FILE NUMBER PART TICC PP.10/04.2601

THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE
TANZANIA INVESTMENT CENTRE

FILE BEGINS | **ENDS** | **PART**

FILE TITLE

CONFIDENTIAL

FILE NUMBER
TICC PP.10
04 2601

INDEX HEADINGS

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
C-DIF	F.11	~~FCM~~	20/5/20											
PS	F.11		26/5/20											
AG-DIF	AG		28/5/20	Noted										

TITLE

DRUMAX CONSTRUCTION

LIMITED

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		29/1/14											
Ditto	F1	"	27/1/14											
DIF	F-9		6/2/14											
Ditto	F4	"	6/2/14											
EXD	M1	"	7/2/14											
DIF	J5		17/2/14											
ADBM	F5		19/2/14											
DIF	F7		19/2/14											
AHBM	F7		14/4/14											
DIF	F9		14/3/18											
Phina	F.9		15/3/18											
AJ DIF	M3		19/03											
IFPO	M4		20/3/18											
Vend	M4		21/3/1											
ACM	F9MS		9/4/18											
SZM	F9MS		9/4/18											

LIMITED

MINUTE SHEET

Dokezo
No.

1.0 **EXD**

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

(a) Minimum finance investment threshold has been exceeded, the project expects to invest US$ 7.289M

(b) Legal entity has been incorporated under certificate

No. 103098 - 01 of 10/11/2013

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. Senzia
DIF
31^{st} January, 2014

APPROVED BY EXD
Sign:
Date: 04/02/14

2.0 **EXD**

In response to the TIC letter of registration dated 31st January 2014

the project has submitted the required documents namely: -

(a) Company Board Resolution.

(b) Reference letter/Financing from CRDB Bank LTD

(c) Lease Agreement as evidence of land

With the above submission EXD is requested to sign Certificate of Incentives No. 042601 herein attached.

6/02/2014

APPROVED BY EXD
Sign:
Date: 10/02/14

DIF

MINUTE SHEET

Dokezo No. 3

Ag DIF

The project is applying for the extention of the implementation period to allow them add a new production line after acquiring a contract to supply construction materials for TANROAD projects.
I recommend the extention of two years to enable them implement the planned activity

[signature]
Rhina Ly
19/03/17

40 IFPO

As per EXD requirement, arrange PVV and TRA exemptions to be submitted.

[signature]
Ag. DIF
21/03/2018

5. Zonal Manager South - Mtwara (SZM)

Please communicate & visit with the project to provide list of exemptions they got with value. Also a financial statement copy of their [illegible] [illegible] certificate [illegible]

[signature] 9.4.2018
Ag IFM-A. ~~ACM~~

MINUTE SHEET

Dezo No. 6

Ag. C-DIF

The project is forwarded to you for further scrutiny.
I humbly submit for your guidance.

Baitha
PLFO
28/5/2020

MINUTE SHEET

Dokezo
No.

DRUMAX CONSTRUCTION LIMITED

P O Box 72809
DAR ES SALAAM

(1)

Ref.No: DCL/TIC/JAN/2014 28TH January 2014

TANZANIA INVESTMENT CENTRE
29 JAN 2014

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

Dear Sir,

RE: APPLICATION FOR TIC CERTIFICATE OF INCENTIVES

We are incorporated company created for purposes of establishing a project for manufacturing Building Material. The Proposed project will be in Mtwara. It is due to this reasons that we hereby submit our application for TIC Certificate of Incentives to facilitate implementation of the project.

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

1. A 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. A certified copy of Title deed.
5. Company Board Resolution to register with TIC
6. A copy of our Feasibility study showing the implementation Period,

Thank you for your kind consideration

Yours Sincerely,

.....
DIRECTOR

DRUMAX CONSTRUCTION LTD.
P. O. Box 72809
DAR ES SALAAM

LEASE AGREEMENT

LEASE AGREEMENT made this 29th day of November 2013 BETWEEN **MASELINE TAABU** of P. O. Box 72809, Dar es Salaam (hereinafter referred to as ("**the Lessor**") of the one part **DRUMAX CONSTRUCTION LIMITED** of P.O Box 72809, Dar es salaam, a limited liability company incorporated in Tanzania (hereinafter referred to as "the Lessee") of the other part:

WHEREBY IT IS MUTUALLY AGREED AS FOLLOWS:

1. Lessor Being the registered owner and occupier of Primary Mining Licenses No. 003685SZ and 003686SZ issued by the ministry of energy and mining for CHIPITE, MASASI DISTRICT. Lessor hereby agrees to let and the Lessee agrees to take the License for a term of 07 years from 29th November 2013 to 28th November 2020.

2. The monthly rent shall be Tshs. **US$. 100** per month.

3. The demised premises shall be used for mining processing facilities. It shall be kept and maintained by the Lessee in a good condition.

4. The Lessee shall not erect any permanent structure without prior written consent of the Lessor.

5. The Lessee shall not sublet, assign or part with possession of the demised premises without having previously obtained the written consent of the Lessor.

6. In the event of the Lessee being desirous of renewing the tenancy herein granted, he shall give the Lessor written notice of 3 months before expiration of this lease agreement.

7. Duly performing her obligations and upon observing all the covenants and conditions hereinbefore stipulated, the

Lessee shall enjoy peaceful occupation of the demised premises without any interruption by the Lessor or any other person claiming on his behalf.

IN WITNESS WHEREOF the parties hereto have executed these presents on the day and year and in the manner hereinafter appearing:

SIGNED and **DELIVERED** by the said)
MASELINE TAABU who is Identified to) .....
me by Ibraheem Fakeeh later being) **LANDLORD**
known to me personally this ....29.....)
day of ...NOV... 2013)

BEFORE ME

Signature: .....

Full name: .....

Address: .....

.....

Qualification: .....

ABDULFATTAH A. AL-BAKRY ADVOCATE, NOTARY PUBLIC COMMISSIONER FOR OATHS P.O. Box 14693, Dar es Salaam

SEALED with the **COMMON SEAL OF**)
DRUMAX CONSTRUCTION LIMITED at)
Dar es Salaam this 29th day of November 2013) .....
SEAL

In the presence of its officers duly authorized

1. Name : IBRAHEEM FAKEEH

   Signature.....

   Qualification: DIRECTOR

2. Name : GHAZI FARRAN

Signature..................

Qualification: DIRECTOR

BEFORE ME

Signature: ....

Full name: ....

Address: ....

....

Qualification: ....

ABDULFATTAH A. AL-BAKRI ADVOCATE, NOTARY PUBLIC & COMMISSIONER FOR OATHS P.O. Box 14693, D.S.M.

Drawn by:

MJ Diamond Advocates,
NIC Investment House,
2nd Floor, Wing 'A",
P.O. Box 2494,
Dar Es Salaam,
TANZANIA.

TANZANIA

Certificate of Incorporation

Section 15

No 103098

I HEREBY CERTIFY THAT

DRUMAX CONSTRUCTION LIMITED

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

Given under my hand at Dar es salaam

this **11TH** day of **OCTOBER**

TWO THOUSAND AND THIRTEEN

Asst. Registrar of Companies

CTIN.: 2170164

ISO 9001 : 2008 Certified

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

DRUMAX CONSTRUCTION LIMITED

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

122-427-269

with effect from 07-11-2013

P. N. Kassera

COMMISSIONER FOR DOMESTIC REVENUE

OFFICIAL SEAL

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

12th December 2013

Tanzania Investment centre

Dar es salaam

Tanzania

CRDB BANK PLC
Tower Branch,
P.O. Box 2302, Dar es Salaam, Tanzania
Tel: +255 (0) 22 2129603/2126762/64,
Fax: +255 (0)22 2129604,
Website: http/www.crdbank.com

Dear sir/Madam

RE;CONFIRMATION LETTER I.F.O DRUMAX CONSTRUCTION LTD

Kindly refer to the above subject.

We would like to confirm to you that **Drumax construction company ltd** is our customer operating account no.**0150390566600** for TZS,It is a new account opened on 30.11.2013

Drumax construction company ltd has submitted a letter to us requesting confirmation letter

Please attend them as appropriate

Yours faithfully

CRDB BANK PLC

.CAN MESSEYEK

BRANCH DIRECTOR

TOWER BRANCH

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY AND MINERALS

THE MINING (MINERAL RIGHTS) REGULATIONS, 2010

PRIMARY MINING LICENCE 003685SZ

The Mining Act, 2010

The exclusive right, subject to the provisions of the Mining Act, 2010 and of the regulations thereunder now in force or which may come into force during the continuance of this primary mining licence or any renewal thereof is hereby granted to M/S **Maseline Taabu** of **P.O Box 72809, Dar-es-Salaam** (hereinafter called the Licensee), to prospect and mine for **Building Materials**, at **Chipite,** in **Masasi** District, QDS **294/3** over an area described in Annex A.

This Licence, unless sooner cancelled, suspended or surrendered pursuant to the provisions of the Mining Act, 2010, shall be valid for a period of **seven (7)** years, effective from the date of grant.

Granted this 28th day of NOVEMBER 2013

.....

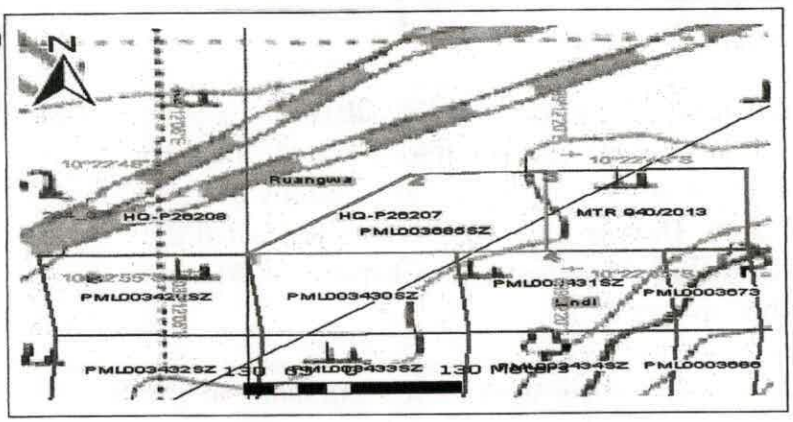
Wilfred R. Machumu
ZONAL MINES OFFICER
Southern Zone

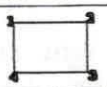
ANNEX A

DESCRIPTION OF THE PRIMARY MINING LICENCE AREA

The Primary Mining Licence is at **Chipite** area in **Masasi** District, QDS **294/3** defined by the following corner co-ordinates (Arc 1960):

Corner	Latitude	Longitude
1	- 10 deg. 22 min. 53.60 sec.	39 deg. 12 min. 07.20 sec.
2	- 10 deg. 22 min. 47.40 sec.	39 deg. 12 min. 13.70 sec.
3	- 10 deg. 22 min. 47.30 sec.	39 deg. 12 min. 19.00 sec.
4	- 10 deg. 22 min. 53.60 sec.	39 deg. 12 min. 19.00 sec.



Legend	
Licensed area	
License Number	PML003685SZ
District	Masasi
Direction	

An area of approximately **4.98** Hectares.

ANNUAL RENT PAYMENTS

Year	ERV	Amount (TShs.)	Date	Signature & Stamp
1.	51512004	199200/=	28/11/2013	FOR ZONAL MINES OFFICER MINISTRY OF ENERGY AND MINERALS MTWARA
2.				
3.				
4.				
5.				
6.				
7.				

