantees that may be expedient.

(mm) To advance money to shareholders in the company, and other to the purpose of enabling the person borrowing the same erect or purchase, or enlarge or repair any house or building or to purchase the fee simple or any less estate or interest in, or to take a demise for any term or terms of years of any freehold or leasehold property upon such terms and conditions as the company may tnink fit.

(nn) To invest and deal with the moneys of the Company not immediately required, upon such securities and in such manner as may from time to time be determined.

(oo) To distribute among the members in pieces any property of the company, or any proceeds of sale or disposal of any property of the company.

(pp) To draw, make, accept, endorse, discount execute and issue promissory notes, bills of lading, warrants, debentures and negotiable or transferable instruments.

(qq) To act as agents or brokers, and as trustees for any person firm or company, and to undertake and perform sub-contracts and also to act in any other business of the company through or by means of agents, brokers, sub-contractors or others.

(rr) To obtain any provisional order, ordinance or act of Parliament for enabling the Company to carry any of it is objects into effect, or for affecting any modification of the Company's constitution, or any other purpose which may seem expedient, and to oppose any proceedings or applications which may seem calculated, directly or indirectly to prejudice the company's interest.

(ss) To take or otherwise and hold shares in any other company having objects altogether or in part similar to this company, or carrying on any business capable of being conducted so as directly or indirectly to benefit the company.

(tt) To transact or carry on all kinds of Agency business and in particular in relation to the investment of money, the sale of property, and the collection and receipt of money.

(uu) To do all other things as may be deemed incidental or conducive to the entertainment of the objects or any of them.

And it is hereby declared that:-

The word "company" in this clause, except where used in reference to this Company, shall be deemed to include any partnership or other body of persons, whether corporate or incorporate, and whether domiciled in the United Republic of Tanzania or elsewhere.

The object specified in each of the paragraphs of the paragraph of this clause shall be regarded as independent objects, and accordingly shall in no way be limited or restricted (except where otherwise expressed in such paragraphs) by reference to or inference from the terms of any other paragraph of the name of the Company but may be carried out in as full and ample a manner and construed in as wide a sense as if each of the said paragraph define the objects of the separate and distinct compound.

That the meaning of any general word or words in any paragraph of this clause shall not be restricted by being construed ejusdem generis with any particular word or words in the same paragraph.

4. The Liability of the Members is Limited.

5. The capital of the Company is Shillings 3,000,000,000/= divided into 100,000 shares of Shillings 30,000/= each. The Company shall have powers to increase its capital and to divide the shares in its capital for the time being into several classes of stock or shares and to attach thereto respectively such preferential, deferred or special rights, privileges, or conditions as may be determined by or in accordance with the Articles of Association of the Company.

We, the several persons whose names and addresses are subscribed, are desirous of being formed into a company, in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the capital of the Company set opposite our respective names:

NAMES, ADDRESSES, AND DESCRIPTION OF SUBSCRIBERS	NUMBER OF SHARES TAKEN	SIGNATURE
MR. WANG SIEN P.O. BOX 1038 DODOMA	20,000	
MR. LIN YIGUO P.O. BOX 1038 DODOMA	20,000	
MR. WANG ZHOUJUN P.O. BOX 1038 DODOMA	15,000	
MR. CHEN GUONYIN P.O. BOX 1038 DODOMA	15,000	
MR. TO TAO P.O. BOX 1038 DODOMA	15,000	
MR. HASSAN SAAD P.O. BOX 1038 DODOMA	8,000	
M/S XIA WENQIN P.O. BOX 1038 DODOMA	4,000	
MR. LUO MINGJIE P.O. BOX 1038 DODOMA	1,000	
MR. XIE HONGBO P.O. BOX 1038 DODOMA	1,000	
MR. RICHARD PETER MUSHI P.O. BOX 1038 DODOMA	1,000	

Dated at DSM this 17TH day of MARCH 2009

Witness **to the above signatures**

Name :

Signature :

Postal Address :

Qualification :

Samson M Russumo * Dar es Salaam * P.O. Box 46012
ADVOCATE NOTARY PUBLIC & COMMISSIONER FOR OATHS

THE COMPANIES ACT, 2002

COMPANY LIMITED BY SHARES

ARTICLES OF ASSOCIATION

FORTUNE QUARRY (T) COMPANY LIMITED

INTERPRETATION

1. In these articles:-
"the Act" means the Companies Act;
"the articles" means the articles of the company;
"clear days" in relation to the period of a notice means that period excluding the day when the notice is given or deemed to be given and the day for which it is given or on which it is to take effect;
"the seal" means the Common Seal of the Company;
"Secretary" shall mean any person appointed to perform the duties of Secretary of the Company;

Expressions referring to writing shall, unless the contrary intention appears, be construed as including references to printing, lithography, photograph, and other modes of representing or reproducing words in a visible form.

Unless the context otherwise requires, words or expressions contained in these articles shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these articles become binding on the company.

PRIVATE COMPANY

2. The company is a Private Company and accordingly:-
(a) The right to transfer shares is restricted in manner hereinafter prescribed.
(b) The number of members of the company (exclusive of persons who are in the employment of the company and persons who have been formerly in the employment to be the member of the were while in such employment to be the member of the company) is limited to fifty, provided that where two or more persons hold one or more shares in the company jointly they shall for the purpose of this regulation be tested as a single member.
(c) Any invitation to the public to subscribe for any shares or debentures pf the Company is prohibited.
(d) The company shall not have power to issue share warrants to bearer.

MEMBERS

3. The number of members with which the company proposes to be registered is ten but the directors may from time to time register an increase of members.

4. The subscribers to the memorandum of association and such other persons as the directors shall admit to membership shall be members of the company.

GENERAL MEETINGS

5. The Company shall in each year hold a general meeting as its annual general meeting in addition to any other meetings in that year, and shall specify the meeting as such in the notice calling it; and not more than fifteen months shall elapse between the date of one annual general meeting of the company and that of the next.

Provided that so long as the company holds its first annual general meeting within eighteen months of its incorporation, it need not hold it in the year of its incorporation or in the following year. The annual general meeting shall be held at such time and place, as the directors shall appoint.

6. All general meetings other than annual general meetings shall be called extraordinary general meetings.

7. The directors may, whenever they think fit, convene an extraordinary general meeting, and extraordinary general meetings shall also be convened on such requisition, or in default, may be convened by such requisitionists, as provided by section 133 of the Act. If at any time there are not within the Tanzania sufficient directors capable of acting to form a quorum, any director or any two members of the company may convene an extraordinary general meeting in the same manner as nearly as possible as that in which meeting may be convened by the directors.

NOTICE OF GENERAL MEETINGS

8. Every general meeting shall be called by twenty-one clear days' notice in writing at the least. The notice shall specify the place, the day and hour of meeting and, in case of special business, the general nature of that business:

Provided that a meeting of the company shall, notwithstanding that it is called by shorter notice than that specified in this article be deemed to have been duly called if it so agreed:-

(a) in the case of a meeting called as the annual general meeting, by all the members entitled to attend and vote thereat; and

(b) in the case of any other meeting, by a majority in number of the members having a right to attend and vote at the meeting, being a majority together representation not less than ninety – five percent of the total voting rights at that meeting of all the members.

9. Subject to the provisions of the articles, the notice shall be given to all the members, to all persons entitled to a share in consequence of the death or bankruptcy of a member and to the directors and auditors. The accidental omission to give notice of a meeting to, or the non receipt to notice of a meeting by, any person entitled to receive notice shall not invalidate the proceedings at that meeting.

PROCEEDINGS AT GENERAL MEETINGS

10. All business shall be deemed special that is transacted at an extraordinary general meeting, and also all that is transacted at an annual general meeting, with the exception of declaring a dividend, the consideration of the accounts, balance sheets, and the reports of the directors and auditors, the election in the place of those retiring and the appointment of, and the fixing of the remuneration of the auditors.

11. No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business; two persons, entitled to vote on the business to be transacted, each being a member or a proxy for a member or a duly authorized representative of a corporation, shall be a quorum.

12. If within half an hour from the time appointed for the meeting quorum is not present, or if during the course of a meeting a quorum is not present, the meeting shall stand adjourned to the same day in the next week, at the same time and place, or to such other day and at such other time and place as the directors may determine.

13. The Chairman, if any, of the board of directors or in his absence some other director nominated by the directors shall preside as chairman of the general meeting, but if neither the chairman nor such other director (if any) be present within fifteen minutes after the time appointed for the holding of

the meeting and willing to act, the directors present shall elect one of their members to be chairman of the meeting and, if there is only one director and willing to act, he shall be chairman.

14. If at any meeting no director is willing to act as chairman or if no director is present within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their members to be a chairman of the meeting.

15. The Chairman may, with the consent of any meeting at which a quorum is present (and shall if so directed by the meeting), adjourn the meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business which might properly have been transacted at the meeting had the adjournment not taken place. When a meeting is adjourned for fourteen days or more, at least seven clear days notice of the adjourned meeting shall be given specifying the time and place of the meeting and the general nature of the business to be transacted. Save as aforesaid it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

16. At any general meeting a resolution put to the vote of the meeting shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands demand:-

(a) by the chairman; or
(b) by at least (three) members present in person or by proxy; or
(c) by any member or members present in person or by proxy and representing not less than one – tenth of the total voting rights of all the members having the right to vote at the meeting.

Unless a poll be so demanded a declaration by the chairman that a resolution has on a show of hands been carried or carried unanimously, or by a particular majority, or lost and an entry to the effect in the book containing the minutes of proceedings of the company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against such resolution.

The demand for a poll may, before the poll is taken, be withdrawn

17. Except as provided in article 18, if a poll is duly demand it shall be taken in such manner as the chairman directs, and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was demand.

18. In the case of an equality of votes, whether on a show of hands or on a poll, the chairman of the meeting shall be entitled to a second or casting vote.

19. A poll demanded on the election of a chairman, or on a question of adjournment, shall be taken immediately. A poll demanded on any other question shall be taken either immediately or at such time as the chairman of the meeting directs, and any business other than upon which a poll has been demanded may be proceeded with pending the taking of the poll.

20. A resolution in writing executed by or on behalf of each member who would have been entitled to vote upon it if it had been proposed at a general meeting at which he was present shall have effect as if it had been passed at a general meeting duly convened and held, and consist of several instruments in the like form each executed by or on behalf of one or more member.

VOTE OF MEMBERS

21. Every member shall have one vote.

22. A member in respect of whose estate a manager has been appointed under section 26 of the Mental Diseases Ordinance, may vote, whether on a show of hands or on a poll, by his said manager, and any such manager may, on a poll, vote by proxy.

23. No member shall be entitled to vote at any general meeting unless all moneys presently payable by him to the company have been paid.

24. On a poll votes may be given either personally or by proxy.

25. The instrument appointing a proxy shall be in writing under the hand of the appointer or of his attorney duly authorized in writing, or, if the appointer is a corporation, either under sea) or under the hand of an officer or attorney duly authorized. A proxy need not be a member of the company.

26. The instrument appointing a proxy and the power of attorney or other authority, if any, under which it is signed or a notarially certified copy of that power or authority shall be deposited at the registered office of the company or at such other place within the Territory as is specified for that purpose in the notice convening the meeting, not less than 48 hours before the time for holding the meeting of adjourned meeting at which the per son named in the instrument proposes to vote, or, in the case of a poll, not less than 24 hours before the time appointed for the taking of the poll, and in default the instrument of proxy shall not be treated as valid.

27. An instrument appointing a proxy shall be in the following form or a form as near hereto as circumstances admit:-

"..... Limited

I/We ..... of ....., being a member/ members of the above–named company, hereby appoint ....., of or failing him ..... of ....., as my/our proxy to vote for me/us on my/or behalf at the {annual or extraordinary, as the case maybe} general meeting of the company to be held on the .....day of .....200....., and at any adjournment thereof.

Signed ..... day of, ...200 ....."

28. Where it is desired to afford members an opportunity of voting for or against a resolution the instrument appointing a proxy shall be in the following form or a form as near thereto as circumstances admit:-

"..... Limited

I/We .....of ..... Being a member/members of the above named company, hereby appoint of ..... of ..... or failing him ..... of ....., as my/our proxy to vote for me/us on my/our behalf at the {annual or extraordinary, as the case may be}general meeting of the company to be held on the .....day of.....200....., and at any adjournment thereof.

Signed ..... day of, ...200 ....."

This form is to be used* in favour of/against the resolution. Unless otherwise instructed, the proxy will vote as he thinks fit.