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF ENERGY AND MINERALS

THE MINING (MINERAL RIGHTS) REGULATIONS, 2010

PRIMARY MINING LICENCE 003686SZ

The Mining Act, 2010

The exclusive right, subject to the provisions of the Mining Act, 2010 and of the regulations thereunder now in force or which may come into force during the continuance of this primary mining licence or any renewal thereof is hereby granted to M/S **Maseline Taabu** of **P.O Box 72809, Dar-es-Salaam** (hereinafter called the Licensee), to prospect and mine for **Building Materials**, at **Chipite,** in **Masasi** District, QDS **294/3** over an area described in Annex A.

This Licence, unless sooner cancelled, suspended or surrendered pursuant to the provisions of the Mining Act, 2010, shall be valid for a period of **seven (7)** years, effective from the date of grant.

Granted this 28th day of NOVEMBER 2013

.....

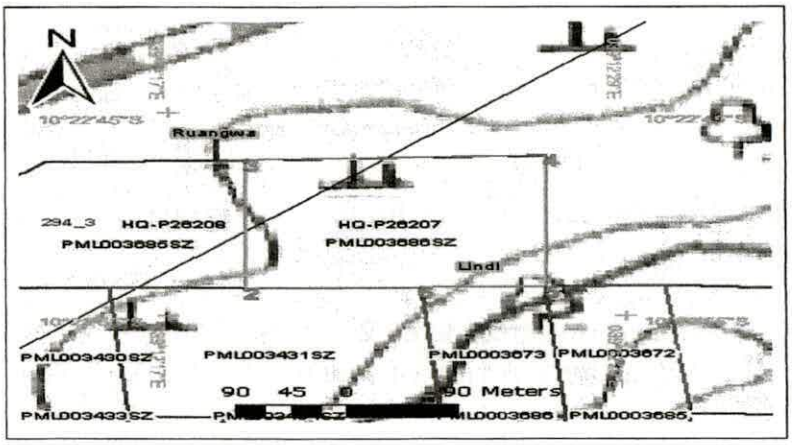
Wilfred R. Machumu
ZONAL MINES OFFICER
Southern Zone

ANNEX A

DESCRIPTION OF THE PRIMARY MINING LICENCE AREA

The Primary Mining Licence is at **Chipite** area in **Masasi** District, QDS **294/3** defined by the following corner co-ordinates (Arc 1960):

Corner	Latitude	Longitude
1	- 10 deg. 22 min. 53.60 sec.	39 deg. 12 min. 23.60 sec.
2	- 10 deg. 22 min. 53.60 sec.	39 deg. 12 min. 19.00 sec.
3	- 10 deg. 22 min. 47.30 sec.	39 deg. 12 min. 19.00 sec.
4	- 10 deg. 22 min. 47.10 sec.	39 deg. 12 min. 26.90 sec.
5	- 10 deg. 22 min. 53.58 sec.	39 deg. 12 min. 26.90 sec.
6	- 10 deg. 22 min. 53.58 sec.	39 deg. 12 min. 23.60 sec.



Legend	
Licensed area	
License Number	PML003686SZ
District	Masasi
Direction	

An area of approximately **4.72** Hectares.

ANNUAL RENT PAYMENTS

Year	ERV	Amount (TShs.)	Date	Signature & Stamp
1.	51512005	188800/=	28/11/2013	FOR ZONAL MINES OFFICER MINISTRY OF ENERGY AND MINERALS MTWARA
2.				
3.				
4.				
5.				
6.				
7.				

Form PA 1 Serial No. 9658 TIC N 11668

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 ....GHAZI FARRAN.....

(diretor/directors/agent of ....DRUMAX CONSTRUCTION LIMITED.....

(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 ....MTWARA.....

.....

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 .....

4. The Principal Officers of the Company are ....GHAZI FARRAN, ABBAS FAKIH, IBRAHEEM FAKEEH, ELIAS EL TAYNAR.....

.....

5. Auditors of the Company are ....TO BE APPOINTED.....

.....

6. The authorized share capital of the Company is Tshs./US$ .....

.....

.....

7. The intended capital investment of the Company in terms of Section 2(2) of the Act is Tshs./US$ ..... 7,128,900/- .....

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

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, ... NER HAMMOUD ..... of Post Office Number .....

..... do solemnly and sincerely declare that I am a director/duly authorized agent of ..... DRUMAX CONSTRUCTION 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 3rd day of February 2014 }

Applicant

DRUMAX CONSTRUCTION LTD

Before me:

.....
Commissioner for Oaths

ILDEFONCE LUNILI NDEMELA
ADVOCATE, NOTARY PUBLIC & COMMISSIONER FOR OATHS
P.O. Box 35904, D.S.M.

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

APPLICATION SUMMARY

Company Name: DRUMAX CONSTRUCTION LTD

Certificate of Incorporation Number: 103098 Status: NEW

Certificate of Incorporation Date: 11 OCTOBER 2013

Post Box: 72809

Town: DAR ES SALAAM

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

Investment Financing Plan in Million US$/Tshs.

Foreign Equity	Local Equity	Foreign Loan	Local Loan
7.1289			

Project Objectives: ESTABLISH PROJECT FOR MANUFACTURING OF BUILDING MATERIALS

Capacity:

Employment: Foreign: 4 Local: 37 Total: 41

Implementation Period: 3 YRS

Project Location

Site/Plot/Block No.:

Street: CHIPITE District: MASASI Region: MTWARA

(Attach sketch map showing project location)

Shareholders	Nationality	%
GHAZI FARRAN	LEBANESE	25
ABBAS FAKIH	LEBANESE	25
IBRAHEEM FAKEEH	LEBANESE	25
ELIAS EL TAYYAR	LEBANESE	25

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

Land/Building	530,400/-
Plant	4,160,000/-
Vehicles	1,800,000/-
Furniture & Fittings	37,000/-
Pre-expenses	160,000/-
Others	41,500/-
Working Capital	400,000/-
TOTAL	7,128,900/-

Contact Details:

Name: NER IBRAHIM HAMMOUD Title: PROJET MANAGER

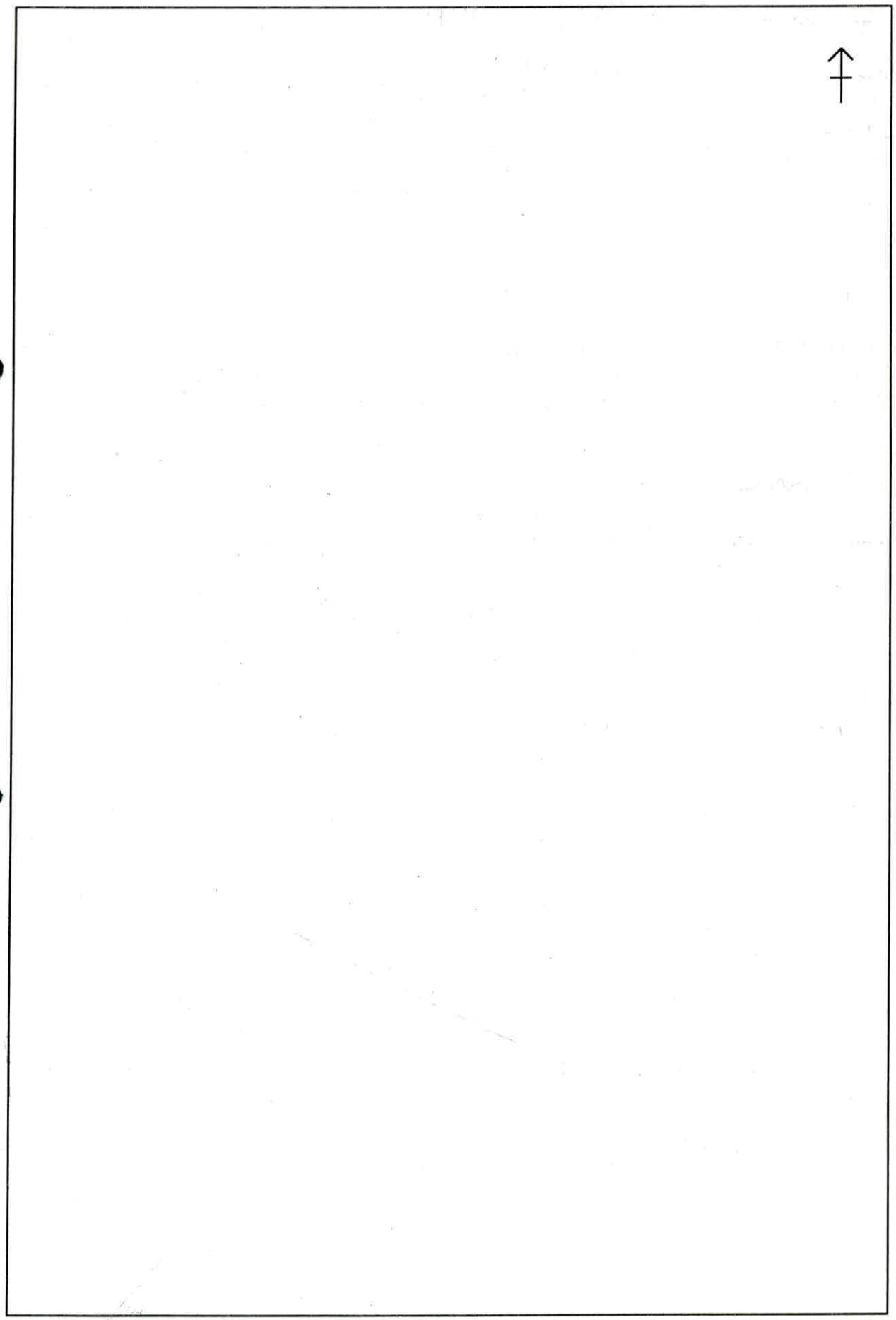
Telephone: 0688 868666 Fax: —

Email: Alnemer40@gmail.com

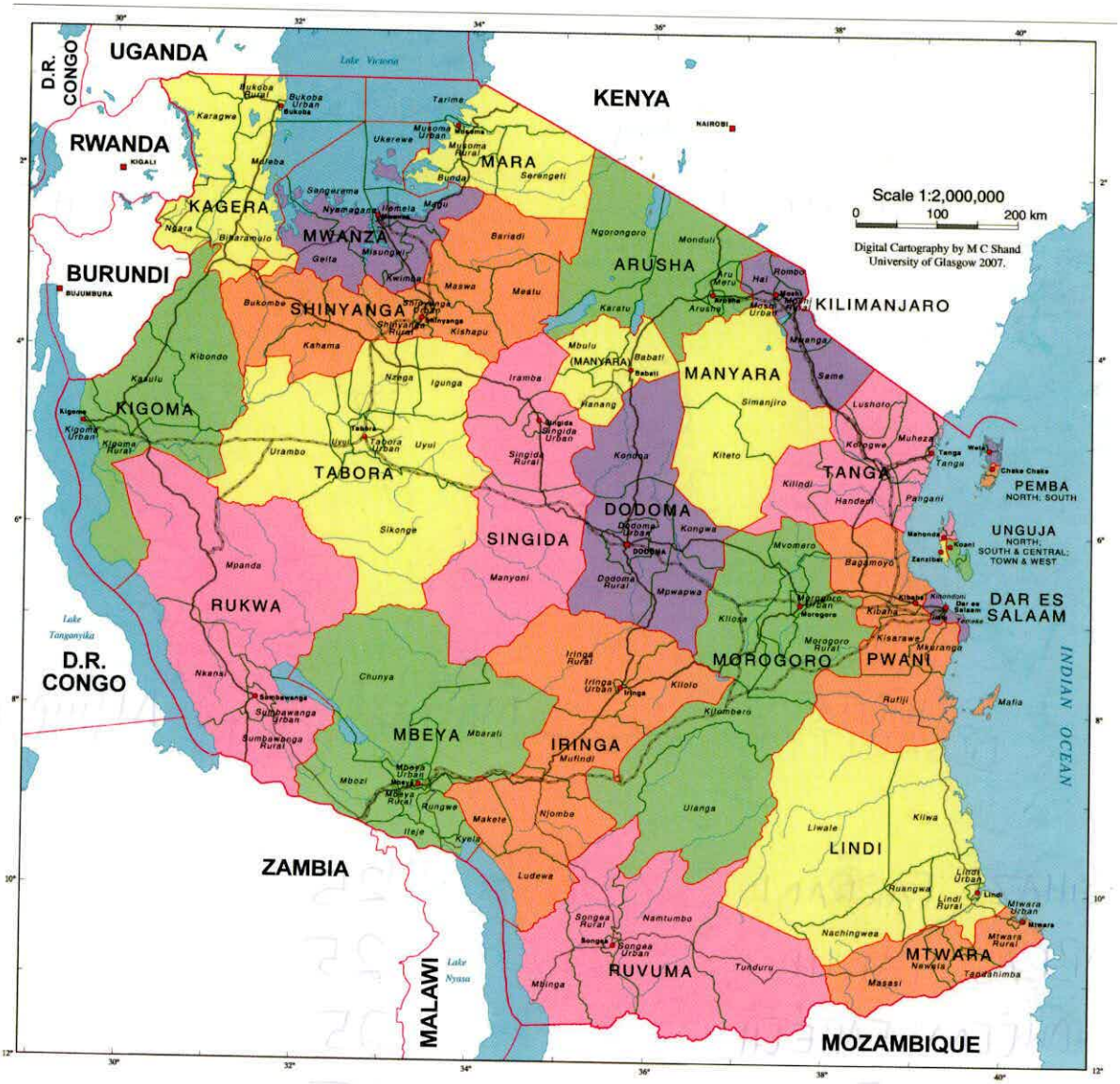
Payments to be made payable to:

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

SKETCH MAP SHOWING PROJECT LOCATION




TUNISIA
ALGERIA
LIBYA
EGYPT
MAURITANIA
MALI
NIGER
CHAD
SUDAN
ERITREA
DJIBOUTI
ETHIOPIA
SOMALIA
NIGERIA
CAMEROON
ZAIRE
KENYA
Indian Ocean
South Atlantic Ocean
ANGOLA
ZAMBIA
MALAWI
MOZAMBIQUE
ZIMBABWE
BOTSWANA
NAMIBIA
SOUTH AFRICA
SWAZILAND
LESOTHO
SOUTHAFRICA
Indian Ocean


UGANDA
D.R. CONGO
RWANDA
KIGALI
BURUNDI
BUJUMBURA
KENYA
NAIROBI
Lake Victoria
Scale 1:2,000,000
0 100 200 km
Digital Cartography by M C Shand
University of Glasgow 2007.
MARA
KAGERA
MWANZA
SHINYANGA
ARUSHA
KILIMANJARO
MANYARA
KIGOMA
TABORA
DODOMA
SINGIDA
TANGA
PEMBA
NORTH; SOUTH
UNGUJA
NORTH; SOUTH & CENTRAL; TOWN & WEST
DAR ES SALAAM
RUKWA
MOROGORO
PWANI
Lake Tanganyika
D.R. CONGO
MBEYA
IRINGA
LINDI
ZAMBIA
MTWARA
RUVUMA
Lake Nyasa
MALAWI
MOZAMBIQUE
INDIAN OCEAN

00220715

THE UNITED REPUBLIC OF TANZANIA

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 042601

This is to certify that

DRUMAX CONSTRUCTION LIMITED

of address P.O. BOX 72809

DAR ES SALAAM

has been granted a Certificate of Incentives to invest in a new, [illegible] enterprise known as

DRUMAX CONSTRUCTION LIMITED

Which is located at CHIPITE - MASASI

MTWARA

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 31ST JANUARY 2014

GP.DSM

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 (%)
	Elias El Tayyar	Lebanese	25
	Ibraheem Fakeeh	Lebanese	25
	Abbas Fakih	Lebanese	25
	Ghazi Farran	Lebanese	25

2. Proposed Activities : To establish a project for manufacturing of building materials

3. Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 7.1289m. Local USD 0m. Total USD 7.1289m.

5. Project Financing: Equity USD 7.1289m. Loans USD 0m. Total USD 7.1289m.

6. Source, terms and conditions of loan None

7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 7.1289m.	USD 0m.	USD 7.1289m.

8. Technology Agreement None

9. Date of TIC Registration: 31st January 2014

10. Implementation period January 2014 - December 2016

11. Operative date January 2017

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

None

Signed .....
Executive Director

TICC/PP.10/042601/3 31/01/2014

Managing Director,
Drumax Construction Limited
P.O. Box 72809
DAR ES SALAAM

RE: CERTIFICATE OF INCENTIVES FOR MANUFACTURING OF BUILDING MATERIALS

We wish to acknowledge receipt of your project proposal to establish and operate a plant for manufacturing of building materials as presented in the TIC P.A. 1 Form No. 11668 and Feasibility Study with a projected investment amounting to USD 7.13

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

Also be informed that you will have to submit a project implementation Progress Report on the implementation of the project in every six months for centre's information and review. Guidelines for the preparation of the report are contained in annexure attached to this letter. Please do not hesitate to contact the Centre for any clarification if the need arises. Also note that a facilitation fee equivalent to US$ 1000.00 is payable at the ruling exchange rate prior issuance of the Certificate of Incentives. 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.10/042601/3 31/01/2014

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

Yours sincerely,
Tanzania Investment Centre

Juliet R. Kairuki
EXECUTIVE DIRECTOR

Copy to: Permanent Secretary,
Ministry of Finance,
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

Drumax Construction Ltd.

Post Box	Chipite, Masasi District	COI Number	103098-01	Contact	Mr. Ner Ibrahim Hammoud
Post Office	72809	COI Date	10/11/2013	Designation	Project Manager
Region	Mtwara	Application F. No	11668	Phone	0
Country	Tanzania	Status	New	Direct Phone	0
		Sector	Manufacturing	Cell Phone	0688 868666
		Sub Sector	Building Materials	Fax	0
		File No	042601	E-Mail Address	0

Project Location	
Plot/Block	0
Street	Chipite
District	Masasi
Region	Mtwara

Investment Finance Plan in Millions USD

Foreign Equity	Local Equity	Foreign Loan	Local Loan
7.1289	0	0	0

Shareholders Detail		
Name	Nationality	(%)
Elias El Tayyar	Lebanese	25
Ibraheem Fakeeh	Lebanese	25
Abbas Fakih	Lebanese	25
Ghazi Farran	Lebanese	25

Investment Breakdown (USD Million)	
Land/Building	0.5304
Plant	4.16
Vehicles	1.8
Furniture & Fittings	0.037
Pre-expenses	0.16
Others	0.0415
Working Capital	0.4
Total	7.1289

Employment	41	Evaluated By	,wf officer3
Capacity	xxxxxx	Drawn By	wf regist3
Project Turn Over		Project Type	Foreign

Description

To establish a project for manufacturing of building materials

Recomendations

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

Decision

APPROVED BY EX

Sign:.....

Date:.....29/01/14.....

(5)

DRUMAX CONSTRUCTION LLMITED

Commissioner of Customs & Excise
Tanzania Revenue Centre,
P.O. Box 9053,
DAR ES SALAAM

Date15/02/2014

TANZANIA INVESTMENT CENTRE
12 FEB 2014
TANZANIA

Received
17/2/2014
TRA/TIC

UFS
Executive Director,
Tanzania Investment Centre,
P.o. Box 938,
DAR ES SALAAM

Dear Sir,

RE: DUTY & VAT EXEMPTION ON CAPITAL/ DEEMED CAPITAL GOODS FOR CERTIFICATE OF INCENTIVES NO: 042601

We are Tic approved project with certificate of incentives No; 042601
Which is valid up to DECEMBER 2016

The Company has been registered with objectives of BUILDING MATERIALS

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

Yours sincerely

IBRAHEEM FAKEEH
Managing Director

DRUMAX CONSTRUCTION LTD.
P. O. Box 72809
DAR ES SALAAM

Certified True Copy of The Original
Signature ______
Date 11/2/2014
For: Executive Director
Tanzania Investment Centre

00220715

THE UNITED REPUBLIC OF TANZANIA

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 042601

This is to certify that

DRUMAX CONSTRUCTION LIMITED

of address P.O. BOX 72809

DAR ES SALAAM

has been granted a Certificate of Incentives to invest in a new, [illegible] *enterprise known as*

DRUMAX CONSTRUCTION LIMITED

Which is located at CHIPITE - MASASI

MTWARA

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 31ST JANUARY 2014

TANZANIA INVESTMENT CENTRE

GP.DSM

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

Shareholders	Nationality	Shareholding (%)
Elias El Tayyar	Lebanese	25
Ibraheem Fakeeh	Lebanese	25
Abbas Fakih	Lebanese	25
Ghazi Farran	Lebanese	25

2. Proposed Activities : To establish a project for manufacturing of building materials

3. Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 7.1289m. Local USD 0m. Total USD 7.1289m.

5. Project Financing: Equity USD 7.1289m. Loans USD 0m. Total USD 7.1289m.

6. Source, terms and conditions of loan None

7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 7.1289m.	USD 0m.	USD 7.1289m.

8. Technology Agreement None

9. Date of TIC Registration: 31st January 2014

10. Implementation period January 2014 - December 2016

11. Operative date January 2017

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

None

Signed .....
Executive Director

CTIN.: 2170164

ISO 9001 : 2008 Certified

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

DRUMAX CONSTRUCTION LIMITED

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

122-427-269

with effect from 07-11-2013

P. N. Kassera

OFFICIAL SEAL

COMMISSIONER FOR DOMESTIC REVENU

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

DRUMAX CONSTRUCTION LTD

DRUMAX CONSTRUCTION LTD P. O. Box 72809 DAR ES SALAAM

	DESCRIPTION	item group	QYT item	
1	asphalt plant	machine	1	set
2	asphalt pavers(finichers)	equipment	3	unit
3	asphalt roller	equipment	6	unit
4	graders	equipment	5	unit
5	milling mashines	equipment	2	unit
6	wheel loaders	equipment	12	unit
7	bakhoe loaders	equipment	3	unit
8	skeed steer (bob cat)	equipment	6	unit
9	road marker mashines	equipment	2	unit
10	pick up (single cab)	machine	6	unit
11	concrete plant	equipment	3	set
12	trans mixer truck(concrete)	machine	12	unit
13	concrete pump	equipment	3	unit
14	tipper truck	equipment	12	unit
15	tank on truck (for water)	equipment	3	unit
16	tank on truck(for diesel)	equipment	3	unit
17	tank on truck(for asphalt)	equipment	1	unit
18	dump truck (off road)	machine	12	unit
19	crushers plant& accessory	machine	3	set
20	washing machine	machine	6	set
21	seperating	machine	6	set
22	screening	machine	6	set
23	conveyor	machine	20	unit
24	ruber conveyor	equipment	20	unit
25	bulldozers	equipment	5	unit

26	excavators	machine	12	unit
27	diesel generators	tools	10	unit
28	electric cables	tools	500	m
29	trasformers	equipment	3	unit
30	drills (for crushers)	tools	3	unit
31	drill bits	tools	50	piece
32	rubber tube (for drill)	equipment	150	m
33	air compressor	equipment	10	unit
34	crane	equipment	3	unit
35	roller wheel conveyor	tools	500	piece
36	chassis roller wheel conveyor	tools	150	piece
37	electro motor	tools	25	unit
38	gear box	tools	25	unit
39	turner machine	machine	2	unit
40	water pump	machine	6	unit
41	willding mashines	machine	6	unit
42	grindings	tools	6	unit
43	electric drills	tools	6	unit
44	steel machine	tools	2	unit
45	channel steel		300	piece
46	rectangular pipe		250	piece
47	steel plate		125	piece
48	angle steel		300	piece
49	weigh bridge	machine	3	unit
50	bucket (for caterpillar)	tools	10	piece
51	low bed (for trans mashines)	equipment	3	unit
52	plates (crusher parts)	tools	12	piece
53	bearings (crusher parts)	tools	50	piece
54	cones (crusher part)	tools	12	piece
55	safety helmet	tools	100	piece
56	safety jaket	tools	100	piece
57	safety shoes	tools	100	piece

DRUMAX CONSTRUCTION LTD

P.O. Box 72809 Dar es Salaam

Commissioner of Customs & Excise
Tanzania Revenue Centre,
P.O. Box 9053,
DAR ES SALAAM

9th April 2014

TANZANIA INVESTMENT CENTRE
14 APR 2014
TANZANIA

UFS
Executive Director,
Tanzania Investment Centre,
P.O. Box 938,
DAR ES SALAAM

Dear Sir,

RE: DUTY & VAT EXEMPTION ON CAPITAL/ DEEMED CAPITAL GOODS FOR CERTIFICATE OF INCENTIVES NO: 042601

Refer to the heading above,

We are TIC approved project with certificate of incentives No; 042601
Which is valid up to December 2016.