*Strike out which ever is not desire"

29. The instrument appointing a proxy shall be deemed to confer authority to demand or join in demanding a poll.

30. A vote given in accordance with the terms of an instrument of proxy, or poll demanded by proxy, or by the dully authorized representative of a corporation shall be valid notwithstanding the previous determination of the authority of the person voting or demanding a poll unless notice of the determination was received by the company at its registered office (or at such other place at which

the instrument of proxy was duly deposited) before the commencement of the meeting or adjourned meeting at which the proxy is used.

CORPORATIONS ACTING BY REPRESENTATION AT MEETINGS

31. Any corporation which is a member of the company may be resolution of its directors or other governing body authorize such person as it thinks fit to act as its representative at any meeting of the company, and the person so authorized shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it were an individual member of the company.

DIRECTORS

32. The Number of the directors and the names of the first directors shall be determined in writing by the subscribers of the memorandum of association or a majority of them and until such determination the signatories to the Memorandum of Association shall be the first directors. Unless otherwise determined by ordinary resolution, the number of directors shall not be subject to any maximum but shall be not less than two.

33. The following persons shall be first Directors to the Company:-

1. **MR. WANG SIEN**
2. **MR. LIN YIGUO**
3. **MR. WANG ZHOUJUN**
4. **MR. CHEN GUONYIN**
5. MR. HASSAN SAAD
6. **M/S. XIA WENQIN**
7. **MR. TO TAO**
8. **MR. LUO MINGJIE**
9. **MR. XIE HONGBO**
10. **MR. RICHARD PETER MUSHI**

34. The remuneration of the directors shall from time to time be determined by the Company in general meeting. Such remuneration shall be deemed to accrue from day to day. The directors shall also be paid all traveling, hotel and other expenses properly incurred by them in attending and returning from meetings of the directors or any committee of the directors or general meetings of the company or in connection with the business of the company.

BORROWING POWERS

35. The director may exercise all the powers of the company to borrow money, and to mortgage or charge its undertaking and property, or any part thereof, and to issue debentures, debenture stock and other securities, whether outright or as security for any debt, liability or obligation of the company or any third party.

POWERS AND DUTIES OF DIRECTORS

36. Subject to the provisions of the Act, the memorandum and the articles and to any directors given by special resolution, the directors, who may exercise all the powers of the company, shall manage the business of the company. No alteration of the memorandum or articles and no such directions shall invalidate any prior act of the directors, which would otherwise have been valid. The powers given by this article shall not be limited by any special power given to the directors by the articles and a meeting of directors at which a quorum is present may exercise all powers exercisable by the directors.

37. The directors may by power of attorney appoint any person to be the attorney or agent of the company for such purposes and on such conditions as they determine, including authority for the attorney or agent to delegate all or any of his powers.

38. All cheques, promissory notes, drafts, bills of exchange and other negotiable instruments, and all receipts for moneys paid to the company, shall be signed, drawn, accepted, endorsed, or otherwise

executed, as the case may be, in such manner as the directors shall from time to time by resolution determine,

39. The directors shall cause minutes to be made in books provided for the purpose:-
(a) of all appointments of officers made by the directors;
(b) of the names of the directors present at each meeting of the directors and of any committees of the directors;
(c) of all resolutions and proceedings at all meetings of the company, and of the directors, and of committees of directors.

DISQUALIFICATION OF DIRECTORS

40. The office of director shall be vacated if the directors:-
(a) Without the consent of the company in general meeting holds any other office of profit under the company; or
(b) Becomes bankrupt or makes any arrangement or composition with his creditors generally; or
(c) Ceases to be a director by virtue of any provision of the Act or becomes prohibited by law from being a director; or
(d) Becomes of unsound mind; or
(e) Resigns his office by notice in writing to the company; or
(f) Is directly or indirectly interested in any contract with the company and fails to declare the nature of his interest in manner required by the Act.

A director shall not vote in respect of any contract in which he is interested or any matter arising thereat, and if he does so vote shall not be counted.

41. The company may by ordinary resolution appoint a person who is willing to act as director to fill a vacancy or be an additional director.

42. The directors may appoint a person who is to act to be a director, either to fill a vacancy or as an additional director, but so that the total number of directors shall not at anytime exceed the number fixed by or in accordance with these articles. Any director so appointed shall hold office only until the next following annual general meeting, and shall then be eligible for re – election.

43. The company may by ordinary resolution, of which special notice had been given in accordance with section 144 of the Act, remove any director before the expiration of his period of office notwithstanding anything in the article or any agreement between the company and such director. Such removal shall be without prejudice to any claim such director may have for damages for breach of any contract of service between him and the company.

44. The company may by ordinary resolution appoint another person in place of a director removed from office under the immediately preceding article. Without prejudice to the powers of the directors under article 40 the company in general meeting may appoint any person to be a director either to fill a vacancy or as an additional director.

45. Subject to the provisions of the articles, the directors may regulate their meetings as they think fit. Questions arising at a meeting shall be decided by a majority of votes. In case of an equality of votes, the chairman shall have a second or casting vote. A director may, and the secretary at the request of a director shall, call a meeting of the directors. It shall not be necessary to give notice of a meeting of directors to any directors who are absent from Tanzania.

46. The quorum necessary for the transaction of the business of the directions may be fixed by the directors, and unless so fixed shall be two.

47. The continuing directors may act notwithstanding any vacancy but, if and so long as their number is reduced below the number fixed by or pursuant to the articles of the act for the purpose of increasing the number of directors to that number, or summoning a general meeting of the company, but for no other purpose.

48. The directors may appoint one of their members to be the chairman of the board of directors and determine the period of which he is to hold office. Unless he is unwilling to do so, the director so appointed shall preside at every meting of directors at which he is present. But if no such chairman is appointed, or if he is unwilling to preside, or if at any meeting the chairman is not present within five minutes after the time appointed for holding the same, the directors present may choose one of their members to be chairman of the meeting.

49. The directors may delegate any of their powers to any committee consisting of one or more directors; any committees so formed shall in the exercise of the powers so to any such regulations, the proceedings of a committee with two or more members shall be governed by the articles regulating the proceedings of directors so far as they are capable of applying.

50. All act done by a meeting of the directors or of a committee of directors or by a person acting as a director shall, notwithstanding that it be afterwards discovered that there was some defect in the appointment of any such director, or that any of them were disqualified from holding office, or hand vacated office, or were not entitled to vote, be as valid as if every such person had been duly appointed and was qualified and had continued to be a director and was entitled to vote.

51. A resolution in writing signed by all the directors entitled to receive notice of a meeting of the directors, or of a committee of directors, shall be as valid and effectual as if it had been passed at a meeting of the directors or {as the case may be} a committee of directors duly convened and held, and may consist of several documents in the like form each signed by one or more directors.

SECRETARY

52. The Secretary shall be appointed by the directors for such term, at such remuneration and upon such conditions as they may think fit; and any secretary so appointed may be removed by them.

53. A provisions of the Act or these articles requiring or authorizing a thing to be done by or to a director and the secretary shall not be satisfied by its being done by or to the same person acting both as director and as, or in place of, the secretary.

THE SEAL

54. The seal shall only be used by the authority of the directors or of a committee of the directors authorized by the directors. The directors may determine who shall sign any instrument to which the seal is affixed and unless otherwise so determined it shall be signed by a director and by the secretary or by a second director.

55. The directors shall cause proper books of account to be kept with respect to:-

(a) all sums of money received and expended by the company and the matters in respect to which the receipt and expenditure takes place;
(b) all sales and purchase of goods by the company; and
(c) the assets and liabilities of the company.

Property books shall not be deemed to be kept if there are not kept such books of account as are necessary to give a true and air view of the state of the company's affairs and to explain its transactions.

56. The books of account shall be kept at the registered officer of the company, or subject to section 151 (4) of the Act, at such other place or places as the directors think fit, and shall always be open to the inspection of the directors.

57. No member shall (as such) have right of inspecting any accounting records or other book or document of the company except as conferred by statue or authorized by the directories or by ordinary resolution of the company.

58. The directors shall from time to time in accordance with sections 153,155 and 150 of the Act, cause to be prepared and to be laid before the company in general meeting, such profit and loss accounts, balance sheets, group accounts (if any) and reports as are referred to in those sections.

59. In accordance with section 164 of the Act, the copy of the company's annual accounts to be laid before the company in general meeting together with a copy of the directors' report and the auditors shall not less than twenty – one days before the date of the meeting be sent to every member of, and every holder of debentures of, the company. Provided that this regulation shall not require a copy of those documents to be sent to any person of whose address the company is not aware or to more than one of the joint holders of any debentures.

AUDIT

60. Auditors shall be appointed and their duties regulated in accordance with sections 170 to 179 of the Act.

61. Any notice to be given to or by any person pursuant to the articles shall be in writing except that a notice calling a meeting of directors need not be in writing. The company may give any notice to a member either personally or by sending it by post in a prepared envelope addressed to the member at his registered address, or by leaving it at that address. Where a notice is sent by post, service of the notice shall be deemed to be effected by properly addressing, prepaying, and posting a letter containing the notice, and to have been effected at the expiration of seventy – two hours after the letter containing the same was posted. A member whose registered address is not within the Tanzania and who gives to the company an address within the Tanzania at which notices may be given him shall be entitled to have notices given to him at that address, but otherwise no such member shall be entitled to receive any notice from the company.

NAMES, ADDRESSES, AND DESCRIPTION OF SUBSCRIBERS	NUMBER OF SHARES TAKEN	SIGNATURE
MR. WANG SIEN P.O. BOX 1038 DODOMA	20,000	
MR. LIN YIGUO P.O. BOX 1038 DODOMA	20,000	
MR. WANG ZHOUJUN P.O. BOX 1038 DODOMA	15,000	
MR. CHEN GUONYIN P.O. BOX 1038 DODOMA	15,000	
MR. TO TAO P.O. BOX 1038 DODOMA	15,000	
MR. HASSAN SAAD P.O. BOX 1038 DODOMA	8,000	
M/S XIA WENQIN P.O. BOX 1038 DODOMA	4,000	
MR. LUO MINGJIE P.O. BOX 1038 DODOMA	1,000	
MR. XIE HONGBO P.O. BOX 1038 DODOMA	1,000	
MR. RICHARD PETER MUSHI P.O. BOX 1038 DODOMA	1,000	

Dated at DSM this 17TH day of MARCH 2009

Witness **to the above signatures**

Name : .....

Signature : .....

Postal Address : .....

Qualification : .....

FORTUNE QUARRY (T) COMPANY LIMITED

ESTABLISHMENT OF FACILITIES FOR MANUFACTURE OF BUILDING MATERIALS

A BUSINESS PLAN

Prepared by:
Fortune Quarry (T) Company Ltd.
P. O. Box 1038
Dodoma.

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TABLE OF CONTENTS

1. INTRODUCTION

FOREWORD

This Project Feasibility Study Report sets out proposals by M/s Fortune Quarry (T) Company Limited to establish manufacturing facilities for building materials including Aggregates, Vibrated Building Blocks, Paving Blocks, Asphalt and Concrete. The project also involves development of a modern and well equipped distribution network.

OBJECTIVE OF STUDY

The purpose of this Feasibility Study is to work out the technical and commercial details and the financial viability for the establishment of manufacturing facilities for various building materials.

PROJECT PROMOTERS

The following sponsors are promoting the proposed building materials manufacturing project. Directors (shareholders) are namely:

NO	NAME AND ADDRESS	SHARES	% SHAREHOLDING
1	Wang Sien	20,000	20%
2	Eng. Hassan Saad	8,000	8%
3	Lin Yiguo	20,000	20%
4	Eng. Richard Peter Mushi	1,000	1%
5	Wang Zhoujun	15,000	15%
6	Chen Guoyin	15,000	15%
7	Xia Wenqin	4,000	4%
8	To Tao	15,000	15%
9	Luo Mingjie	1,000	1%
10	Xie Hongbo	1,000	1%

STUDY LAYOUT

This study is presented in one document comprising the following major chapters.

Chapter One	-Introduction
Chapter Two	-Executive Summary
Chapter Three	-Market Analysis
Chapter Four	-Production Technology
Chapter Five	-Machinery and Equipment
Chapter Six	-Production Inputs
Chapter Seven	-Manpower and Plant Organization
Chapter Eight	-Investment and Financing
Chapter Nine	-Operating Costs
Chapter Ten	-Financial Analysis
Chapter Eleven	-Economic Benefits
Chapter Twelve	-Conclusion and Recommendations

2. EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Study examines the possibility of establishing manufacturing facilities for building materials for both industrial and domestic usage. The targeted Building Materials include Aggregates, Vibrated Building Blocks, Paving Blocks, Asphalt and Concrete. A techno-economic evaluation has been carried out to determine the feasibility of project.