The Company has been registered with objectives of establishing a project for manufacturing of building materials.

On 27th February 2014 we were confirmed and approved our items as per our list of capital/deemed capital good for establishment and facilitation of our project with a certificate of incentives mentioned above.

We are hereby requesting approval of an additional list.

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

Yours sincerely

DRUMAX CONSTRUCTION LTD
P.O. Box 72809
DAR ES SALAAM

.....
Managing Director

TANZANIA REVENUE AUTHORITY

TRA/CE/C/P.20/08/3811 27th February, 2014

Managing Director,
M/s Drumax Construction Ltd,
P.O.Box 72809,
DAR ES SALAAM

RE: DUTY/VAT EXEMPTION ON CAPITAL/DEEMED CAPITAL GOODS CERTIFICATE OF INCENTIVES No.042601 OF 26TH JANUARY, 2014 AND TIN: 122427269

We are writing in response to your letter dated 15th February, 2014, supported by the letter Ref. TICC/PP.10/042601/6 of 18th February, 2014 from Tanzania Investment Centre, regarding the captioned subject.

We hereby confirm and approve items as per two page-list herewith attached as capital/deemed capital goods for establishment and facilitation of your project with certificate of incentives mentioned above. Motor vehicles could not be approved at this stage until the project start operation. You are also advised to take note that items therein deleted are not eligible for exemption under the project.

The approved deemed capital goods will be exempted to the tune of 75% of import Duty and VAT will be relieved to the tune of 45% of the amount of VAT payable. Please complete VAT form 224 and submit for approval to the Commissioner for Domestic Revenue for local purchases and the Commissioner for Customs and Excise for importations.

Sincerely yours,

Said Athumani
For: COMMISSIONER FOR CUSTOMS AND EXCISE.

GF/
C: C: Manager – Customs Service Centre
C. C: Manager Tax Exemption,
C. C: Manager- TRA - Mtwara
C. C: Executive Director,
Tanzania Investment Centre,
DSM.

DRUMAX CONSTRUCTION LTD
P. O. Box 72809
DAR ES SALAAM

DRUMAX CONSTRUCTION LTD

	DESCRIPTION	item group	QYT item	
1	asphalt plant	machine	1	set
2	asphalt pavers(finichers)	equipment	3	unit
3	asphalt roller	equipment	6	unit
4	graders	equipment	5	unit
5	milling mashines	equipment	2	unit
6	wheel loaders	equipment	12	unit
7	~~bakhoe loaders~~	~~equipment~~	~~3~~	~~unit~~
8	skeed steer (bob cat)	equipment	6	unit
9	road marker mashines	equipment	2	unit
10	pick up (single cab)	machine	6	unit
11	concrete plant	equipment	3	set
12	trans mixer truck(concrete)	machine	12	unit
13	~~concrete pump~~	~~equipment~~	~~3~~	~~unit~~
14	~~tipper truck~~	~~equipment~~	~~12~~	~~unit~~
15	tank on truck (for water)	equipment	3	unit
16	tank on truck(for diesel)	equipment	3	unit
17	tank on truck(for asphalt)	equipment	1	unit
18	~~dump truck (off road)~~	~~machine~~	~~12~~	~~unit~~
19	crushers plant& accessory	machine	3	set
20	washing machine	machine	6	set
21	seperating	machine	6	set
22	screening	machine	6	set
23	conveyor	machine	20	unit
24	ruber conveyor	equipment	20	unit
25	bulldozers	equipment	5	unit

26	excavators	machine	12	unit
27	diesel generators	tools	10	unit
28	electric cables	tools	500	m
29	trasformers	equipment	3	unit
30	~~drills (for crushers)~~	~~tools~~	3	unit
31	~~drill bits~~	~~tools~~	50	piece
32	rubber tube (for drill)	equipment	150	m
33	air compressor	equipment	10	unit
34	crane	equipment	3	unit
35	roller wheel conveyor	tools	500	piece
36	chassis roller wheel conveyor	tools	150	piece
37	electro motor	tools	25	unit
38	~~gear box~~	~~tools~~	~~25~~	~~unit~~
39	turner machine	machine	2	unit
40	water pump	machine	6	unit
41	willding mashines	machine	6	unit
42	grindings	tools	6	unit
43	electric drills	tools	6	unit
44	steel machine	tools	2	unit
45	channel steel		300	piece
46	rectangular pipe		250	piece
47	steel plate		125	piece
48	angle steel		300	piece
49	weigh bridge	machine	3	unit
50	~~bucket (for caterpillar)~~	~~tools~~	~~10~~	~~piece~~
51	low bed (for trans mashines)	equipment	3	unit
52	~~plates (crusher parts)~~	~~tools~~	~~12~~	~~piece~~
53	~~bearings (crusher parts)~~	~~tools~~	~~50~~	~~piece~~
54	~~cones (crusher part)~~	~~tools~~	~~12~~	~~piece~~
55	~~safety helmet~~	~~tools~~	~~100~~	~~piece~~
56	~~safety jaket~~	~~tools~~	~~100~~	~~piece~~
57	~~safety shoes~~	~~tools~~	~~100~~	~~piece~~

DRUMAX CONSTRUCTION LTD

	DESCRIPTION	ITEM GROUP	QTY	UNITS
1	Crawler Drill CD-110(DTH)	Machine	1	Set
	Hammer 3"(OD-78mm)	Equipment	2	Nos
	DrillBit (95mm)	Equipment	4	Nos
	Drill Pipe (3Mtrs.Long)	Equipment	6	Unit
	Main Hose (30 Mtr.Long) with fittings	Equipment	1	set
	Rubber Conveyor Belt 600 mm	Equipment	250	mtrs
	Rubber Conveyor Belt mm 800mm	Equipment	100	mtrs
	Rubber Conveyor Belt mm 1000mm	Equipment	200	mtrs
2	JCB loader	Equpment	3	
3	concrete pump	Machine	3	
4	crusher tipper truck	Equpment	12	
5	crusher dump truck	Equpment	12	
6	Quarry drill	Equpment	3	Units
7	conveyor gear box	Machine	25	Units
8	bucket (for caterpillar)	Equpment	10	Units
9	crusher cones	Machine	12	Units
10	Trucks	Vehicle	10	
11	Light Trucks	Vehicle	4	
12	Pickup Single Cabin	Vehicle	4	
13	concrete pump	Equpment	3	Units
14	Drills	Equpment	3	Units
15	Drills Bits	Equpment	50	Units

00220715

THE UNITED REPUBLIC OF TANZANIA

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 042601

This is to certify that

DRUMAX CONSTRUCTION LIMITED

of address P.O. BOX 72809

DAR ES SALAAM

has been granted a Certificate of Incentives to invest in a new, xxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxx enterprise known as

DRUMAX CONSTRUCTION LIMITED

Which is located at CHIPITE - MASASI

MTWARA

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 31ST JANUARY 2014

GPDSM

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 (%)
Elias El Tayyar	Lebanese	25
Ibraheem Fakeeh	Lebanese	25
Abbas Fakih	Lebanese	25
Ghazi Farran	Lebanese	25

2. Proposed Activities : To establish a project for manufacturing of building materials

3. Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 7.1289m. Local USD 0m. Total USD 7.1289m.

5. Project Financing: Equity USD 7.1289m. Loans USD 0m. Total USD 7.1289m.

6. Source, terms and conditions of loan None

7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 7.1289m.	USD 0m.	USD 7.1289m.

8. Technology Agreement None

9. Date of TIC Registration: 31st January 2014

10. Implementation period January 2014 - December 2016

11. Operative date January 2017

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

None

Signed .....
Executive Director

TICC/PP.10/042601/6 **18/02/2014**

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

Dear Sir,

RE: DUTY/VAT REMISSIONS ON THE CAPITAL/DEEMED CAPITAL GOODS OF CERTIFICATE OF INCENTIVES NO. 042601

M/S Drumax Construction Limited is a TIC registered company with certificate of incentives **No. 042601** which is valid up to **December 2016**

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

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

Yours sincerely
TANZANIA INVESTMENT CENTRE

N.A. Senzia
FOR: EXECUTIVE DIRECTOR

DRUMAX CONSTRUCTION LTD

P.O.BOX 184,MASASI,MTWARA
TEL NA. 0785 – 009 600 / 0717 – 009 500,Email Drumaxconstruction@gmail.com
Located Chipate Street Masasi ,Mtwara - Tanazania

9

Ref. DCL/TIC/2018/01

14th March 2018

TANZANIA INVESTMENT CENTRE
RECEIVED
14 MAR 2018
P. O. Box 938
DAR-ES-SALAAM

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

Dear Sir,

RE: APPLICATION FOR EXTENSION OF TIC CERTIFICATE OF INCENTIVES

We are a limited liability company incorporated in Tanzania with certificate of incorporation number 103098 dated 11th October 2013 with a certificate of incentive number 042601 with a proposed project of establishing manufacturing material project located at QDS 294/3 Chipite, Masasi in Mtwara Region.
We are hereby applying for extension of our TIC certificate which had expired in January 2017. The company shareholders has reached consensus to add more production lane since the company has entered into a 3 years contract to supply construction materials for TANROADS so we are of the opinion that our request is got to be resolved the soonest.

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

1. Original TIC certificate
2. Progress Report attached with projects photos

Thank you for your kind consideration

Yours Sincerely,

DRUMAX CONSTRUCTION LTD
P O Box 72809
DAR ES SALAAM

.....
Elias El Tayyar
DIRECTOR

DRUMAX CONSTRUCTION LIMITED

PROJECT PROGRESS REPORT

SUBMITTED TO TANZANIA INVESTMENT CENTRE

MARCH, 2018

TABLE OF CONTENTS

1.0 Introduction

Drumax Construction Limited is a limited liability company incorporated in the United Republic of Tanzania under cap. 212 with Reg. No. 103098 dated 11th october, 2013. The project which is geared to provide establish manufacturing facilities for building materials including aggregates, Alphalt, concrete, paving Blocks and crusher, dust, Crs, Crr of all sizes.

The project is located at QDS 294/3 Chipite, Masasi in Mtwara region.

The core business or the object clause remains mainly "To manufacture building materials for road construction and any other construction.

2.0 Planned Activities for the Period

During the period, the company planned to invest and undertake the following activities.

Proposal activities included:

- Processing plant/ ware house.
- Acquisition of more Land.
- Acquisition of more modern equipments.
- As part of implementing the project, a reasonable labor force to be recruited.
- To seek additional source of funds from the bank in order to fulfill our project missions and objectives.
- Procuring of other necessary equipments in supporting the implementation of the project.
- To increase more production and installation of a new production lane.

3.0 Achievements made towards Implementation

During the period of implementation, a number of the above activities were implemented as follows:-

3.1 Employment, during implementation period, the company provided cumulative employment to local Tanzanians.

3.2 As phase one of constructing a garage is completed and now moving to phase two which is to install another new production lane.

3.3 Managed to purchase haulage trucks 25, 3 excavator and production lane chain.

3.4 Few other types of equipment were purchased like generators, pressure pumps, wheeling and advanced tool kits.

4.0 Financial Expenditure

The project planned to make further investments in order to expand the project up and running at the capex of 7 million USD from the initial refer the summarized table below:

		USD
TOTAL COST OF THE PROJECT		**7,000,000.00**
Land & Buildings		**250,000**
Equipment & Machine		**1,500,000**
Motor Vehicles		**700,000**
Furniture		**5,000**
Pre - Expenses		**70,000**
others		**NIL**
Working capital		**80,000**
Total		**2,625,000**

5.0 Major Problems

Although no serious problems have been faced with the implementation of the project we have encountered several niggling issues which may be looked at. Some of them are mentioned below:-

5.3 Changing of Laws

This is a very huge set back since it reflect unpredictable environment for investments. For this reason it has delayed my company to decide to extend but we believe the situation is going to change under the new regime which emphasize on manufacturing and industries we have gained hope and as directors of the company think that the situation is going to be different this present.

6.0 Planned Activities for the coming Period

The development focus on increasing more capital and invest more on modern technology on so doing the project capital and strengthening of its present capacity and activities to meet the standards. The company has also enter into three years contract with TANROADS to supply materials for road construction also the company has decides to add more production lane to make total of 16 production lane in total.

7.0 Projected Expenditure for the Coming Period

The company activities has been financed by both equities, own sources of funds and hope to source from bank loans in future.

TICC/PP.10/042601/8 **15/04/2014**

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

Dear Sir,

RE: DUTY/VAT REMISSIONS ON THE CAPITAL/DEEMED CAPITAL GOODS OF CERTIFICATE OF INCENTIVES NO. 042601

M/S Drumax Construction Limited is a TIC registered company with certificate of incentives **No. 042601** which is valid up to **December 2016**

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

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

Yours sincerely
TANZANIA INVESTMENT CENTRE

N.A. Senzia
FOR: EXECUTIVE DIRECTOR

(10)

MINUTE **PAGE NO.** _____

TO: SOUTHERN ZONAL MANAGER

DATE: 10/04/2018

RE: URGENT INFORMATION FROM DURUMAX CONSTRUCTION LTD

The mentioned company has applied for Extension of Certificate of Incentives for implementation of its project. Apart from the information (progress report and the expiring Original Certificate of Incentive) provided, TIC will need to have more information from the same company before the decision is made which makes it a matter of EXTREAMLY URGENCY.

TIC HQ will require the Southern Zonal Office to:

1. Visit the project and assess the progress of its implementation if ids satisfactory
2. Get photos pf the project
3. Get the list of exempted items and the value of exemption since the project was registered by TIC.

The project is located at Chipate street, Masasi – Mtwara

Telephone Numbers: 255 785 009600 / 0717 009 500

E mail: drumaxconstruction@gmail.com

Tibenda Njoki

Ag. IFM – A

C-DIF
FYA.
EXD
20/05/2020

Drumax Construction Limited

P.O. BOX 184 MASASI, MTWARA
TEL: +255 717 009500 Email:drumaxconstruction@gmail.com

Ref. DCL/TIC/2020/01

8th May 2020

TANZANIA INVESTMENT CENTRE
RECEIVED
18 MAY 2020
P. O. Box 938
DAR-ES-SALAAM

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

Dear Sir,

RE: APPLICATION FOR AMENDMENT OF SHAREHOLDER IN OUR OF TIC CERTIFICATE OF INCENTIVES

We are a limited liability company incorporated in Tanzania with certificate of incorporation number 103098 dated 11th October 2013 with a certificate of incentive number 042601 with a proposed project of establishing manufacturing material project located at QDS 294/3 Chipite, Masasi in Mtwara Region.
We are hereby applying for addition of shareholder in our TIC certificate.
We request your good office to effect the requested changes.

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

1. Police report for our missing Original TIC certificate
2. Progress Report attached with projects photos
3. TIN
4. BRELA current status
5. Payment Receipt

Thank you for your kind consideration

Yours Sincerely,

....
DIRECTOR

IFO - Private
Review and proceed with the application if appropriate
C-DIF
21/05/2020

Scanned with CamScanner

00220715

THE UNITED REPUBLIC OF TANZANIA

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 042601

This is to certify that

DRUMAX CONSTRUCTION LIMITED

of address P.O. BOX 72809

DAR ES SALAAM

has been granted a Certificate of Incentives to invest in a new, [redacted] *enterprise known as*

DRUMAX CONSTRUCTION LIMITED

Which is located at CHIPITE - MASASI

MTWARA

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 31ST JANUARY 2014

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

1.	Shareholders	Nationality	Shareholding (%)
	Elias El Tayyar	Lebanese	25
	Ibraheem Fakeeh	Lebanese	25
	Abbas Fakih	Lebanese	25
	Ghazi Farran	Lebanese	25

2. Proposed Activities: To establish a project for manufacturing of building materials

3 Sector: Manufacturing Subsector Building materials

4. Investment cost: Foreign USD 7.1289m. Local USD 0m. Total USD 7.1289m.

5. Project Financing: Equity USD 7.1289m. Loans USD 0m. Total USD 7.1289m.

6. Source, terms and conditions of loan None

7. Assets to be invested:

Capital Items:	Foreign	Local	Total
	USD 7.1289m.	USD 0m.	USD 7.1289m.

8. Technology Agreement None

9. Date of TIC Registration: 31st January 2014

10. Implementation period January 2014 - December 2016

11. Operative date January 2017

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, 1

(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. Other conditions attached to this Certificate

None

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF HOME AFFAIRS
TANZANIA POLICE FORCE

LOSS REPORT

DAR/BUG/RB/368863/2020

This is to certify that

SAID SEIF ABDALLAH

Reported to the police on **11/5/2020** that the under-mentioned property/properties has been lost:-

Property Type	Property Name	Property Number
Documents(eg.School,Car Card)	certificate of incentives	042601

More Details
nil

Control Number :: 9910812640535

INSPECTOR GENERAL OF POLICE (IGP)
5/11/2020 10:07:00 AM

NB:It must be clearly understood that the certificate is not evidence that the report made by the complainants accepted by Police as genuine.

DRUMAX CONSTRUCTION LIMITED

PROJECT PROGRESS REPORT

SUBMITTED TO TANZANIA INVESTMENT CENTRE

MAY, 2020

TABLE OF CONTENTS

1.0 Introduction

Drumax Construction Limited is a limited liability company incorporated in the United Republic of Tanzania under cap. 212 with Reg. No. 103098 dated 11th october, 2013. The project which is geared to provide establish manufacturing facilities for building materials including aggregates, Alphalt, concrete, paving Blocks and crusher, dust, Crs, Crr of all sizes.

The project is located at QDS 294/3 Chipite, Masasi in Mtwara region.

The core business or the object clause remains mainly "To manufacture building materials for road construction and any other construction.

2.0 Planned Activities for the Period

During the period, the company planned to invest and undertake the following activities.

Proposal activities included:

- Processing plant/ ware house.
- Acquisition of more Land.
- Acquisition of more modern equipments.
- As part of implementing the project, a reasonable labor force to be recruited.
- To seek additional source of funds from the bank in order to fulfill our project missions and objectives.
- Procuring of other necessary equipments in supporting the implementation of the project.
- To increase more production and installation of a new production lane.

3.0 Achievements made towards Implementation

During the period of implementation, a number of the above activities were implemented as follows:-

3.1 Employment more than 35 direct and indirect, during implementation period, the company provided cumulative employment to local Tanzanians.

3.2 As phase one of constructing a garage is completed and now moving to phase two which is to install another new production lane.

3.3 Managed to purchase haulage trucks 35, 6 excavator and addition of another production lane chain.

3.4 More equipment's have been purchased like generators, pressure pumps, wheeling and advanced tool kits.

4.0 Financial Expenditure

The project planned to make further investments in order to expand the project up and running at the capex of 7 million USD from the initial refer the summarized table below:

USD

TOTAL COST OF THE PROJECT		**7,000,000.00**
Land & Buildings		**250,000**
Equipment & Machine		**2,500,000**
Motor Vehicles		**1,000,000**
Furniture		**7,000**
Pre - Expenses		**90,000**
others		**NIL**
Working capital		**180,000**
Total		**4,027,000**

5.0 Major Problems

Although no serious problems have been faced with the implementation of the project we have encountered several niggling issues which may be looked at. Some of them are mentioned below:-

of Laws

y huge set back since it reflects unpredictable environment nts. For this reason, it has delayed my company to decide we believe the situation is going to change under the new emphasize on manufacturing and industries we have d as directors of the company think that the situation is rent this present.

ctiv s for the coming Period

focus on increasing more capital and invest more on on so doing the project capital and strengthening of and activities to meet the standards. The company into another three years contract with TANROADS or road construction also the company has decided ion lane to make total of 16 production lane in

the Coming Period

been financed by both equities, own source from bank loans in future.

Tanzania Investment Centre

Exchequer Receipt

Stakabadhi ya Malipo ya Serikali

Receipt No	: **EC100591234113**
Received from	: **DRUMAX CONSTRUCTION LIMITED**
Amount	: **2290000.0**
Amount in Words	: **Two Million Two Hundred Ninety Thousand Tanzanian Shillings Only**
In respect of	: **Certificate Of Incentives for DRUMAX CONSTRUCTION LIMITED**
Bill Description	: **Certificate Of Incentives for DRUMAX CONSTRUCTION LIMITED**
Bill Reference	: **BL-COI-1589206260675**
Payment Control Number	: **995360008323**
Payment Date	: **2020-05-12 09:59:54**
Issued by	: **MAGRETH NKYA**
Date Issued	: **2020-05-12 09:59:54**
Signature	----------

TANZANIA

BRELA
BUSINESS REGISTRATIONS AND LICENSING AGENCY

Register of Companies
Detailed information

Information date and time: 20/03/2020 13:57:32
Registration date and time: 11/10/2013 00:00:00

1.	**Status:**	Registered
2.	**Incorporation number:**	**103098**
3.	**Company:**	**DRUMAX CONSTRUCTION LIMITED**
4.	**Company type:**	Private company Limited by shares
5.	**Registered office:**	Region Mtwara, District Masasi, Ward Nanganga, Postal code 63522, FARM NUMBER 288,CHIPITE VILLAGE,NEAR NANGANGA PETROL STATION, MASASI, MTWARA
6.	**Contacts:**	Email: Drumaxconstruction@gmail.com, Mob no/Tel no: 255621221221, P.O.Box 72809
7.	**Business activity:**	0810 - Quarrying of stone, sand and clay, Main activity
8.	**Directors / Directors in the country of origin:**	GEORGE EL TAYYAR, Lebanese ABBAS FAKIH, Lebanese
9.	**Company secretary / Company secretary in the country of origin:**	IBRAHEEM FAKEEH, Lebanese
10.	**Authorised share capital:**	500000000 TZS
11.	**Class of shares:**	Class Ordinary: 1000 shares, 500000 TZS/share, 500000000 TZS
12.	**Shareholders:**	GEORGE EL TAYYAR Class Ordinary 250 shares taken GHAZI FARRAN Class Ordinary 250 shares taken ABBAS FAKIH Class Ordinary 250 shares taken IBRAHEEM FAKEEH Class Ordinary 240 shares taken MOHAMAD KLAIT Class Ordinary 10 shares taken

Information ordered by: KHADIJA SLIM
NOTE. Information printed from the Register of Company is true and complete as per extract generation date and time. Please be advised to refer to the Online Registration System at BRELA (ors.brela.go.tz) for an up-to-date information regarding given Company.