2.1.2 Background

Construction aggregate, or simply "aggregate", is a broad category of coarse particulate material used in construction, including sand, gravel, crushed stone, slag, recycled concrete, and geosythetic aggregates such as Ring Industrial Group's EZflow polymer based aggregates used mainly in lieu of gravel in drainage and septic applications. Aggregates are a component of composite materials such as concrete and asphalt concrete; the aggregate serves as reinforcement to add strength to the overall composite material. Due to the relatively high hydraulic conductivity value as compared to most soils, aggregates are widely used in drainage applications such as foundation and french drains, septic drain fields, retaining wall drains, and road side edge drains. Aggregates are also used as base material under foundations, roads, and railroads. To put it another way, aggregates are used as a stable foundation or road/rail base with predictable, uniform properties (e.g. to help prevent differential settling under the road or building), or as a low-cost extender that binds with more expensive cement or asphalt to form concrete.

The American Society for Testing and Materials publishes an exhaustive listing of specifications for various construction aggregate products, which, by their individual design,

are suitable for specific construction purposes. These products include specific types of coarse and fine aggregate designed for such uses as additives to asphalt and concrete mixes, as well as other construction uses. State transportation departments further refine aggregate material specifications in order to tailor aggregate use to the needs and available supply in their particular locations.

Sources for these basic materials can be grouped into three main areas: Mining of mineral aggregate deposits, including sand, gravel, and stone; use of waste slag from the manufacture of iron and steel; and recycling of concrete, which is itself chiefly manufactured from mineral aggregates. In addition, there are some (minor) materials that are used as specialty lightweight aggregates: clay, pumice, perlite, and vermiculite.

A brick is a block of ceramic material used in masonry construction and sized to be laid with one hand using mortar. Bricks formed from concrete are usually termed blocks, and are typically pale grey in colour. They are made from a dry, small aggregate concrete which is formed in steel moulds by vibration and compaction in either an "egglayer" or static machine. The finished blocks are cured rather than fired using low-pressure steam. Concrete blocks are manufactured in a much wider range of shapes and sizes than clay bricks and are also available with a wider range of face treatments - a number of which are to simulate the appearance of clay bricks.

An impervious and ornamental surface may be laid on brick either by salt glazing, in which salt is added during the burning process, or by the use of a "slip," which is a glaze material into which the bricks are dipped. Subsequent reheating in the kiln fuses the slip into a glazed surface integral with the brick base.

Natural stone bricks are of limited modern utility, due to their enormous comparative mass, the consequent foundation needs, and the time-consuming and skilled labour needed in their construction and laying. They are however very durable and considered more handsome than clay bricks. Only a few stones are suitable for bricks, common materials are granite, limestone and sandstone. Other stones may be used (e.g. marble, slate, quartzite, etc.) but this tend to be limited to a particular locality

Bricks are used for building and pavement. In the USA, brick pavement was found incapable of withstanding heavy traffic, but it is coming back into use as a method of traffic calming or as a decorative surface in pedestrian precincts.

Bricks are also used in the metallurgy and glass industries for lining furnaces. They have various uses, especially refractory bricks such as silica, magnesia, chamotte and neutral (chromomagnesite) refractory bricks. This type of brick must have good thermal shock resistance, refractoriness under load, high melting point, and satisfactory porosity. There is a large refractory brick industry, especially in the United Kingdom, Japan and the U.S.A..

Asphalt is a sticky, black and highly viscous liquid or semi-solid that is present in most crude petroleums and in some natural deposits sometimes termed asphaltum. It is most commonly modeled as a colloid, with asphaltenes as the dispersed phase and maltenes as the

continuous phase (though there is some disagreement amongst chemists regarding its structure).

In U.S. terminology, asphalt (or asphalt cement) is the carefully refined residue from the distillation process of selected crude oils. Outside North America, the product is called bitumen.

The primary use of asphalt is in road construction, where it is used as the glue or binder for the aggregate particles. The road surfacing material is usually called 'asphaltic concrete' or simply AC in North America, or simply 'asphalt' elsewhere. Within North America the apparent interchangeability of the words 'asphalt' and 'bitumen' causes confusion outside the road construction industry despite quite clear definitions within industry circles.

Asphalt can be separated from the other components in crude oil (such as naphtha, gasoline and diesel) by the process of fractional distillation, usually under vacuum conditions. A better separation can be achieved by further processing of the heavier fractions of the crude oil in a de-asphalting unit, which uses either propane or butane in a supercritical phase to dissolve the lighter molecules which are then separated. Further processing is possible by "blowing" the product: namely reacting it with oxygen. This makes the product harder and more viscous.

Natural deposits of asphalt include lake asphalts (primarily from the Pitch Lake in Trinidad and Tobago and Bermudez Lake in Venezuela), Gilsonite, the Dead Sea between Israel & Jordan, and Tar Sands. Asphalt was mined at Ritchie Mines in Macfarlan in Ritchie County, West Virginia in the United States from 1852 to 1873.

Asphalt is typically stored and transported at temperatures around 300 degrees Fahrenheit (150° C). Sometimes diesel oil or kerosene are mixed in before shipping to retain liquidity; upon delivery, these lighter materials are separated out of the mixture. This mixture is often called bitumen feedstock, or BFS. Some dump trucks route the hot engine exhaust through pipes in the dump body to keep the material warm. The backs of tippers carrying asphalt, as well as some handling equipment, are also commonly sprayed with a releasing agent before filling to aid release. Diesel oil is sometimes used as a release agent, although it can mix with and thereby reduce the quality of the asphalt.

Concrete is a combination of cement, aggregate such as sand or gravel, and water. It is used in construction process to make hard structures.

2.2 MARKET AND MARKETING ASPECTS

The market survey carried out reveals that the current demand for building materials is higher than the local production. There is wide gap between supply and demand and therefore, business opportunity exists for setting up additional manufacturing facilities to satisfy the market requirement. The project plans to acquire appropriate vehicles and recruit qualified personnel for distribution of the products.

2.3 PROCESS AND TECHNOLOGY

2.3.1 Aggregates

A rock crusher is a machine designed to take large rocks and reduce them to smaller rocks, gravel, or rock dust. Rock crushers produce aggregates and ready-to-process mining ores, as well as rock fill material for landscaping and erosion control. They can be used with virgin rock or other materials such as reclaimed concrete. Rock crushers can be mobile (although usually very heavy) machines or they can be fixed installations.

Crushing is the first step in converting shot rock or demolition rubble into usable products, by taking large rocks and breaking them into smaller pieces. Crushing is sometimes continued until only the sand-like 'fines' remain, and in mining applications it is usually followed by milling. At some operations, all the crushing is accomplished in one step, by a single crusher. At other operations, crushing is done in two or more steps, with a primary crusher that is followed by a secondary crusher, and sometimes a tertiary or even quaternary crusher. Each crusher is designed to work with a certain maximum size of raw material, and often delivers its output to a screening machine which sorts and directs the product for further processing.

In operation, the raw material (of various sizes) is usually delivered to the primary crusher's hopper by dump trucks, excavators or wheeled front-end loaders. A feeder device such as a conveyor or vibrating grid controls the rate at which this material enters the crusher, and often contains a preliminary screening device which allows smaller material to bypass the crusher itself, thus improving efficiency. Primary crushing reduces the large pieces to a size which can be handled by the downstream machinery.

Types of Crushers

Jaw Crushers

The jaw crusher squeezes rock between two ridged surfaces (jaws) which taper to form a funnel. In most designs one jaw is fixed while the other oscillates at a rate of somewhere around 3 times a second. Raw material enters the jaw crusher from the top. Pieces of rock that are larger than the opening at the bottom of the jaw lodge between the two metal plates of the jaw, and the motion of the oscillating jaw against the fixed jaw continues to pound the lodged pieces until they are broken into pieces small enough to drop through the opening at the bottom.

Gyratory Crushers

A gyratory crusher breaks rock by squeezing it between an eccentrically gyrating spindle (which is covered by a wear resistant mantle) and the enclosing concave hopper. As run-of-mine rock enters the top of the gyratory crusher, it becomes wedged and squeezed between the mantle and concaves. Large pieces of ore are broken once and then fall to a lower position (because they are now smaller) where they are broken again. This process continues

until the pieces are small enough to fall through the narrow opening at the bottom of the crusher.

Impact Crushers

There are two types of impact crushers which are Horizontal Shaft Impactor and the Vertical Shaft Impactor.

- Horizontal Shaft Impactor (HSI) Crushers

The HSI crushers break rock by impacting the rock with hammers that swing on a rotating shaft. The practical use of HSI crushers is limited to soft materials and non abrasive materials, such as limestone, phosphate, gypsum, weathered shales.

- Vertical Shaft Impactor (VSI)

VSI Crushers use a different approach involving a high speed rotor with wear resistant tips and a crushing chamber designed to 'throw' the rock against. The VSI crushers utilize velocity rather than surface force as the predominant force to break rock. In its natural state, rock has a jagged and uneven surface. Applying surface force (pressure) results in unpredictable and typically non-cubicle resulting particles. Utilizing velocity rather than surface force allows the breaking force to be applied evenly both across the surface of the rock as well as through the mass of the rock. Rock, regardless of size, has natural fissures (faults) throughout its structure. As rock is 'thrown' by a VSI Rotor against a solid anvil, it fractures and breaks along these fissures. Final particle size can be controlled by 1) the velocity at which the rock is thrown against the anvil and 2) the distance between the end of the rotor and the impact point on the anvil. The product resulting from VSI Crushing is generally of a consistent cubicle shape such as that required by modern SUPERPAVE highway asphalt applications. Using this method also allows materials with much higher abrasiveness to be crushed than is capable with an HSI and most other crushing methods.

VSI Crushers generally utilize a high speed spinning rotor at the center of the crushing chamber and an outer impact surface of either abrasive resistant metal anvils or crushed rock. Utilizing cast metal surfaces 'anvils' is traditionally referred to as a "Shoe and Anvil VSI". Utilizing crushed rock on the outer walls of the crusher for new rock to be crushed against is traditionally referred to as "rock on rock VSI".

Cone Crusher

A cone crusher is similar in operation to a gyratory crusher, with less steepness in the crushing chamber and more of a parallel zone between crushing zones. A cone crusher breaks rock by squeezing the rock between an eccentrically gyrating spindle, which is covered by a wear resistant mantle, and the enclosing concave hopper, covered by a manganese concave or a bowl liner. As rock enters the top of the cone crusher, it becomes wedged and squeezed between the mantle and the bowl liner or concave. Large pieces of

ore are broken once, and then fall to a lower position (because they are now smaller) where they are broken again. This process continues until the pieces are small enough to fall through the narrow opening at the bottom of the crusher.

For the most part advances in crusher design have moved slowly. Jaw crushers have remained virtually unchanged for sixty years. More reliability and higher production have been added to basic cone crusher designs that have also remained largely unchanged. Increases in rotating speed, have provided the largest variation. For instance, a 48 inch (120 cm) cone crusher manufactured in 1960 may be able to produce 170 tons/hr of crushed rock, whereas the same size cone manufactured today may produce 300 tons/hr. These production improvements come from speed increases and better crushing chamber designs.

The largest advance in cone crusher reliability has been seen in the use of hydraulics to protect crushers from being damaged when uncrushable objects enter the crushing chamber. Foreign objects, such as steel, can cause extensive damage to a cone crusher, and additional costs in lost production. The advance of hydraulic relief systems has greatly reduced downtime and improved the life of these machines.

2.3.2 Concrete Blocks/Bricks

The production of concrete blocks consists of four basic processes: mixing, molding, curing, and cubing. Some manufacturing plants produce only concrete blocks, while others may produce a wide variety of precast concrete products including blocks, flat paver stones, and decorative landscaping pieces such as lawn edging. Some plants are capable of producing 2,000 or more blocks per hour.

The following steps are commonly used to manufacture concrete blocks

Mixing

- The sand and gravel are stored outside in piles and are transferred into storage bins in the plant by a conveyor belt as they are needed. The Portland cement is stored outside in large vertical silos to protect it from moisture.
- As a production run starts, the required amounts of sand, gravel, and cement are transferred by gravity or by mechanical means to a weigh batcher which measures the proper amounts of each material.
- The dry materials then flow into a stationary mixer where they are blended together for several minutes. There are two types of mixers commonly used. One type, called a planetary or pan mixer, resembles a shallow pan with a lid. Mixing blades are attached to a vertical rotating shaft inside the mixer. The other type is called a horizontal drum mixer. It resembles a coffee can turned on its side and has mixing blades attached to a horizontal rotating shaft inside the mixer.
- After the dry materials are blended, a small amount of water is added to the mixer. If the plant is located in a climate subject to temperature extremes, the water may first pass through a heater or chiller to regulate its temperature. Admixture chemicals and

coloring pigments may also be added at this time. The concrete is then mixed for six to eight minutes.