REGISTRAR OF COMPANIES
TANZANIA

Princ. Asst. Registrar of Companies

12

THE UNITED REPUBLIC OF TANZANIA

0224103552

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 042601

This is to certify that

DRUMAX CONSTRUCTION LIMITED

of address **P.O.BOX 72809**

DAR-ES-SALAAM

has been granted a Certificate of Incentives to invest in a new investment project. This Certificate replaces the previous one N0.042601 issued on 31/01/2014 due to amendment on Section 1.

PROJECT NAME - BUILDING MATERIALS

Which is located at **CHIPITE - MASASI**

MASASI-MTWARA

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: **1 June, 2020**

This Certificate is issued in accordance with the provision 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 (%)**
	Abbas Fakih	*Lebanon*	*25*
	Ghazi Farran	*Lebanon*	*25*
	George El Tayyar	*Lebanon*	*25*
	Ibraheem Fakeeh	*Lebanon*	*24*
	Mohamad Klait	*Lebanon*	*1*

2 Proposed Activities: ***To establish and operate a project for manufacturing of building materials***

3 Sector **Manufacturing** Sub Sector **Building Materials**

4 Investment Cost **Foreign (M$)** **7.1289** **Local (M$)** **0** **Total (M$)** **7.1289**

5 Project Financing **Equity (M$)** **7.129** **Loan (M$)** **0** **Total (M$)** **7.1289**

6 Source, terms and conditions of loan **None**

7 Assets to be Invested

	Foreign (M$)	**Local (M$)**	**Total (M$)**
Capital items:	**7.1289**	**0**	**7.1289**

8 Technology Agreement **None**

9 Date of TIC Registration **31 January, 2014**

10 Implementation period **January 2014** - **December 2016**

11 Operative date **January 2017**

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 **EAC Customs Management Act. 2004 and VAT Act. 2014**
(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

None

Signed **Executive Director**

THE COMPANIES ACT, (CAP 212)

COMPANY LIMITED BY SHARES

MEMORANDUM

AND

ARTICLES OF ASSOCIATION

OF

DRUMAX CONSTRUCTION LIMITED

Incorporated this ..... day of ..... 2013.

DRAWN BY:

M.J. DIAMOND ADVOCATES,
2ND FLOOR, WING 'A',
NIC INVESTMENT HOUSE,
SAMORA AVENUE,
P.O. BOX 2494,
DAR ES SALAAM,
TANZANIA.

THE COMPANIES ACT, (CAP 212)

COMPANY LIMITED BY SHARES.

MEMORANDUM AND ARTICLES OF ASSOCIATION

OF

DRUMAX CONSTRUCTION LIMITED

Incorporated this ..... day of 2013

Seal

.....
REGISTRAR OF COMPANIES

THE COMPANIES ACT (CAP 212)

COMPANY LIMITED BY SHARES.

MEMORANDUM OF ASSOCIATION

OF

DRUMAX CONSTRUCTION LIMITED

1. The name of the company is DRUMAX CONSTRUCTION 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 Civil Works and engineering, Building engineering, Electrical engineering, Architectural Designing, Structural engineering, Road Works engineering, prepare plans, Construction, Reconstruction, Renovation, Decoration, Development expansion, Quantity Surveying, Values, land and Property managers, Environmental engineering, Information Communication Technology engineering, Consultant Engineers, Pre-engineered buildings, and maintenance, improvement, supervision, management, contractors and control of such works in Tanzania, Africa and elsewhere all over the world.

b) To construct, improve, maintain, develop, work, manage, hiring of building machinery, carry out or control any roads, ways, tramways, railways, branches or sidings, bridges, reservoirs, watercourses, wharves, manufactories, warehouses, electric works, shops, stores and other works, buildings and conveniences, which may be calculated to directly or indirectly advance the Company's interests, and to contribute to, subsidize, or otherwise assist or take part in the construction, management, improvement, maintenance, development, working, carrying out, or control thereof.

c) To carry on the business of importers, exporters, manufacturers, buyers, sellers, suppliers, distributors, dealers in hardware, building materials, sanitary-ware, wall papers, roofing tiles, flooring tiles, industrial equipments, electronic appliances, equipments, machinery and to provide technical services on the imported equipments and carry out general domestic electrical installation, plumbers, steel fabrication, machine shop, nickel plating, electric plating, making steel windows, doors, frames and roof tresses.

d) To enter into contracts in relation to and erect, civil works, construct, maintain, alter, repair, pull down and restore, either alone or jointly with any other companies or persons works of all descriptions, including wharves, docks, piers, railways machines, railway carriages, roads, bridges, warehouses, factories, mills, godowns, dwelling houses, flats, hotels, safari and game lodges, water works, drainage and sewage works, gas works and structure of every description.

e) To carry on the business as real estate agency and management of residential and commercial premises, property developers, maintenance, improvement of buildings, offices, dwelling houses, estates, stores, godowns and other structures, works and conveniences.

f) To carry on the business of consultancy on soil and water engineering, evaluation of water and land resources, planning, designing and construction of irrigation schemes, maintenance and management of soil and water conservation schemes, mechanization of agricultural operations, selection, design and development of machinery equipments and power sources, maintenance, repair and construction of equipments.

g) To carry on the business of proprietors, managers and operators of tourist hotels, motels, safaris and holiday camps, lodges, caravan sites, restaurants, refreshments and tea rooms, cafes, snack and coffee shops, and inn and lodging house keepers and motels merchants, distillers and to provide food and catering services to individual, private, public institutions and to industrial and business concerns.

h) To carry on all or any of the business of agencies, proprietors, purchase, take on lease or by any other means acquire any movable or immovable property in Tanzania or elsewhere for any estate or interest whatever, buildings, flats, maisonettes, dwelling houses, offices, shops, godowns, lands and any real or personal property or rights, privileges or easements over or in respect of any property, and any buildings or things whatever and act as agents or brokers, trustees for any person, firm, or company, and to undertake and perform sub-contracts and also to act in any of the businesses of the Company through or by means of agents, brokers, sub-contractors, or others.

i) To carry on all kinds of agency business, and to take part in the management, supervision or control of the business or operations of any other company, firm, association, trust or person, and to act as director, the Managing Agents, Secretaries, Administrators, Executors or officers of any employee or ex-employees or the dependents or connections of such persons, and to grant pensions, and to grant pensions and allowances, and to make payments towards insurance, and subscribe or guarantee money for charitable or benevolent objects, or for any public, general or useful object.

j) To carry out consultancy in mechanical engineering and related activities, designing of various technical equipments, manufacturing, utilization and maintenance of mechanical equipments, formulating of engineering policy, drafting work programs, processing of construction work of whatever type, inspection and maintenance, construction of dams, drilling operations, roads, buildings and painting, installation of power plants, maintenance of electric motors, generators and all associated machineries.

k) To carry out installation of technical equipments of whatever type, start up operational test data, and performance evaluation, computer engineering and associated activities and their maintenance, information technology and other related or connected activities. Chemical and processing engineering and related activities.

l) To carry out preparation of preliminary plant design and equipment specification, simple equipment design, preparation of cost estimates and evaluation of tenders, production planning and costing.

m) To carry on engineering activities related to casting and foundry work, including pattern making, bench work, drilling, shaping, turning, milling, grinding, welding, panel beating, shot blasting, spray painting and other similar operations, designing, surveying, soil testing and architecture related activities.

n) To carry on business of consultants, professional and technical advisers to individuals, firms, companies, corporations, cooperative societies, government authorities and other like organizations and in particular but without prejudice to the generality of the foregoing to provide consultancy services in matters of, and to advise upon, direct, manage or supervise business methods and systems, efficiency, policy, finance, investments, organization, administration, management, insurance, budgetary and other controls, personnel, purchasing, stores, operations, production, engineering, maintenance, documentation and marketing.

o) To engage in research and system analyses and designs and give advice on all problems relating to finance accounting, marketing materials, industrial production, purchase, lease or otherwise acquire, and to hold, sell, improve, develop, exchange, mortgage or otherwise dispose of any lands, buildings machinery or plants, mills factories, warehouses or any determents.

p) To sell, exchange, improve, manage, develop, lease, mortgage, dispose of, turn to account, or otherwise deal with all or any property and rights of the Company.

q) To open and operate banking accounts and make, accept, endorse, discount, negotiate, issue, buy, sell and deal in promissory notes, bills of exchange, bill

of lading, shipping documents, dock and warehouse warrants and other instruments negotiable or transferable or otherwise.

r) To control, manage, finance, subsidize, co-ordinate or otherwise assist any companies in which the company has a direct or indirect financial interest.

s) To enter into arrangement with any Government or authorities (supreme, municipal, local or otherwise) or any corporation, company or any of them, and to obtain from any such government, authority, corporation, company or person any charter, contract, decrees, rights, privileges and concessions with the company it may think desirable, and to carry out, exercise and comply with any such charters contracts, decrees, rights, privileges and concessions with the company as it may think desirable, and to carry out, exercise and comply with any such charters, contracts, decrees, rights, privileges an concessions.

t) To carry on all kinds of agency business, and to take part in the management, supervision or control of the business or operations of any other company, firm, association, trust or person, and to act as Directors, the Managing Agents, Secretaries, Administrators, Executors or Officers of any such company, firm, association, trust or person and in connection therewith to appoint and remunerate directors, accountants, assistants and other officers or experts or agents.

u) To apply for purchase or otherwise acquire any patents, brevets d'invention, licences, concessions, and the like, conferring an exclusive, non-exclusive or limited right to use any invention, secret or other information which may seem capable of being used for any of the purposes of the Company or the acquisition of which may seem calculated directly or indirectly to benefit the Company, and to use, exercise, develop and grant licences in respect of, or otherwise turn to account, the property, rights and information so acquired.

v) To enter into partnership or into any arrangement for sharing profits, union of interests, joint adventure, reciprocal concession, or co-operation with any person or company carrying on or about to carry on any business which this Company is authorized to carry on, or any business or transaction capable of being calculated so as directly or indirectly to benefit the Company, and to take or otherwise acquire and hold shares or assist any such company and to sell, hold, reissue, with or without guarantee or otherwise deal with such shares, stock or securities.

w) To lend money to such parties and on such terms as may seem expedient, and in particular to customers or any persons having dealings with the Company, and to guarantee the performance of contracts by members of, or persons having dealings with the Company, and to allow customers and other

to draw on the Company on such terms as may be arranged, to receive money on deposit at interest or otherwise, and to discount bills, and generally carry on business as bankers.

x) Top invest and deal with the money of the Company not immediately required upon such securities and in such manner as may from time to time be determined.

y) To receive money or deposit or loan and borrow or raise money in such manner as the company shall think fit, and in particular by issue of debentures, or debenture stock (perpetual or otherwise) and to ensure the repayment of any money borrowed, raised or owing by mortgage charge or lien upon all or any of the property or assets of the company (both present and future) including its uncalled capital and also by a similar mortgage charge or lien to secure and guarantee the performance by the company or any other person or company as the case may be.