Molding

- Once the load of concrete is thoroughly mixed, it is dumped into an inclined bucket conveyor and transported to an elevated hopper. The mixing cycle begins again for the next load.
- From the hopper the concrete is conveyed to another hopper on top of the block machine at a measured flow rate. In the block machine, the concrete is forced downward into molds. The molds consist of an outer mold box containing several mold liners. The liners determine the outer shape of the block and the inner shape of the block cavities. As many as 15 blocks may be molded at one time.
- When the molds are full, the concrete is compacted by the weight of the upper mold head coming down on the mold cavities. This compaction may be supplemented by air or hydraulic pressure cylinders acting on the mold head. Most block machines also use a short burst of mechanical vibration to further aid compaction.
- The compacted blocks are pushed down and out of the molds onto a flat steel pallet. The pallet and blocks are pushed out of the machine and onto a chain conveyor. In some operations the blocks then pass under a rotating brush which removes loose material from the top of the blocks.

Curing

- The pallets of blocks are conveyed to an automated stacker or loader which places them in a curing rack. Each rack holds several hundred blocks. When a rack is full, it is rolled onto a set of rails and moved into a curing kiln.
- The kiln is an enclosed room with the capacity to hold several racks of blocks at a time. There are two basic types of curing kilns. The most common type is a low-pressure steam kiln. In this type, the blocks are held in the kiln for one to three hours at room temperature to allow them to harden slightly. Steam is then gradually introduced to raise the temperature at a controlled rate of not more than 60°F per hour (16°C per hour). Standard weight blocks are usually cured at a temperature of 150-165°F (66-74°C), while lightweight blocks are cured at 170-185°F (77-85°C). When the curing temperature has been reached, the steam is shut off, and the blocks are allowed to soak in the hot, moist air for 12-18 hours. After soaking, the blocks are dried by exhausting the moist air and further raising the temperature in the kiln. The whole curing cycle takes about 24 hours.

  Another type of kiln is the high-pressure steam kiln, sometimes called an autoclave. In this type, the temperature is raised to 300-375°F (149-191°C), and the pressure is raised to 80-185 psi (5.5-12.8 bar). The blocks are allowed to soak for five to 10 hours. The pressure is then rapidly vented, which causes the blocks to quickly release their trapped moisture. The autoclave curing process requires more energy and a more expensive kiln, but it can produce blocks in less time.

Cubing

- The racks of cured blocks are rolled out of the kiln, and the pallets of blocks are unstacked and placed on a chain conveyor. The blocks are pushed off the steel pallets, and the empty pallets are fed back into the block machine to receive a new set of molded blocks.
- If the blocks are to be made into split-face blocks, they are first molded as two blocks joined together. Once these double blocks are cured, they pass through a splitter, which strikes them with a heavy blade along the section between the two halves. This causes the double block to fracture and form a rough, stone-like texture on one face of each piece.

The blocks pass through a cuber which aligns each block and then stacks them into a cube three blocks across by six blocks deep by three or four blocks high. These cubes are carried outside with a forklift and placed in storage

2.3.3 Asphalt

An asphalt plant is a plant used for the manufacture of asphalt, macadam and other forms of coated road stone, sometimes collectively known as blacktop.

The manufacture of coated road stone demands the combination of a number of aggregates, sand and a filler (such as stone dust), in the correct proportions, heated, and finally coated with a binder, usually bitumen based or, in some cases, tar. The temperature of the finished product must be sufficient to be workable after transport to the final destination. A temperature in the range of 100 - 200 degrees Celsius is normal.

Increasingly, recycled asphalt pavement (RAP) is used as part of the mix. The binder used is flammable, and the heaters are large liquid or gas fired burners. RAP is introduced after the heating process and must be accounted for in the overall mix temperature calculations.

There are three main classes of plant: batch heater, semi-continuous (or "asphalt plant"), and continuous (or "drum mix"). The batch heater has the lowest throughput, the continuous plant the highest at up to around 500 Tonnes per hour.

Supply of road stone for large contracts is generally by tender with considerable pressure on price. A faulty batch of road stone must be planed up and re-laid, often with additional lane rental charges, at a cost which may be orders of magnitude higher than the original price, so sophisticated control systems are a necessity.

Sand

One key ingredient of most road stones is sand. Sand generally has high water content. Boiling off this water is a large part of the energy cost of heating the aggregate, in turn a significant part of the overall cost of operation. The water content of sand also varies

considerably, especially when stored outdoors, being typically of the order of some tens of percent of the overall mass of wet sand. Since sand takes the form of small grains, with a high surface area per unit volume, and binder attaches to the surface of the aggregates, the amount of dry sand in the mix is particularly critical to the overall blend; the moisture content must be measured and the equivalent dry weight calculated.

Binder

Binder comes in different grades known as "penetration" or "pen" grades, with values varying between around 30 and 300. The pen value is an expression of the depth to which a standard needle will penetrate the surface of the binder at a specified temperature (the higher the value, the softer the binder). This has an effect on the workability of hot asphalt and the stiffness of the asphalt when cooled. Lower pen values give harder wearing. Asphalt wearing courses are typically 35-50 pen, base courses will be higher, typically 200 or 300 pen. The coating plant may combine binder of different grades to achieve a grade between those held on site.

Filler

Filler, as the name implies, fills the voids between aggregate grains and improves the wearing capabilities of the overall mix. It is stored and fed dry into the mix, during or after addition of binder. A common source of filler is fines from the heating process recovered by bag filters or wet filtration ponds from the exhaust of the heating drum.

Types of plant
Batch heater

A batch heater plant weighs the raw aggregates into a heater drum, where the batch is then heated up to temperature. The hot aggregate is discharged into a mixing drum where (dry) filler and binder are added. The blend is mixed and discharged either directly into the delivery vehicles or into a small weighing and collecting hopper. To increase throughput, the heater can be heating the next batch while the previous is being mixed. Capacity is usually of the order of tens of tonnes per hour.

Batch heater plant is used where short production runs are common (a different recipe can be used on each mix) or where total volume is low. Mobile batch heaters are available.

Continuous

In the continuous plant, raw aggregate is brought up from ground hoppers at a precisely controlled rate and fed into a heater drum similar to that used in the asphalt plant. Once heated it is immediately coated in the same drum (with the binder spray bars situated behind the burner) or in a smaller drum situated immediately behind it. Finished product is almost invariably discharged into a hot store rather than directly into delivery vehicles.

Changing mix is achieved by varying the feed rates of the aggregate, filler and binder feeders, with time delays so that the change of blend occurs at the same point in the coating drum. Sand tends to move more slowly through the heating drum, so the blend proportions will not necessarily change at the same point on the feed conveyor. It is common to divert a small amount of material to a waste chute when the transition point reaches the hot elevator.

Drum mix plants are not really suitable for short production runs; although with sophisticated controls the change of mix can be accurate to within some seconds, production rates of hundreds of tonnes per hour may equate to a tonne every ten seconds or so.

Hot storage

Finished road stone must be kept heated to avoid setting. It is commonly stored in large electrically heated insulated stainless steel silos, from which it is weighed into delivery vehicles. This may be achieved by intermediate weigh hoppers (which may shuttle between hoppers) or by mounting the hoppers directly on load cells. Control of load out by this method involves accurately predicting the material "in flight" between the discharge door and the vehicle.

Control

Precise control is a necessity. Asphalt mixing and load out plant typically use a combination of industrialized computer control and programmable logic controllers to achieve this.

With asphalt being a real-time product, timing is important when it comes to delivering product amounts to job sites, etc. 2008 has provided plants with a level of control over equipment by utilizing GPS, RFID and other forms of tracking systems. Tracking provides information throughout the supply chain to make sure that the right amount and type of product is delivered to the correct site in a timely manner and with better accuracy.

2.3.4 Concrete

A concrete mixer (also commonly called a cement mixer) is a device that homogeneously combines cement, aggregate such as sand or gravel, and water to form concrete. A typical concrete mixer uses a revolving drum to mix the components. For smaller volume works portable concrete mixers are often used so that the concrete can be made at the construction site, giving the workers ample time to use the concrete before it hardens. An alternative to a machine is mixing concrete or cement by hand. This is usually done in a wheelbarrow; however, several companies have recently begun to sell modified tarps for this purpose.

Industrial mixers

Today's market increasingly requires consistent homogeneity and short mixing times for the industrial production of ready-mix concrete, and more so for precast/prestressed concrete. This has resulted in new technologies for concrete production. Worldwide, therefore, twin-shaft batch mixers are becoming more important for high-quality concrete production. They

introduce very high turbulence into the mix and achieve about 95% homogeneity at only around 30 seconds mixing time per batch.

Special concrete transport trucks (in-transit mixers) are made to transport and mix concrete from a factory/plant to the construction yard. They are charged with dry materials and water, with the mixing occurring during transport. With this process, the material has already been mixed, and then is loaded into the truck. The ready mix truck maintains the material's liquid state, through agitation, or turning of the drum, until delivery.) The interior of the drum on a concrete truck is fitted with a spiral blade. In one rotational direction, the concrete is pushed deeper into the drum. This is the direction the drum is rotated while the concrete is being transported to the building site. This is known as "charging" the mixer. When the drum rotates in the other direction, the Archimedes screw-type arrangement "discharges", or forces the concrete out of the drum. From there it may go onto chutes to guide the viscous concrete directly to the job site. If the truck cannot get close enough to the site to use the chutes, the concrete may be discharged into a concrete pump connected to a flexible hose, or onto a conveyor belt which can be extended some distance (typically ten meters). A pump provides the means to move the material to precise locations, multi-floor buildings, and other distance prohibitive locations.

"Rear discharge" trucks require both a driver and a "chuteman" to guide the truck and chute back and forth to place concrete in the manner suitable to the contractor. Newer "front discharge" trucks have controls inside the cab of the truck to allow the driver to move the chute in all directions.

A six-axle truck has three "lift axles" -- the first two axles behind the cab (the pusher axles) and the rear-most axle (the tag axle) -- which can be lifted out of the way for off-road operation. When loaded, these axles distribute the weight of the truck. This distribution of weight is essential. Otherwise, roads most traveled on by vehicles of this size begin to break down. As an added benefit, these axles provide the driver better control of the vehicle during transport. The lift axles are equipped with brakes, and a system that lets them actually turn with the truck during turns, allowing maneuvering that would otherwise be nearly impossible.

Concrete mixers generally do not travel far from their plant, as many contractors require that the concrete be in place within 90 minutes after loading. If the truck breaks down or for some other reason the concrete hardens in the truck, workers need to enter the barrel with jackhammers; dynamite is still occasionally used to break up hardened concrete in the barrel under certain circumstances.

QUALITY CONTROL

We facilitate quality control by ensuring that our products are inspected for the highest quality before delivery. Similarly, sourcing of materials is done with great care to ensure that the best materials are used in the manufacturing processes for various products.

2.5 BYPRODUCTS/WASTE

The by products from our various processes are collected and sent out the factory for proper disposal to ensure that no harm is done to the environment

2.6 PRODUCTION INPUTS

As explained earlier, the basic Raw Materials used in the manufacture of building materials include rocks, gravel, cement, sand, asphalt and water. These are used in the different processes during the manufacturing of the different types of building materials.

2.7 LOCATION

The project location is in a prime industrial area in Dodoma at Chigongwe, Dodoma Municipality. This is the location of company operations and it has an area which is large enough to contain all the manufacturing operations, materials storage, and stockyard and office space

2.8 MANPOWER REQUIREMENTS

The whole project will comprise of a total work force of 66 permanent employees and several part time employees. Initially there will be a few technical expatriates and engineers who will give training to the local staff. Maximum employment will be given to the local work force.

The plant will be organized into three functions namely:

Production and Technical Services
Marketing
Finance and administration

2.9 IMPLEMENTATION

The project is planned to undergo two phases:

Phase I: Major activities involved include registration of the project and approvals by the Tanzania Investment Centre (TIC), and mobilization of funds from Sponsors. Other activities include identification of appropriate production technology, sourcing of machinery and equipment, renovation of factory buildings, staff recruitment and training of core personnel. A total of five months period is planned for the above activities after completion of this study.

Phase II: The second phase will involve full production of various building materials envisaged to start in the second half of year 2009.

2.10 PROJECT ECONOMICS

2.10.1 Capital Investment Requirements

COST STRUCTURE

PARTICULAR	AMOUNT USD
Land and Buildings	647,150
Plant and Equipment	4,255,000
Motor Vehicles	840,000
Furniture & Fixtures	55,000
Pre expenses (& workshop & support)	120,000
Others/ Misc	50,000
Working Capital	300,000
TOTAL	**6,267,150**

2.10.2 Expenditure and Profitability

The major expenditure item is the purchase of raw materials used in the manufacture of various building materials such as rocks, gravel, cement, sand, asphalt and water

Project revenue will accrue from sales of building materials. Total revenue from this project will increase from USD 1,480,750 in the first year of operation to USD 1,799,861 in the fifth year. This is shown in the following summary.

REVENUE PROJECTION

PRODUCTS	YEARS				
	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
Revenue	1,480,750	1,554,788	1,632,527	1,714,153	1,799,861
	1,480,750	**1,554,788**	**1,632,527**	**1,714,153**	**1,799,861**

2.11 RECOMMENDATIONS

The study shows the establishment of production facilities for building materials including aggregates, building blocks, paving blocks, asphalt and concrete is both technically and financially a feasible undertaking. Furthermore, it will create local employment for the national benefit. In view of the findings, the project is recommended for implementation.

3 MARKET AND MARKETING

In this chapter, we look into whether there is a market for the proposed products and how the promoters would approach that market.

3.1 PRODUCTS

The products which this project will produce for sale are building materials including aggregates, building blocks, paving blocks, asphalt and concrete.

3.2 DEMAND

The company projections show increasing demand for various building materials. Their use has been on the increase taking into consideration the growth occurring in construction industry in Tanzania.

3.3 DISTRIBUTION CHANNEL

The company will involve itself with a product that will be distributed to final consumers either directly (one level channel) or by using only one intermediary who will resale to final consumers (two level channel). It is important for these channels to be adopted because they reduce costs of distribution and avoid several profit margins of distributors, hence making the product price competitive in the market place. However, the company is exploring all sales and distribution avenues that will work to the company's advantage, given the stiff competition anticipated in the market. The company has budgeted for the development of a modern distribution/sales network that will comprise of modern and adequate number of distribution trucks as well as recruitment and training of qualified sales and marketing personnel.

4 PRODUCTION PROCESS AND TECHNOLOGY

4.1 BASIC PRODUCTION PROCESS

4.1.1 Aggregates

Crushing is the first step in converting shot rock or demolition rubble into usable products, by taking large rocks and breaking them into smaller pieces. Crushing is sometimes continued until only the sand-like 'fines' remain, and in mining applications it is usually followed by milling. At some operations, all the crushing is accomplished in one step, by a single crusher. At other operations, crushing is done in two or more steps, with a primary crusher that is followed by a secondary crusher, and sometimes a tertiary or even quaternary crusher. Each crusher is designed to work with a certain maximum size of raw material, and often delivers its output to a screening machine which sorts and directs the product for further processing.

In operation, the raw material (of various sizes) is usually delivered to the primary crusher's hopper by dump trucks, excavators or wheeled front-end loaders. A feeder device such as a conveyor or vibrating grid controls the rate at which this material enters the crusher, and often contains a preliminary screening device which allows smaller material to bypass the crusher itself, thus improving efficiency. Primary crushing reduces the large pieces to a size which can be handled by the downstream machinery.

Types of Crushers

Jaw Crushers

The jaw crusher squeezes rock between two ridged surfaces (jaws) which taper to form a funnel. In most designs one jaw is fixed while the other oscillates at a rate of somewhere around 3 times a second. Raw material enters the jaw crusher from the top. Pieces of rock that are larger than the opening at the bottom of the jaw lodge between the two metal plates of the jaw, and the motion of the oscillating jaw against the fixed jaw continues to pound the lodged pieces until they are broken into pieces small enough to drop through the opening at the bottom.

Gyratory Crushers

A gyratory crusher breaks rock by squeezing it between an eccentrically gyrating spindle (which is covered by a wear resistant mantle) and the enclosing concave hopper. As run-of-mine rock enters the top of the gyratory crusher, it becomes wedged and squeezed between the mantle and concaves. Large pieces of ore are broken once and then fall to a lower position (because they are now smaller) where they are broken again. This process continues until the pieces are small enough to fall through the narrow opening at the bottom of the crusher.

Impact Crushers

There are two types of impact crushers which are Horizontal Shaft Impactor and the Vertical Shaft Impactor.

- Horizontal Shaft Impactor (HSI) Crushers

The HSI crushers break rock by impacting the rock with hammers that swing on a rotating shaft. The practical use of HSI crushers is limited to soft materials and non abrasive materials, such as limestone, phosphate, gypsum, weathered shales.

- Vertical Shaft Impactor (VSI)

VSI Crushers use a different approach involving a high speed rotor with wear resistant tips and a crushing chamber designed to 'throw' the rock against. The VSI crushers utilize velocity rather than surface force as the predominant force to break rock. In its natural state, rock has a jagged and uneven surface. Applying surface force (pressure) results in unpredictable and typically non-cubicle resulting particles. Utilizing velocity rather than surface force allows the breaking force to be applied evenly both across the surface of the rock as well as through the mass of the rock. Rock, regardless of size, has natural fissures (faults) throughout its structure. As rock is 'thrown' by a VSI Rotor against a solid anvil, it fractures and breaks along these fissures. Final particle size can be controlled by 1) the velocity at which the rock is thrown against the anvil and 2) the distance between the end of the rotor and the impact point

on the anvil. The product resulting from VSI Crushing is generally of a consistent cubicle shape such as that required by modern supersave highway asphalt applications. Using this method also allows materials with much higher abrasiveness to be crushed than is capable with an HSI and most other crushing methods.

VSI Crushers generally utilize a high speed spinning rotor at the center of the crushing chamber and an outer impact surface of either abrasive resistant metal anvils or crushed rock. Utilizing cast metal surfaces 'anvils' is traditionally referred to as a "Shoe and Anvil VSI". Utilizing crushed rock on the outer walls of the crusher for new rock to be crushed against is traditionally referred to as "rock on rock VSI".

Cone Crusher

A cone crusher is similar in operation to a gyratory crusher, with less steepness in the crushing chamber and more of a parallel zone between crushing zones. A cone crusher breaks rock by squeezing the rock between an eccentrically gyrating spindle, which is covered by a wear resistant mantle, and the enclosing concave hopper, covered by a manganese concave or a bowl liner. As rock enters the top of the cone crusher, it becomes wedged and squeezed between the mantle and the bowl liner or concave. Large pieces of ore are broken once, and then fall to a lower position (because they are now smaller) where they are broken again. This process continues until the pieces are small enough to fall through the narrow opening at the bottom of the crusher.

Technology

For the most part advances in crusher design have moved slowly. Jaw crushers have remained virtually unchanged for sixty years. More reliability and higher production have been added to basic cone crusher designs that have also remained largely unchanged. Increases in rotating speed, have provided the largest variation. For instance, a 48 inch (120 cm) cone crusher manufactured in 1960 may be able to produce 170 tons/hr of crushed rock, whereas the same size cone manufactured today may produce 300 tons/hr. These production improvements come from speed increases and better crushing chamber designs.

The largest advance in cone crusher reliability has been seen in the use of hydraulics to protect crushers from being damaged when uncrushable objects enter the crushing chamber. Foreign objects, such as steel, can cause extensive damage to a cone crusher, and additional costs in lost production. The advance of hydraulic relief systems has greatly reduced downtime and improved the life of these machines.

4.1.2 Concrete Blocks/Bricks

The production of concrete blocks consists of four basic processes: mixing, molding, curing, and cubing. Some manufacturing plants produce only concrete blocks, while others may produce a wide variety of precast concrete products including blocks, flat paver stones, and

decorative landscaping pieces such as lawn edging. Some plants are capable of producing 2,000 or more blocks per hour.

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The following steps are commonly used to manufacture concrete blocks

Mixing

- 1 The sand and gravel are stored outside in piles and are transferred into storage bins in the plant by a conveyor belt as they are needed. The Portland cement is stored outside in large vertical silos to protect it from moisture.
- 2 As a production run starts, the required amounts of sand, gravel, and cement are transferred by gravity or by mechanical means to a weigh batcher which measures the proper amounts of each material.
- 3 The dry materials then flow into a stationary mixer where they are blended together for several minutes. There are two types of mixers commonly used. One type, called a planetary or pan mixer, resembles a shallow pan with a lid. Mixing blades are attached to a vertical rotating shaft inside the mixer. The other type is called a horizontal drum mixer. It resembles a coffee can turned on its side and has mixing blades attached to a horizontal rotating shaft inside the mixer.
- 4 After the dry materials are blended, a small amount of water is added to the mixer. If the plant is located in a climate subject to temperature extremes, the water may first pass through a heater or chiller to regulate its temperature. Admixture chemicals and coloring pigments may also be added at this time. The concrete is then mixed for six to eight minutes.

Molding

- 5 Once the load of concrete is thoroughly mixed, it is dumped into an inclined bucket conveyor and transported to an elevated hopper. The mixing cycle begins again for the next load.
- 6 From the hopper the concrete is conveyed to another hopper on top of the block machine at a measured flow rate. In the block machine, the concrete is forced downward into molds. The molds consist of an outer mold box containing several mold liners. The liners determine the outer shape of the block and the inner shape of the block cavities. As many as 15 blocks may be molded at one time.
- 7 When the molds are full, the concrete is compacted by the weight of the upper mold head coming down on the mold cavities. This compaction may be supplemented by air or hydraulic pressure cylinders acting on the mold head. Most block machines also use a short burst of mechanical vibration to further aid compaction.
- 8 The compacted blocks are pushed down and out of the molds onto a flat steel pallet. The pallet and blocks are pushed out of the machine and onto a chain conveyor. In

some operations the blocks then pass under a rotating brush which removes loose material from the top of the blocks.

Curing

- 9 The pallets of blocks are conveyed to an automated stacker or loader which places them in a curing rack. Each rack holds several hundred blocks. When a rack is full, it is rolled onto a set of rails and moved into a curing kiln.
- 10 The kiln is an enclosed room with the capacity to hold several racks of blocks at a time. There are two basic types of curing kilns. The most common type is a low-pressure steam kiln. In this type, the blocks are held in the kiln for one to three hours at room temperature to allow them to harden slightly. Steam is then gradually introduced to raise the temperature at a controlled rate of not more than 60°F per hour (16°C per hour). Standard weight blocks are usually cured at a temperature of 150-165°F (66-74°C), while lightweight blocks are cured at 170-185°F (77-85°C). When the curing temperature has been reached, the steam is shut off, and the blocks are allowed to soak in the hot, moist air for 12-18 hours. After soaking, the blocks are dried by exhausting the moist air and further raising the temperature in the kiln. The whole curing cycle takes about 24 hours.

  Another type of kiln is the high-pressure steam kiln, sometimes called an autoclave. In this type, the temperature is raised to 300-375°F (149-191°C), and the pressure is raised to 80-185 psi (5.5-12.8 bar). The blocks are allowed to soak for five to 10 hours. The pressure is then rapidly vented, which causes the blocks to quickly release their trapped moisture. The autoclave curing process requires more energy and a more expensive kiln, but it can produce blocks in less time.

Cubing

- 11 The racks of cured blocks are rolled out of the kiln, and the pallets of blocks are unstacked and placed on a chain conveyor. The blocks are pushed off the steel pallets, and the empty pallets are fed back into the block machine to receive a new set of molded blocks.
- 12 If the blocks are to be made into split-face blocks, they are first molded as two blocks joined together. Once these double blocks are cured, they pass through a splitter, which strikes them with a heavy blade along the section between the two halves. This causes the double block to fracture and form a rough, stone-like texture on one face of each piece.
- 13 The blocks pass through a cuber which aligns each block and then stacks them into a cube three blocks across by six blocks deep by three or four blocks high. These cubes are carried outside with a forklift and placed in storage

4.1.3 Asphalt Plant

An asphalt plant is a plant used for the manufacture of asphalt, macadam and other forms of coated road stone, sometimes collectively known as blacktop.

The manufacture of coated road stone demands the combination of a number of aggregates, sand and a filler (such as stone dust), in the correct proportions, heated, and finally coated with a binder, usually bitumen based or, in some cases, tar. The temperature of the finished product must be sufficient to be workable after transport to the final destination. A temperature in the range of 100 - 200 degrees Celsius is normal.