z) To borrow or raise or secure the payment of money in such manner and on such terms as may be thought expedient and to mortgage or charge the undertaking and all or any part of the property and rights of the Company, present and future, including its uncalled capital and issue at par or a premium or discount, and for such consideration and with and subject to such rights, powers, privileges and conditions as may be thought fit, debentures or debenture stock either permanent or redeemable.

aa)To carry on 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, claim, properties, cassettes and effects supposed to contain minerals, diamonds, or other precious stones, and any interest therein, and to explore, mine, work, excise and develop and turn account mines and mining rights and any undertaking connected therewith.

bb) To produce, manufacture, refine, treat, distil, condense, test, experiment with, store, hold, transport, market, distribute, exchange, purchase, sell, import, export, trade, handle, dispose of or otherwise deal with in any kind of minerals, precious and non precious metals and ores, oil, gas, and other volatile substances, petroleum products, refined products, petrol, kerosene, paraffin, grease, engine oil, gas oil, diesel and any other oils, petrochemical products and lubricants, derivatives and byproducts, tars, hydrocarbons, and any other metal minerals or chemical substances of all grades, kinds, forms, and descriptions, whether found naturally, manufactured or synthesized from petroleum products or subsurface or subaqueous deposits of every nature and description, and any product or by-products which may be derived, produced, prepared, compounded, made or manufactured there from and

any substances obtained by mixing any of the foregoing with any other substance

cc) To carry on the business of dealers, buyers, processors, exporters and importers of minerals, including diamond, Gemstones and gold, to engage in cutting and polishing, gems and any other types of gems or precious tones and to do any kind of business relating to mineral, and to own and run jewelers shops. To carry on the business of mining, mineral exploration, and deal in mineral as miners, buyers processors, exporters of minerals, including diamond, Gemstone, gold and other minerals.

dd) To carry on business of prospectors, miners and mining work. To buy and sell manufacture and deal in minerals and things capable of being used in with prospecting, mining and metallurgical operations. To search for, get win, work make marketable and use, sell and dispose of precious and other metals, mineral and other substances or products on, within, or under any property under the company and to be granted with prospecting any mining and other licenses, rights or privileges for such purpose.

ee) To promote any other company for the purpose of acquiring the whole or any of the property, rights and liabilities of this Company or for any other purpose which may appear likely to benefit the Company and to amalgamate with any other company whose objects are altogether or in part similar to those of the Company.

ff) To sell, improve, manage, develop, turn to account, exchange, let or rent, royalty, share of profits or otherwise grant licenses, easements and other rights in or over, and in any other manner deal with or dispose of the undertaking and all or any of the property and assets for the time being of the Company for such consideration as the Company may think fit.

gg) To sell or dispose of the undertaking of the Company, or any part thereof, for such considerations as the Company may think fit and in particular for shares, whether fully or partly paid-up, debentures or securities of any other company, whether or not having objects altogether, or in part, similar to those of this Company.

hh) To do all such other things as are incidental or conducive to the attainment of the above objectives. To carry on all or any of the following businesses, namely builders and contractors, decorators, merchants, and dealers in stone, sand, lime, bricks, timber, hardware and other building requisites, tile

and terra-cotta makers, job masters, carriers, and house agents, and to carry on any other business incidental thereto or therewith connected.

ii) To carry on any other trade or business whatsoever which can, in the opinion of the Board of Directors, be advantageously carried on by the Company in connections with or as ancillary to any of the above businesses or the general business of the Company.

jj) To carry on the business of farming, including but not limited to the establishment, buying or otherwise acquiring farms and properties thereon or useful thereto; and to carry on the business of the buying, selling or otherwise disposing of agricultural produce of oil seeds or of any kind, type or description.

kk) To deal in all activities involving farming, ranching and rearing of livestock, poultry and/or animal husbandry.

ll) To carry on any business associated with farming horticulture, dairy-products manufacture and the like.

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 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 ejusden generis with any particular word or words in the same paragraph.

4. The Liability of members is Limited.

5. The Capital of the Company is **Tanzania Shillings Five Hundred Million (Tshs. 500,000,000/=) only** divided into **One Thousand (1,000)** ORDINARY SHARES of **Tanzania shillings Five Hundred Thousand (Tsh. 500,000/=)** 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.

NO.	Names, Addresses and Description of Subscribers	Number of Shares taken by each Subscriber	Signature
1.	GHAZI FARRAN, P.O.BOX 72809 DAR ES SALAAM	250	
2.	ABBAS FAKIH, P.O.BOX 72809, DAR ES SALAAM	250	
3.	IBRAHEEM FAKEEH, P.O.BOX 72809, DAR ES SALAAM	250	
4.	ELIAS EL TAYYAR, P.O.BOX 72809, DAR ES SALAAM	250	

DATED at **DAR ES SALAAM** this 08 day of OCTOBER 2013.

WITNESS TO THE ABOVE SIGNATURE:

NAME:.....
SIGNATURE.....
POSTAL ADDRESS: .....
QUALIFICATION: **ADVOCATE**

THE COMPANIES ACT (CAP. 212)

COMPANY LIMITED BY SHARES.

ARTICLES OF ASSOCIATION

DRUMAX CONSTRUCTION LIMITED

1. In these regulations:-

"**The Act**" means the Company Act Cap. 212. R.E 2002 of the Laws of Tanzania.

When any provision of the Act is referred to, the reference is that provision is as modified by any law for the time being in force.

Unless the context otherwise requires, the expressions defined in the Act or any statutory modification thereof in the force at the date at which there regulations become binding on the company, shall have the meaning so defined.

Any words importing the singular shall include the plural and vice versa, and words importing the masculine gender shall include females, and the words importing persons shall include bodies corporate, partnership, firms, cooperatives, societies, etc.

The regulations of Companies Act shall not apply to the Company, save in so far as they are varied or excluded hereby, but in case of any conflict between the provisions herein, and the provisions under this regulation the former shall prevail, and in addition to the substitution shall be the regulations of the Company.

PRIVATE COMPANY

2. The Company is a Private Company and accordingly:-

(a) The right to transfer its shares is restricted as herein after prescribed.

(b) The number of members of the company (exclusive of persons in the employment of the company and of persons who have been formerly in the employment of the company were while in such employment to be the member of the Company) is not to exceed fifty but where two or more persons hold one more shares in the company jointly they shall for the purposes of this paragraph be treated as a single member.

(c) Any invitation to the Public to subscribe for any share or debenture stock of the company is hereby prohibited.

(d) The Company shall not have power to issue share warrants to bearer.

TRANSFER OF SHARES

3. The Directors may in their direction and without assigning any reason thereof refuses to register the transfer of any share to any person who it shall in their opinion be undesirable for any reason whatsoever to admit to membership.

4. Subject to clauses 2 and 3 hereof the right to members to transfer their shares shall be restricted as follows;

(a) No share shall be transferred to a person who is not a member so long as any member of any person selected by the Directors as one who it is not desirable in the interest of the Company to admit to membership.

(b) Every shareholder or trustee in bankruptcy, or any person who may desire to sell or transfer any such shares and every, who may desire to sell or transfer any such shares and every personal representatives of a deceased shareholder shall give notice in writing to the Directors that he desires to make such sale or transfer. Such notice shall constitute the Board of Directors of the Company as his agent for the sale of said shares to any member or members of the company at the price to be agreed upon between the party giving such notice the party and the board, or in case of difference to be determined by the Auditor of the Company.

(c) Upon price of such shares being agreed on a determined as per clause (b) above, the board shall forthwith give notice to such of the shareholders other than the shareholders desiring to sell or transfer the said shares, stating the number and price of such shares inviting the person to whom notice is sent to state within 21 days from the date of such notice whether he is willing to purchase any, if so what maximum number of such shares. At the expiration of such 21 days notice the board shall apportion such shares amongst the shareholders (if more than one) who shall have expressed their desire to purchase number of shares already held by them respectively, or if there be only one such shareholder, that the whole of such shares shall be sold to him, provided no shareholder shall be obliged to take more than the maximum

intention to purchase, as the case may be, the party desiring to sell or transfer such shares shall be bound upon payment to the said price to transfer the shares to the respective shareholders or to single shareholder who shall have agreed to purchase the same.

GENERAL MEETINGS: NOTICE OF GENERAL MEETING AND PROCEEDNGS OF THE GENERAL MEETINGS.

5. The regulation of the Companies Act shall apply to the following variations;-

(a) A General Meeting, Ordinary or Extraordinary may with the consent in writing of all members, be convened on a shorter notice than seven days or without notice.

(b) Two members, present either personally or by proxy shall form a quorum.

(c) Any ordinary resolution of the company determined without any general meeting and evidenced by writing under the hands of majority of the Directors and of the members of the company holding three-fourths of the issued shares of the company shall be valid and effectual as an ordinary resolution duly passed at a general meeting of the company.

DIRECTORS

6. (a) Until otherwise determined by the company in General Meeting the Directors shall not be less than two and not more than seven in numbers.

(b) The following persons shall be the first Directors of the Company;-

1. **GHAZI FARRAN**
2. **ABBAS FAKIH**
3. **IBRAHEEM FAKEEH**
4. **ELIAS EL TAYYAR**

7. The shareholding qualification for Directors may be fixed by the Company in General Meeting, and unless and until so fixed no qualification shall be required.

8. The quorum of Directors for transacting business shall, unless otherwise fixed by the Directors, be two.

9. A resolution in writing signed by all the Directors then in Tanzania shall be as valid and effectual as if it had been passed at a meeting of Directors duly constituted.

10. The Directors may from time to time borrow or raise any money for the purposes of the Company which may exceed the issued share capital of the Company.

BORROWING POWERS

11. The Directors may from time to time in their discretion raise or borrow for the purpose of any Company's business such sum or sums of money as they think fit.

12. The Directors may secure the repayment of or raise any such sum or sums as aforesaid by mortgage or charge upon the whole or any part of the property and assets of the Company present or future including its uncalled capital for the time being, or by the issue at such price as they may think fit, of bonds or debentures either charged upon the whole or any part of the property and assets of the company or not so charged or in such other way as the Directors may think expedient.

VOTE OF MEMBERS

13. On a show of hands every members present in person shall have one vote. On a roll every member shall have one vote only for the shares of which he is holder.

14. No member shall be entitled to vote at any general meeting unless all calls or other sums presently by him in respect of shares in the Company have been paid.

DISQUALIFICATION OF DIRECTORS

15. The office of the Director shall be vacated if the Director;

(a) becomes bankruptcy; or

(b) is found to be a lunatic or becomes of unsound mind; or

(c) resigns his office by lunatic in writing to the Company;

(d) abstains himself from the meetings of the directors for a period of six months without special leave of absence from the other Directors.

SEAL

16. The Directors shall provide for the safe custody of the seal. The Seal of the Company shall not be affixed to any instrument except by the authority of a resolution of the Board of Directors and in the presence of at least two Directors or a Director and Secretary or other person as aforesaid shall sign every instrument to which the seal of the Company is so affixed in their presence.

ALTERNATE DIRECTORS

17. Any Director shall have power to nominate any person to act or attend as alternate Director during his absence or during his inability so to act. Such Director shall be subject in all respects to the terms and conditions existing with the reference to the other Directors and such Alternate Director shall exercise and discharge all the duties of Director whom he represents.

18. Unless otherwise decided by the Directors the quorum necessary to transact business of the Directors shall be two Directors personal present.

SECRETARY

19. The Secretary shall be appointed by the Board for such terms at such remuneration and upon such condition as it may think fit, and any Secretary so appointed may be removed by the Board.

WINDING UP

20. With the sanction of a special resolution of the shareholders any part of the assets of the Company including any shares in other Companies may be divided between the members of the Company in special or may be vested in Trustees for the benefit of such members and liquidation of the company may be closed and the company dissolved but so that no member shall be compelled to accept any shares whereupon there is any liability.

ALTERNATION OR ADDITION

21. Subject to the provisions of the Act and to those contained in the Memorandum of Association the Company may by Special Resolution make alteration or addition so made shall be as valid and effectual as if originally contained in those articles and be subject in like manner to alteration by Special Resolution.

INDEMNITY

22. Every Director, Managing Director, Agent, Auditor, Secretary and other Officer for the time being of the Company shall be indemnified out of the Assets of the Company against any liability incurred by him in defending any proceedings, whether civil or criminal in which judgment is given in his favour or in which he is acquitted or is in connection with any application in which relief is granted to him by the Court.

ARBITRATION

23. If and whenever any dispute or difference shall arise between the Company and any of the members or their respective representatives touching upon the construction or meaning of any of the Articles herein contained or any act matter or thing made or done or omitted to be done or with regard to the rights or liabilities arising here under or arising out of the relation existing between the parties by reasons of these articles or the Act, such differences shall (unless a sole arbitrator be agreed upon) forthwith be referred to the arbitration of three arbitrators, one to be appointed by each party and the third to be appointed by the first two or, in the event of failure to agree within (Cap 15) or any then existing statutory modifications or re-enactment thereof shall apply.

NO.	Names, Addresses and Description of Subscribers	Number of Shares taken by each Subscriber	Signature
1.	GHAZI FARRAN, P.O.BOX 72809 DAR ES SALAAM	250	
2.	ABBAS FAKIH, P.O.BOX 72809, DAR ES SALAAM	250	
3.	IBRAHEEM FAKEEH, P.O.BOX 72809, DAR ES SALAAM	250	
4.	ELIAS EL TAYYAR, P.O.BOX 72809, DAR ES SALAAM	250	

DATED at **DAR ES SALAAM** this 08 day of OCTOBER 2013.

WITNESS TO THE ABOVE SIGNATURE:

NAME:.....
SIGNATURE.....
POSTAL ADDRESS: .....
QUALIFICATION: **ADVOCATE**

DRUMAX CONSTRUCTION LTD

TABLE OF CONTENS

1 . INTRODUCTION

FOREWORD

This project Feasibility Study Report sets out proposals by M/s DRUMAX Construction 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 AND 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	GHAZI FARRAN	250	25 %
2	ABBAS FAKIH	250	25 %
3	IBRAHEEM FAKEEH	250	25 %
4	ELIAS EL TAYYAR	250	25 %

STUDY LAYOUT

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

Chapter one - Introduction
Chapter one - Executive Summary
Chapter one - Market Analysis
Chapter one - Production Technology
Chapter one - Machinery and Equipment
Chapter one - Production Inputs
Chapter one - Manpower and Plant Organization
Chapter one - Investment and Financing
Chapter one - Operating Costs
Chapter one - Financial Analysis
Chapter one - Economic Benefits
Chapter one - 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, slag, recycled concrete and geosynthetic aggregates such as Ring Industrial Group's EZflow polymer based aggregates used mainly in lieu of gravel 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 or a single unit of a 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 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 very durable and considered more handsome than clay bricks by some. Only a few stones are suitable for bricks. Common materials are granite, limestone and sandstone. Other stones may be used (for example, marble, slate,quartzite, and so on) but these 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, the United States, Belgium and theNetherlands.

Asphalt , is a sticky, black and highly viscous liquid or semi-solid that is present in most crude petroleum sand 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.

T he 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 'asphalt concrete' 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 aspjalts (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 Country, 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/bitumen, 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 structure.

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 **crusher** is a machine designed to reduce large rocks into 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, 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 or 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 tock between two ridged surfaces (jaws) which taper to form a funnel. In most designs 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 (HIS) Crushers

The HSI crushers break rock by impacting the rock with hammers that swing on a rotating shaft. The practical use of HIS crushers is limited to soft materials and non abrasive materials, such aslimestone, 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-cubical 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 thesefissures. 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 cubical 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/h of crushed rock, whereas the same size crusher manufactured today may produce 300 tons/h. 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

- 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.

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.

These 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 tons 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 runs material from various cold feed hoppers into a heater drum, where the batch is then heated up to temperature. The hot aggregate is screened into numerous hot bins (depending on the various aggregate sizes).Each hot bin releases a certain amount of aggregate into a weigh hopper, then it 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 tons 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 (or drum) 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 spraybars 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.

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 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 refinement of mixing 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 up to the construction site. They can be charged with dry materials and water, with the mixing occurring during transport. They can also be loaded from a "central mix" plant, with this process the material has already been mixed prior to loading. The concrete mixing transport truck maintains the material's liquid state through agitation, or turning of the drum, until delivery. The interior of the drum on a concrete mixing 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 or more metres). 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”- in 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 of 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 barrel under certain circumstances.

QUALITY CONTROL

We facilitate quality control by ensuring that our products are inspected for the highest quality before delivery. Similary, 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

There 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 Chipite, Masasi District. This is the location of the 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 plan 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 2009.

2.10 PROJECT ECONOMICS

2.10.1 Capital Investment Requirements

PARTICULAR	AMOUNT USD
Land and Buildings	530,400
Plant and Equipment	4,160,000
Motor Vehicles	1,800,000
Furniture & Fixtures	37,000
Pre expenses(& workshop & support)	160,000
Others/ Misc	41,500
Working Capital	400,000
TOTAL	**7,128,900**

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 1,480,450 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	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
REVENUE	1,550,000	1,675,000	1,780,000	2,000,000	2,360,000

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 the 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, 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 or 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 tock between two ridged surfaces (jaws) which taper to form a funnel. In most designs 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 (HIS) Crushers
- The HSI crushers break rock by impacting the rock with hammers that swing on a rotating shaft. The practical use of HIS crushers is limited to soft materials and non abrasive materials, such aslimestone, 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-cubical 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 thesefissures. 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 cubical 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

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/h of crushed rock, whereas the same size crusher manufactured today may produce 300 tons/h. 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

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.

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

- 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.

These 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 tons 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 runs material from various cold feed hoppers into a heater drum, where the batch is then heated up to temperature. The hot aggregate is screened into numerous hot bins (depending on the various aggregate sizes).Each hot bin releases a certain amount of aggregate into a weigh hopper, then it 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 tons 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 (or drum) 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 spraybars 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.

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 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 refinement of mixing 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 up to the construction site. They can be charged with dry materials and water, with the mixing occurring during transport. They can also be loaded from a "central mix" plant, with this process the material has already been mixed prior to loading. The concrete mixing transport truck maintains the material's liquid state through agitation, or turning of the drum, until delivery. The interior of the drum on a concrete mixing 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 our products are inspected for the highest quality before delivery. Similary, sourcing of materials is done with great care to ensure that the best materials are used in the manufacturing processes for various products.

4.3 ENVIRONMENT PROTECTION

Our aim is to make this product environment friendly. The company will strive to observe stringent environment protection in its production process. It will seek environment 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 effort.

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. Total price mentioned (4,160,000 USD) are based on quotations received from suppliers.

5.2 PLANT LOCATION AND CIVIL WORKS

5.2.1. Site and Location

As mentioned earlier, The project location is in a prime industrial area in Chipite, Masasi District. This is the location of the 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 for onward delivery to the customers.

5.2.3. Office Building

An office Block to accommodate the clerical staff will be constructed.

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 electricity supply company Ltd (TANESCO) has no problem in providing electricity to us to facilitate smooth production of various types of building materials.

S/N	PARTICULAR	UNITS	UNIT COST	TOTAL COST
1	TANESCO TRANSORMER PLUS INSTALLATION	1 Set	120,000 $	120,000 $

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

6 RAW MATERIALS AND OTHER PRODUCTION INPUTS:

REQUIREMENTS AND AVAILIBILITY

6.1 BASIC MATERIAL

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

6.2 UTILITIES

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 policy level. The top most person in the day to day running of the project will be 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 named by a number of personnel with varying education level 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 follow:

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 120.

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 stuff. 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$ 480,000 .

8. INVESTMENT AND FINANCING

8.1 ASSUMPTIONS

The financial projections to determine the viability of the project are based on the following keys 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 1,600.00

8.2 SUMMARY OF CAPITAL COSTS

On completion of project implementation; the total investment will reach US$7,128,900 .

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$530,400

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$ 4,160,000 approximately.

8.5 FURNITURE AND FITTINGS

The costs for this item have been estimated at US$ 37,000. The items to be purchased will comprise office furniture, computers, & other equipments for the office and factory use.

8.6 MOTOR VEHICLES

For company work, we intend to procure the following vehicles at cost of US$ 1,800,000

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$ 160,000 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$400,000. 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
	0

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$ 1,550,000 in the first year of production toUS$ 2,300,000 in the 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 the country foreign currency when the company starts exporting some of the building materials to neighboring countries at later stages of project implementation.

11.4 PROFUCTION 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 DRUMAX Construction 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 at Investment Incentives be submitted to Tanzania Investment Centre with a view of benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act. 1997.

DRUMAX

CONSTRACTION LIMITED

	DESCRIPTION	QYT.
1	asphalt plant	1
2	concrete plant	2
3	crushers plant	3
4	trans mixer truck	12
5	trans pump truck	3
6	drills all kind	5
7	comprasor	5
8	asphlt paver	5
9	rollers all kind	15
10	wheelloaders	10
11	exavators	12
12	truck all kind	15
13	law bed for trans machines	3
14	bucket all kind	15
15	bulldozers	5
16	graders	10
17	pile extractors	2
18	milling mchines	2
19	wilding machines	5
20	parts and tools	
21	tank on truck	5
22	tank for water, asphalt,diesel	10
23	light truck	6
24	private cars 4*4	4
25	machines tools working metals ,cement , asphalt	3
26	chain saws machines	20
27	diesel generators	10
28	tires all kind	
29	jaw crushers with feeders	3
30	cone crushers	6
31	impact crushers	3
32	sorting, screening, separating,washing machines	6
33	convayers belt all kind	20
34	electric appliances	
35	asphalt,cement, ceramic,diesel	
36	lathes all kind	2
37	power cables	
38	tranformers	5
39	lubricant oil	
40	water pump	10
41	farm mashinery	10
42	machinery parts	
43	rooms comtrols	3

44	electric power tools						
45	skeed steer with attch					6	
46	bakhoe loaders					5	
47	tools for constration public works						
48	road marker						
49	thermo plastic marking paint						
50	dump truck off road					6	
51	cranes all kind					6	
52	weigh bridge					3	

Schedule 3

COST STRUCTURE	
PARTICULAR	**AMOUNT USD**
Land and Building	530400
Plant and Equipment	4160000
Motor Vehicles	1800000
Furniture and Fixture	37000
Pre Expenses (Workshop & Support)	160000
Others/Misc	44500
Working Capital	400000
Total	7128900

Schedule 4

Name of Assets	Year 1	Year 2	Year 3	Year 4	Year 5
Land and Buildings	530400	503900	477400	450900	424400
Machinery and Equipment	4160000	3952000	3744000	3536000	3328000
Motor Vehicles	1800000	1710000	1620000	1530000	1440000
Furniture and Fixtures	37000	35150	33300	31450	29600
TOTAL	6527400	6201050	5874700	5548350	5222000
DEPRECIATION	Year 1 USD	Year 2 USD	Year 3 USD	Year 4 USD	Year 5 USD
Land and Buildings	26500	26500	26500	26500	26500
Machinery and Equipment	208000	208000	208000	208000	208000
Motor Vehicles	90000	90000	90000	90000	90000
Furniture and Fixtures	1850	1850	1850	1850	1850
Annual Depreciation	326350	326350	326350	326350	326350
Closing Fixed Assets	6201050	5874700	5548530	4895650	4569300

Drumax construction ltd