Increasingly, recycled asphalt pavement (RAP) is used as part of the mix. The binder used is flammable, and the heaters are large liquid or gas fired burners. RAP is introduced after the heating process and must be accounted for in the overall mix temperature calculations.

There are three main classes of plant: batch heater, semi-continuous (or "asphalt plant"), and continuous (or "drum mix"). The batch heater has the lowest throughput, the continuous plant the highest at up to around 500 Tonnes per hour.

Supply of road stone for large contracts is generally by tender with considerable pressure on price. A faulty batch of road stone must be planed up and re-laid, often with additional lane rental charges, at a cost which may be orders of magnitude higher than the original price, so sophisticated control systems are a necessity.

Sand

One key ingredient of most roadstones is sand. Sand generally has a high water content. Boiling off this water is a large part of the energy cost of heating the aggregate, in turn a significant part of the overall cost of operation. The water content of sand also varies considerably, especially when stored outdoors, being typically of the order of some tens of percent of the overall mass of wet sand. Since sand takes the form of small grains, with a high surface area per unit volume, and binder attaches to the surface of the aggregates, the amount of dry sand in the mix is particularly critical to the overall blend; the moisture content must be measured and the equivalent dry weight calculated.

Binder

Binder comes in different grades known as "penetration" or "pen" grades, with values varying between around 30 and 300. The pen value is an expression of the depth to which a standard needle will penetrate the surface of the binder at a specified temperature (the higher the value, the softer the binder). This has an effect on the workability of hot asphalt and the stiffness of the asphalt when cooled. Lower pen values give harder wearing. Asphalt wearing courses are typically 35-50 pen, base courses will be higher, typically 200 or 300 pen. The coating plant may combine binder of different grades to achieve a grade between those held on site.

Filler

Filler, as the name implies, fills the voids between aggregate grains and improves the wearing capabilities of the overall mix. It is stored and fed dry into the mix, during or after

addition of binder. A common source of filler is fines from the heating process recovered by bag filters or wet filtration ponds from the exhaust of the heating drum.

Types of plant

- Batch heater

A batch heater plant weighs the raw aggregates into a heater drum, where the batch is then heated up to temperature. The hot aggregate is discharged into a mixing drum where (dry) filler and binder are added. The blend is mixed and discharged either directly into the delivery vehicles or into a small weighing and collecting hopper. To increase throughput, the heater can be heating the next batch while the previous is being mixed. Capacity is usually of the order of tens of tonnes per hour.

Batch heater plant is used where short production runs are common (a different recipe can be used on each mix) or where total volume is low. Mobile batch heaters are available.

- Continuous

In the continuous plant, raw aggregate is brought up from ground hoppers at a precisely controlled rate and fed into a heater drum similar to that used in the asphalt plant. Once heated it is immediately coated in the same drum (with the binder spray bars situated behind the burner) or in a smaller drum situated immediately behind it. Finished product is almost invariably discharged into a hot store rather than directly into delivery vehicles.

Changing mix is achieved by varying the feed rates of the aggregate, filler and binder feeders, with time delays so that the change of blend occurs at the same point in the coating drum. Sand tends to move more slowly through the heating drum, so the blend proportions will not necessarily change at the same point on the feed conveyor. It is common to divert a small amount of material to a waste chute when the transition point reaches the hot elevator.

Drum mix plants are not really suitable for short production runs; although with sophisticated controls the change of mix can be accurate to within some seconds, production rates of hundreds of tonnes per hour may equate to a tonne every ten seconds or so.

Hot storage

Finished road stone must be kept heated to avoid setting. It is commonly stored in large electrically heated insulated stainless steel silos, from which it is weighed into delivery vehicles. This may be achieved by intermediate weigh hoppers (which may shuttle between hoppers) or by mounting the hoppers directly on load cells. Control of load out by this method involves accurately predicting the material "in flight" between the discharge door and the vehicle.

Control

Precise control is a necessity. Asphalt mixing and load out plant typically use a combination of industrialized computer control and programmable logic controllers to achieve this.

With asphalt being a real-time product, timing is important when it comes to delivering product amounts to job sites, etc. 2008 has provided plants with a level of control over equipment by utilizing GPS, RFID and other forms of tracking systems. Tracking provides information throughout the supply chain to make sure that the right amount and type of product is delivered to the correct site in a timely manner and with better accuracy.

4.1.4 Concrete Mixer

A concrete mixer (also commonly called a cement mixer) is a device that homogeneously combines cement, aggregate such as sand or gravel, and water to form concrete. A typical concrete mixer uses a revolving drum to mix the components. For smaller volume works portable concrete mixers are often used so that the concrete can be made at the construction site, giving the workers ample time to use the concrete before it hardens. An alternative to a machine is mixing concrete or cement by hand. This is usually done in a wheelbarrow; however, several companies have recently begun to sell modified tarps for this purpose.

Industrial mixers

Today's market increasingly requires consistent homogeneity and short mixing times for the industrial production of ready-mix concrete, and more so for precast/prestressed concrete. This has resulted in new technologies for concrete production. Worldwide, therefore, twin-shaft batch mixers are becoming more important for high-quality concrete production. They introduce very high turbulence into the mix and achieve about 95% homogeneity at only around 30 seconds mixing time per batch.

Special concrete transport trucks (in-transit mixers) are made to transport and mix concrete from a factory/plant to the construction yard. They are charged with dry materials and water, with the mixing occurring during transport. With this process, the material has already been mixed, and then is loaded into the truck. The ready mix truck maintains the material's liquid state, through agitation, or turning of the drum, until delivery.) The interior of the drum on a concrete truck is fitted with a spiral blade. In one rotational direction, the concrete is pushed deeper into the drum. This is the direction the drum is rotated while the concrete is being transported to the building site. This is known as "charging" the mixer. When the drum rotates in the other direction, the Archimedes screw-type arrangement "discharges", or forces the concrete out of the drum. From there it may go onto chutes to guide the viscous concrete directly to the job site

4.2 QUALITY CONTROL

The company will facilitate quality control by ensuring that its products are inspected for the highest quality before delivery. Similarly, sourcing of materials will be done with great care to ensure that the best materials are used in the manufacturing processes for various products.

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4.3 ENVIRONMENT PROTECTION

Our aim is to make this project environment friendly. The company will strive to observe stringent environment protection in its production process. It will seek environmental friendly technologies. All by products will be properly handled so as not to pollute the environment. The factory surroundings will be kept clean and trees are to be planted as part of environment conservation efforts.

5 MACHINERY EQUIPMENT AND CIVIL WORKS

5.1 MACHINERY

The complete set of requisite plant, machinery and equipment for production of Aggregates, Vibrated Building Blocks, Paving Blocks, Asphalt and Concrete is listed hereunder for reference. Prices indicated are based on quotations received from suppliers

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST US $	TOTAL COST US$
1	CHAIN EXCAVATOR	4	150,000	600,000
2	WHEEL LOADER	4	140,000	560,000
3	BULDOZER	1	180,000	180,000
4	DRILLING MACHINE	2	115,000	230,000

5	COMPRESSORS	6	40,000	240,000
6	WELDING MACHINE	3	10,000	30,000
7	SET OF TOOLS	3	10,000	30,000
8	WEIGH BRIDGE 80 TONS	1	70,000	70,000
9	GRIZZLY FEEDER	2	40,000	80,000
10	JAW CRUSHER	2	140,000	280,000
11	CONE CRUSHER	2	150,000	300,000
12	COMPACT CRUSHER	2	110,000	220,000
13	VIBRATING SCREENS	4	45,000	180,000
14	CONVOYER BELTS	8	15,000	120,000
15	NECESSARY MOTORS	16	8,000	128,000
16	CONCRETE MIXER 1 CUBIC METRE	1	20,000	20,000
17	VIBRATING MACHINES	15	4,000	60,000
18	PAVEMENTS MACHINES	10	3,000	30,000
19	CONCRETE PIPES MOLES	20	350	7,000
20	MOLES	40	250	10,000
21	CONCRETE MIXER 15 TONS	1	180,000	180,000
22	MOBILE MIXER VEHICULES	5	60,000	300,000
23	PUMP	1	100,000	100,000
24	ASPHALT MIXER 15 TONS	1	300,000	300,000

5.2 PLANT LOCATION AND CIVIL WORKS

5.2.1 Site and Location

As mentioned earlier, the project location is in an industrial area at Chigongwe, Dodoma Municipality. This is the location of company operations and it has an area which is large enough to contain all the manufacturing operations, materials storage, and stockyard and office space.

5.2.2 Production Building Required

The buildings required include residential houses, garage house, staff houses and public toilet. A warehouse will also be needed for storage of raw materials and some finished building materials and for onward delivery to the customers. Details appear below

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST US $	TOTAL COST US$
A	LAND AND BUILDING			
1	QUARRY ACQUISITION	32,000 Sq m	250,000	250,000
2	RESIDENTIAL HOUSES	6	20,000	120,000
3	WARE HOUSE	2	15,000	30,000
4	GARAGE HOUSE	2	10,000	20,000
5	STAFF HOUSES	3	10,000	30,000
6	PUBLIC TOILETS	8	1,000	8,000
7	WATER TANK	4	5,000	20,000
8	DIESEL TANK 30,000 LITRES	2	30,000	60,000
9	FOUNDATION FOR THE CRUSHER	1	100,000	100,000
10	AIR CONDITIONS	12	450	5,400
11	AIR CONDITIONS HORIZONTAL	5	750	3,750

5.2.3 Office Building

An office block to accommodate the clerical staff will be constructed within the premises at cost shown hereunder

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST	TOTAL COST
			US $	US$
1	OFFICE	1	10,000	10,000

5.3 UTILITY SERVICES

5.3.1 Water

A three-inch diameter pipeline to the location from the main pipeline is available. The plant water requirement is basically for making of building and paving blocks and for other factory uses. About 5,000 liters of water will be required per day. Therefore, a water reservoir with capacity of around 10,000 liters is planned for construction.

5.3.2 Electricity

The Tanzania Electric Supply Company Ltd. (TANESCO) has no problem in providing electricity to us to facilitate smooth production of various types of building materials.

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST	TOTAL COST
			US $	US$
1	TANESCO INSTALLATION + TRANSFORMER	SET	150,000	150,000

The project will also require the following machinery and equipment to facilitate generation of power for this project

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST US $	TOTAL COST US$
	POWER GENERATION			
1	ELECTRIC PANEL BOARD	1	50,000	50,000
2	GENERATOR 600 KVA	2	125,000	250,000
3	GENERATOR 60 KVA	1	25,000	25,000
				-

6 RAW MATERIALS AND OTHER PRODUCTION INPUTS: REQUIREMENTS AND AVAILABILITY

6.1 BASIC MATERIALS

The basic Raw Materials used in the manufacture of different building materials include rocks, gravel, powdered portland cement, water, asphalt and sand.

6.2 UTILITIES

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6.2.1 Power

As said earlier in this report, the source of energy for the proposed project will be electric power. Power is consumed in quite large quantities and is among the higher cost elements.

A standby power generator has also been budgeted for to avoid inconveniences caused by frequent power cuts by TANESCO.

7 MANPOWER AND ORGANIZATION

The proposed project will have three independent departments, namely:

- Production and Technical Services
- Sales and Marketing

- Administration and Finance

7.1 ORGANIZATION

The Board of Directors shall manage the project at policy level. The top most person in the day to day running of the project will be the Managing Director who will be the project manager. Under the Managing Director's office will be the three departments mentioned above. Each department will comprise a number of sections each headed by a section head as follows.

PRODUCTION AND TECHNICAL SERVICES DEPARTMENT

- Aggregate section
- Building Block/Brick section
- Paving Block section
- Asphalt section
- Concrete section
- Raw Materials Stores
- Quality Control section
- Research and Development section
- Repair / Maintenance section

SALES AND MARKETING

- Marketing Section
- Sales and Distribution Section
- Finished Goods Stores
- Procurement and Logistics Section

ADMINISTRATION AND FINANCE DEPARTMENT:

- Procurement
- Accounts
- Personnel and Administration
- Security

Each section will be manned by a number of personnel with varying education levels and work experiences.

The management team will comprise the Managing Director/Project Manager, Site Manager/Production Manager and the Marketing Manager.

7.2 RESPONSIBILITIES

Responsibilities will be as follows:

7.2.1 Production and Technical Services Department

This will be responsible for production planning and overseeing that daily production activities are carried. It will further be responsible for repair and maintenance of company assets and research and development activities.

Technical Staff in each of the other sections will likewise assist the Site/Production Manager execute his duties. We recommend that expatriates be employed to man these positions at least for the initial 2 - 3 years.

7.2.2 Finance and Administration Department

A qualified accountant with experience in administrative issues will head the department. He will be responsible for the administration of the company as well as overseeing the financial aspects of the company. The administration and finance department will comprise three sections, namely:

- The administrative section which will be responsible for the general administrative matters of the company as well as personnel issues.
- The finance section, which will be responsible for financial issues. It will also be responsible for the proper maintenance of books of accounts and financial planning.
- The purchasing section which will be responsible for the purchase of raw materials, spare parts and equipment. This section will also be responsible for the receipt, storage and issue of purchased materials.

7.2.3 Sales and Marketing Department.

This Department will be headed by the Sales and Marketing Manager who will be responsible for the development of a sustainable sales and distribution network throughout the country. This will involve developing and maintaining a fleet of distribution vehicles and recruitment and training of qualified and well motivated marketing and sales personnel.

7.3 MANPOWER REQUIREMENT

The permanent manpower requirement for running the proposed plant is 66, with the breakdown mentioned in attached schedule 5.

7.4 SOURCE OF MANPOWER AND WAGE BILL

Manpower for proposed project will be employed from local sources, except for a few expatriates who would basically be engaged in the training of local staff. The workers will be given on-the-job training to familiarize them with the proposed machinery and equipment. The total wage bill per annum will be US$ 239,712 as shown in schedule 5

8. INVESTMENT AND FINANCING

8.1 ASSUMPTIONS

The financial projections to determine the viability of the project are based on the following key assumptions:

- The production of various building materials will start from second half of the year 2009.
- The whole project output will be sold locally during initial years of project implementation.
- Financial calculations are based on current market prices and costs are assumed constant throughout the operating period under review on the assumption that if operation costs change, selling prices will change proportionally to preserve the profit margins.
- The project has adopted the currency exchange rate of United States Dollar 1 = Tanzania Shilling 1,300.00.

8.2 SUMMARY OF CAPITAL COSTS

On completion of project implementation, the total investment will reach US$ 6,267,150 as per attached schedule 3.

8.3 BUILDING AND CIVIL WORKS COSTS

The main civil works required for the building for the plants to be installed and operated will be construction of factory, construction of warehouse, construction of residential houses for staff, electrification and water supply, installation of overhead tank, etc. This aspect is expected to cost US$ 647,150.

8.4 PLANT MACHINERY AND EQUIPMENT COSTS

The main machines for the envisaged project have been explained earlier. The total investment on machinery and equipment is based on a quotation received from suppliers for main production machinery and amount of to US$ 4,255,000 approximately.

8.5 FURNITURE AND FITTINGS

The costs for this item have been estimated at US$ 55,000. The items to be purchased will comprise office furniture, computers, & other equipments for the office and factory use.

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST US $	TOTAL COST US$
1	COMPUTER APPLIANCES	8	2,500	20,000
2	PRINTERS	6	500	3,000
3	FURNITURE AND FIXTURE	4	6,000	24,000
4	RECORDS BOOKS	2	400	800
5	STATIONERIES	2	600	1,200
6	UNIFORMS	50	120	6,000

8.6 MOTOR VEHICLES

For company work, we intend to procure the following vehicles at cost of US$ 890,000

S/N	PARTICULARS / ITEMS	UNITS REQUIRED	UNIT COST US $	TOTAL COST US$
1	DUMPER TRUCKS	6	65,000	390,000
2	TIPPER TRUCKS	6	60,000	360,000

3	FORCKLIFT	1	15,000	15,000
4	CRANE 60 TONS	1	75,000	75,000

8.7 PRE-PRODUCTION CAPITAL EXPENDITURES

These include project development cost for feasibility study and start-up expenses, transportation of machinery, installation, and other overheads during installation. A budget of US$ 120,000 is considered adequate for this item

8.8 INITIAL WORKING CAPITAL

Initial net working capital requirement at maximum for the proposed project works out at about US$ 300,000. This is mainly for the procurement of initial stocks of raw materials. Rest of the requirement of the working capital will be raised from commercial banks as and when the need arises. This will fluctuate as per stocks in hand.

8.9 FINANCING PATTERN

The financing of the project will be from 100% shareholder's equity. It is anticipated that the financing of the project will take the following form.

EQUITY (FOREIGN) US $	LOAN
6,267,150	0

9 COST OF OPERATIONS

The anticipated costs for operating the project are detailed in the following sections and summarized in attached schedule 2.

9.1 OFFICE RENT & OPERATION

This includes cost for Water and Energy for various manufacturing units for building materials. The costs are expected to increase from US$ 14,760 in the first year of operation to US$ 16,613 in the fifth year.

9.2 ADMINISTRATIVE OVERHEADS

This cost item has been estimated to cost US$ 139,921 in the first year of operation. This is anticipated to increase to US$ 157,482 during the fifth year of operation.

9.3 VEHICLE RUNNING EXPENSES

Vehicle running expenses include fuel, lubricants, road licenses, insurance, etc. This is expected to increase from US$ 28,800 in first year of operation to US$ 32,415 in the fifth year of operation.

9.4 SALARIES AND WAGES

The number of employees, along with their incomes, is shown in attached schedule 5. The total annual wage package is estimated at US$ 239,712 in first year of operation. The figure is calculated to grow to US$ 269,798 when the project reaches its fifth year of operation.

9.5 DEPRECIATION

The depreciation cost element has been estimated to stand at US$ 289,858 per annum during 5 years of project implementation.

10 FINANCIAL ANALYSIS

10.1 INCOME AND EXPENDITURE

10.1.1 Income

The proposed project expects to earn its income through the sale of various building materials. At sustainable level of production, the total sales are expected to increase from US$ 1,480,750 in the first year of production to US$ 1,799,861 in the fifth year of operation.

10.1.2 Expenditure

All project costs have been discussed in Chapter 9 above and are summarized in attached schedule 2.

10.2 NET INCOME STATEMENT

The project generates profit from the first year of operation and can easily meet both its long term and short-term obligations in less then five years.

10.3 CASH FLOW HIGHLIGHTS

The project's cash flow is impressive as the project has positive end of the year cash flow from first to fifth year of operation.

11. ECONOMIC BENEFITS OF THE PROJECT

11.1 EMPLOYMENT

The expansionary project will provide additional permanent direct employment to 66 individuals mostly local Tanzanians.

11.2 TAXES

The government will earn revenue from taxes.

11.3 FOREIGN CURRENCY EARNINGS

The project will bring in the country foreign currency when the company starts exporting some of the building materials to neighbouring countries at later stages of project implementation.

11.4 PRODUCTION OF HIGH QUALITY BUILDING MATERIALS

People will be able to buy high quality building materials as the company will employ state of the art technology in manufacturing the products.

12. CONCLUSION AND RECOMMENDATIONS

12.1 CONCLUSION

In all aspects, the project is feasible, sustainable and beneficial not only to the investors but also to the ultimate consumers and the economy as a whole. M/S Fortune Quarry (T) Company Limited is expected to produce useful building materials initially for domestic market and later for export market.

12.2 RECOMMENDATIONS

Provided all other economic factors remain substantially the same, it is strongly recommended that the project be implemented with immediate effect. It is further recommended that an application for TIC Certificate of Investment Incentives be submitted to Tanzania Investment Centre with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

FORTUNE QUARRY (T) COMPANY LTD

PROJECTED INCOME & EXPENDITURE STATEMENT

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
Sales Revenue	1,480,750	1,554,788	1,632,527	1,714,153	1,799,861
Cost of Sales	148,075	155,479	163,253	171,415	179,986
Gross Profit	1,332,675	1,399,309	1,469,274	1,542,738	1,619,875
Operating Expenses:					
Motor Vehicle running expenses	28,800	29,664	30,554	31,471	32,415
Salaries and wages	239,712	246,903	254,310	261,940	269,798
Pension contribution	23,971	24,690	25,431	26,194	26,980
Depreciation	289,858	289,858	289,858	289,858	289,858
Milling cost	46,674	48,074	49,516	51,002	52,532
Mining cost	475,909	490,186	504,892	520,039	535,640
Office Rent & Operation	14,760	15,203	15,659	16,129	16,613
Administrative-Overhead	139,921	144,119	148,442	152,895	157,482
Communication cost	19,200	19,776	20,369	20,980	22,610
Total Expenses	**1,278,805**	**1,308,473**	**1,339,032**	**1,370,507**	**1,403,926**
Profit before Tax	**53,870**	**90,836**	**130,243**	**172,231**	**215,949**
Tax (30%)	16,161	27,251	39,073	51,669	64,785
Profit After Tax	**37,709**	**63,585**	**91,170**	**120,562**	**151,164**

FORTUNE QUARRY (T) COMPANY LTD

PROJECTED BALANCE SHEET

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
Fixed Assets					
Long-term Assets	5,797,150	5,507,293	5,217,435	4,927,578	4,637,720
Depreciation	289,858	289,858	289,858	289,858	289,858
Total Long-term Assets	**5,507,293**	**5,217,435**	**4,927,578**	**4,637,720**	**4,347,863**
Current Assets					
Cash	612,287	907,466	1,237,777	1,605,588	2,012,401
Inventory	58,333	61,250	64,312	67,528	70,904
Accounts Receivable	146,197	202,506	251,170	291,624	323,570
Total Current Assets	**816,817**	**1,171,222**	**1,553,259**	**1,964,739**	**2,406,876**
Total Assets	**6,324,109**	**6,388,657**	**6,480,837**	**6,602,459**	**6,754,738**
Current Liabilities					
Accounts Payable	4,442	4,664	4,898	5,142	5,400
Other Current Liabilities	14,808	15,548	16,325	17,142	17,999
Subtotal Current Liabilities	**19,250**	**20,212**	**21,223**	**22,284**	**23,398**
Long-term Liabilities					
Long-term Liabilities					
Total Liabilities	**19,250**	**20,212**	**21,223**	**22,284**	**23,398**
Net Assets	**6,304,859**	**6,368,445**	**6,459,614**	**6,580,175**	**6,731,340**
Capital and Reserves					
Owners Contribution	6,267,150	6,267,150	6,267,150	6,267,150	6,267,150
Retained Earnings	37,709	101,294	192,464	313,026	464,190
Total Capital	**6,304,859**	**6,368,444**	**6,459,614**	**6,580,176**	**6,731,340**
	0	**0**	**- 0**	**- 0**	**0**

FORTUNE QUARRY (T) COMPANY LTD

PROJECTED CASHFLOW

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
CASHFLOW FROM OPERATIONS:					
Cash Sales	1,184,600	1,243,830	1,306,022	1,371,323	1,439,889
VAT Receipt	222,113	233,218	244,879	257,123	269,979
Subtotal Cash Received	1,406,713	1,477,048	1,550,901	1,628,446	1,709,868
Expenditures from Operations:					
Purchases	125,864	132,157	138,765	145,703	152,988
Additional Cash Spent	988,947	1,018,616	1,049,174	1,080,649	1,114,069
VAT payments	29,615	31,096	32,651	34,283	35,997
Subtotal Cash payment	1,144,426	1,181,868	1,220,589	1,260,635	1,303,054
CASH FLOW FROM OPERATIONS	**262,287**	**295,180**	**330,311**	**367,810**	**406,814**
CASH FLOW FROM INVESTMENTS:					
Purchase of Assets	- 5,797,150				-
Pre- expenses	- 120,000				
CASH FLOW FROM INVESTMENTS:	- **5,917,150**	-	-	-	-
CASH FLOW FROM FINANCING:					
Owners Equity Contribution	6,267,150				
CASH FLOW FROM FINANCING	**6,267,150**	-	-	-	-
NET CASHFLOW FOR PERIOD	**612,287**	**295,180**	**330,311**	**367,810**	**406,814**
CASHFLOW AT START OF YEAR	-	612,287	907,466	1,237,777	1,605,588
CASHFLOW AT THE END OF YEAR	**612,287**	**907,466**	**1,237,777**	**1,605,588**	**2,012,401**

FORTUNE QUARRY (T) COMPANY LTD
SCHEDULES AND GRAPHS

SCHEDULE 1

REVENUE PROJECTION

	YEARS				
PRODUCTS	**YEAR 1 USD**	**YEAR 2 USD**	**YEAR 3 USD**	**YEAR 4 USD**	**YEAR 5 USD**
Revenue	1,480,750	1,554,788	1,632,527	1,714,153	1,799,861
	1,480,750	**1,554,788**	**1,632,527**	**1,714,153**	**1,799,861**

SCHEDULE 2

OTHER OPERATING COSTS

	YEARS				
OTHER OPERATING COST	**YEAR 1 USD**	**YEAR 2 USD**	**YEAR 3 USD**	**YEAR 4 USD**	**YEAR 5 USD**
Motor vehicle running expenses	28,800	29,664	30,554	31,471	32,415
Salaries and wages	239,712	246,903	254,310	261,940	269,798
Pension contribution	23,971	24,690	25,431	26,194	26,980
Depreciation	289,858	289,858	289,858	289,858	289,858
Milling cost	46,674	48,074	49,516	51,002	52,532
Mining cost	475,909	490,186	504,892	520,039	535,640
Office Rent & Operation	14,760	15,203	15,659	16,129	16,613
Administrative Overhead	139,921	144,119	148,442	152,895	157,482
Communication cost	19,200	19,776	20,369	20,980	21,610
Total costs	**1,278,805**	**1,308,473**	**1,339,032**	**1,370,507**	**1,402,926**

SCHEDULE 3

COST STRUCTURE

PARTICULAR	AMOUNT USD
Land and Buildings	647,150
Plant and Equipment	4,255,000
Motor Vehicles	840,000
Furniture & Fixtures	55,000
Pre expenses (& workshop & support)	120,000
Others/ Misc	50,000
Working Capital	300,000
TOTAL	**6,267,150**

SCHEDULE 4

FIXED ASSETS SCHEDULE

NAME OF ASSETS	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
Land and Buildings	647,150	614,793	582,435	550,078	517,720
Machinery, tools & Equipment	4,255,000	4,042,250	3,829,500	3,616,750	3,404,000
Motor Vehicles	840,000	798,000	756,000	714,000	672,000
Furniture & Fixtures	55,000	52,250	49,500	46,750	44,000
TOTAL	**5,797,150**	**5,507,293**	**5,217,435**	**4,927,578**	**4,637,720**
DEPRECIATION	**YEAR 1 USD**	**YEAR 2 USD**	**YEAR 3 USD**	**YEAR 4 USD**	**YEAR 5 USD**
Land and Buildings	32,358	32,358	32,358	32,358	32,358
Machinery, tools & Equipment	212,750	212,750	212,750	212,750	212,750
Motor Vehicles	42,000	42,000	42,000	42,000	42,000
Furniture & Fixtures	2,750	2,750	2,750	2,750	2,750
ANNUAL DEPRECIATION	**289,858**	**289,858**	**289,858**	**289,858**	**289,858**
CLOSING FIXED ASSETS	**5,507,293**	**5,217,435**	**4,927,578**	**4,637,720**	**4,347,863**

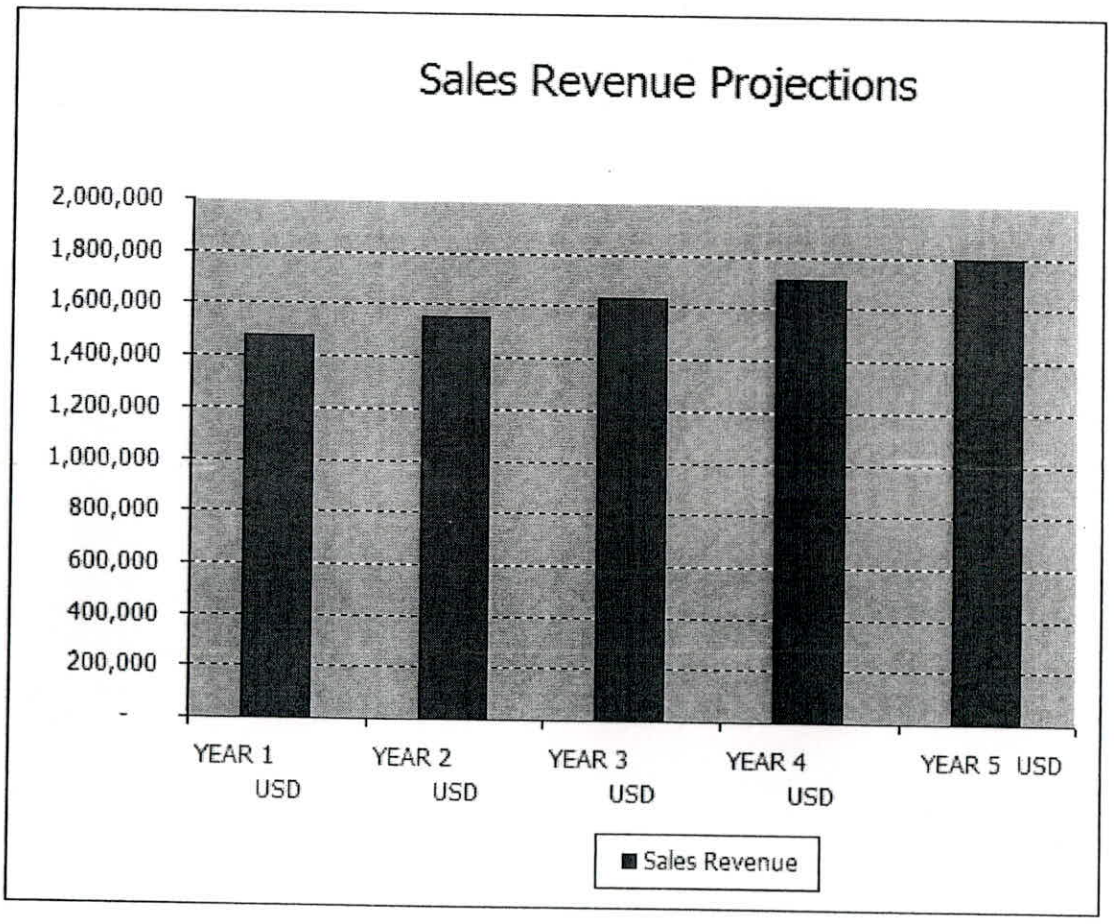
SCHEDULE 5

SALARIES & WAGES

NO	DEPARTMENTS/DESIGNATION	NO.	SALARY PER MONTH	SUBTOTAL MONTHLY SALARY	ANNUAL GROSS SALARY
1	Project Manager	1	2400	2400	28,800
2	Site Manager	3	1000	3000	36,000
3	Marketing Manager	1	1200	1200	14,400
4	Technical Officers	5	480	2400	28,800
5	Technical Assistants	7	320	2240	26,880
6	Operators/Drivers	13	200	2600	31,200
7	Quarry Staff	5	320	1600	19,200
8	Crusher staff	3	240	720	8,640
9	Concrete Mixer staff	7	160	1120	13,440
10	Asphalt Plant staff	8	160	1280	15,360
11	Secretary	3	120	360	4,320
12	Messenger	2	80	160	1,920
13	Security Guards	8	112	896	10,752
	TOTAL USD $	66	6,792	19,976	239,712

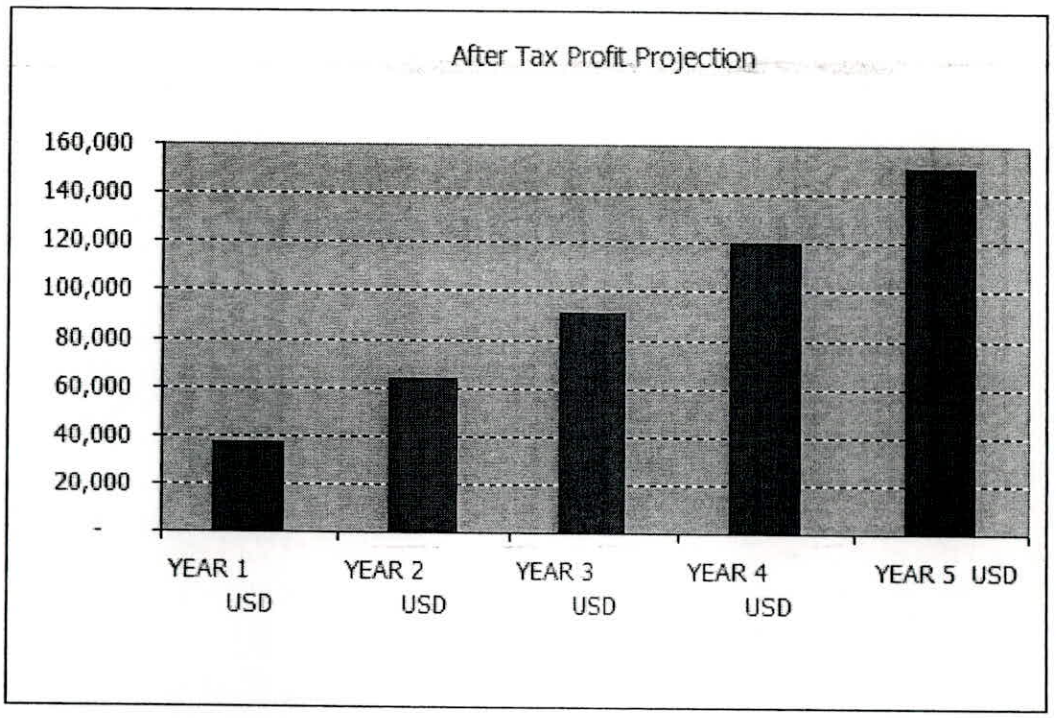
REVENUE PROJECTION

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
Sales Revenue	1,480,750	1,554,788	1,632,527	1,714,153	1,799,861



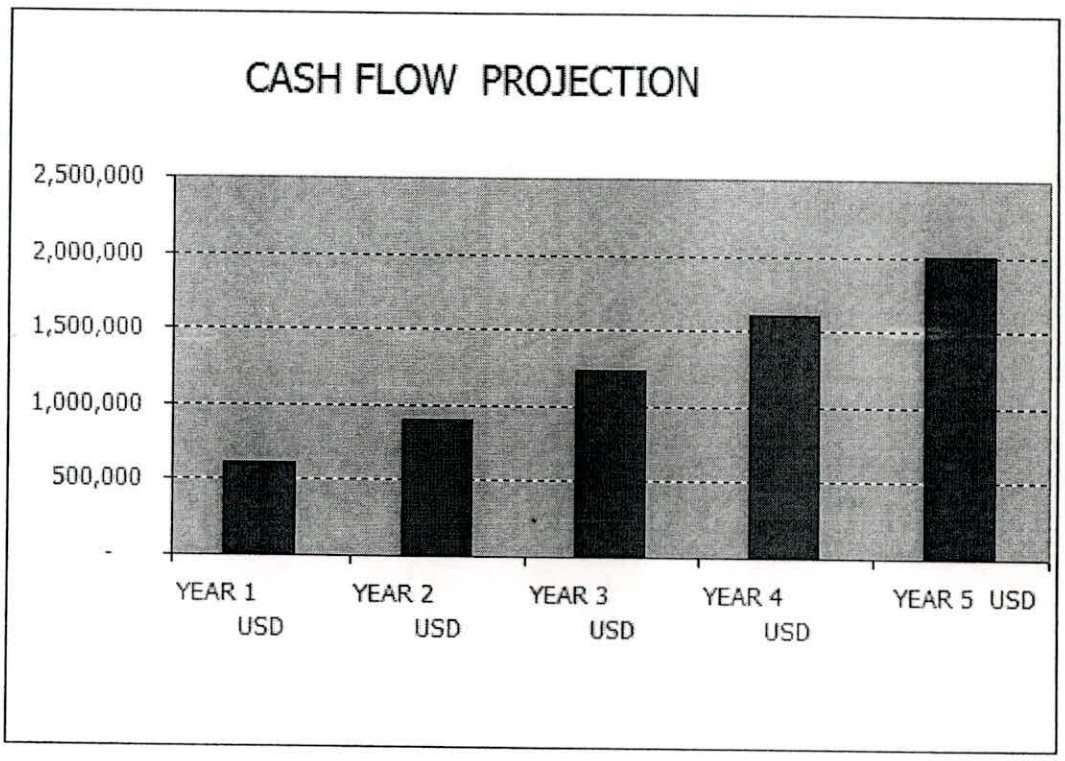
PROFIT PROJECTION

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
Profit After Tax	37,709	63,585	91,170	120,562	151,164



CASH FLOW PROJECTION

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD
CASH FLOW AT THE END OF THE YEAR	612,287	907,466	1,237,777	1,605,588	2,012,401



NET PRESENT VALUE

	YEAR 1 USD	YEAR 2 USD	YEAR 3 USD	YEAR 4 USD	YEAR 5 USD	TOTAL
CASH OUTFLOW AT THE BEGINNING OF THE PROJECT	**-6,267,150**					**-6,267,150**
DISCOUNTED CASH INFLOW	612,287	295,180	330,311	367,810	406,814	**2,012,401**
NET CASH FLOW						**- 4,254,749**