Eye Clinic construction project

"Towards good vision for everyone and improved quality of life for people living with avoidable and treatable blindness in the Macha region"

Eye for Zambia Foundation

January 2018, version 1.0

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A General Data

Management Summary

Introduction Eye for Zambia
Eye for Zambia is a Dutch foundation working together with Macha Mission Hospital in the South of Zambia. This hospital has been active in the Macha area since 1957. It is a general district hospital which had very basic eye care. Eye for Zambia has started to offer eye services in Zambia since early 2017 (www.eyeforzambia.org) and aims to increase the local eye care capacity and services in rural Zambia. The local team consists of a Dutch ophthalmologist, a Dutch optometrist low vision specialist, a Zambian ophthalmic clinical officer in training and two Zambian ophthalmic nurses.

Of the almost 13 million residents in Zambia, a significant number of people are blind or have low vision. Approximately 80% of blindness and low vision in this group is treatable. Eye disorders such as cataract and refractive errors are relatively easy to treat.

Compared to the Netherlands with 618 opthalmologists, Zambia has 25 opthalmologists only. There is also a large deficit of opticians. Many people have limited access to quality eye care due to long travel distances and high travel costs.

Eye Clinic construction project
The current services are provided in three small rooms on the hospital compound. Not all services can be offered due to this lack of space. Besides that, there is a lack of continuous water supply and unsteady power supply.

A newly constructed, adequately equipped eye clinic with more space and clean rooms will increase the capacity, ensure optimal hygiene standards and increase the scope of services. A separate eye clinic will ultimately improve sustainability, and lies in line with the mission of Eye for Zambia:

"*Towards good vision for everyone and improved quality of life for people living with avoidable and treatable blindness in the Macha region*"

This eye clinic will consist of two rooms for screening, four rooms for additional testing, an optic shop and working place, operation theatre and two wards for male and female patients. Additionally, this eye clinic will have secured water supply throughout the year, water storage and sufficient steady power supply with a back-up system.

Schedule and costs
All these plans are developed together with Macha Mission Hospital. The eye clinic will be an integrated part of Macha Mission Hospital.

The approximate starting date of the project will be 01-05-2018. The expected completion date is 31-03-2019.

The expected building costs will be: **€ 223.861**

Basic Data Organisation

Name organisation	Eye for Zambia
Name of local partner	Macha Mission Hospital (based in Macha, Zambia)
Project name	Eye Clinic project
Country	Zambia
Summary of main project activities	Eye for Zambia is a Dutch foundation working together with Macha Mission Hospital. This hospital is a general district hospital which had very basic eye care. Eye for Zambia has started to offer eye services in Zambia since early 2017 (www.eyeforzambia.org) and aims to increase the local eye care capacity and services in rural Zambia. The current services are provided in three small rooms on the hospital compound. Not all services can be offered due to this lack of space. A newly constructed, adequately equipped eye clinic with more space and clean rooms will increase the capacity, ensure optimal hygiene standards and increase the scope of services. A separate eye clinic will ultimately improve sustainability.

Short video impression	https://www.youtube.com/watch?v=za5wEgMUq-U		
Currency	Kwacha (ZMK)	Euro	%
Local contribution of Eye for Zambia	238.000	20.000	9%
Contribution of other donors	357.000	30.000	13%
Contribution of international donors	2.068.945	173.861	78%
Total project budget	2.663.945	223.861	100%

Organisation	
Address Netherlands	Dukaatslag 74, 3991 TE, Houten, the Netherlands
Visiting Address Zambia	Macha Mission Hospital Off Namwala Road Choma, Southern Province, Zambia
Postal Address Zambia	Brethren in Christ Church Macha Mission Hospital Att: Verkerk family On behalf of Eye for Zambia Foundation P.O. Box 630340 Choma 10101 Zambia
Telephone number NL	0031616143358 (board chair)
Telephone number Zam	00260961352764(local representative)
Website	www.eyeforzambia.org
Date of establishement	21 April 2016
Legal status	Formal registration as foundation with the Dutch chamber of commerce. Locally operates under full responsibility and registration of the Brethren of Christ Church Zambia.
Contact persons project	Mr. S. Verkerk and Mrs. T. Verkerk-Brussee
Position	Local representatives Eye for Zambia in Macha
Telephone	00260961352764
E-mail	eyeforzambia@gmail.com

Eye for Zambia (NL)	IBAN NL 48 INGB 0007 31 7224 Signatories: Rinze Beursken, Adriaan Verkerk Minimum of one signatory required
Eye for Zambia (Zam)	Account name: Eye for Zambia Account number: 01-1-0323909-011 Investrust Bank, Choma Branch Branch code: 171220 Swift Code: VSTRZMLUXXX Bank address: Plot No. 398 Livingstone Road, P.O. Box 630654, Choma, Zambia Signatories: James H. DeBoe, Samuel Verkerk, Tamara Verkerk-Brussee Minimum of two signatories required

B The Project

Objective

To provide comprehensive eye care to the patients in the Southern province of Zambia by establishing a well-functioning, equipped Eye Clinic and optical shop

Location

The Eye Clinic Project will be built on the compound of Macha Mission Hospital, Choma, Southern Province, Zambia

Duration

Starting date of project: approximately 01-05-2018
Expected completion date: approximately 31-03-2019

Background

The idea and initiative to start this eye clinic project was based on a collaboration by the local Mission Hospital staff and the local representative of Eye for Zambia. The hospital has expressed its desire to establish a well running and equipped eye clinic based on local needs.
Technical expertise and experience in eye care are provided by Eye for Zambia, who have been providing eye services at the hospital site since the beginning of 2017. Experience from the past year has shaped ideas for a better functioning clinic, offering more types of tailor-made eye services to patients in an improved clinical setting.

Before 2017 patients with eye problems (including refractive errors) greatly suffered from a lack of eye care services. Poor access, limited capacity and high costs have been longstanding barriers to eye care in the Southern province of Zambia. Several scientific reports have been published on the unmet need of eye care in this part of Zambia (can be shared on request), and eye camps operated by foreign ophthalmologists only cover a limited period of services during the year. The high need of sustainable, easily accessible quality eye care has been acknowledged and identified by Eye for Zambia.
The economic status of the local target group is poor, people often only rely on subsistence farming. Poor sight increases dependency of people; young people experience difficulties during their school years and training while elderly people

become more dependent on their family members.
The current activities of Eye for Zambia include surgical services (mainly cataract extraction), correction of refractive errors by production of spectacles, screening of outpatients during outreaches and training of local staff to provide eye care services.
Lack of space at the hospital site prevents the local team to provide eyecare services with optimal quality, and limits the amount and type of services provided.

Beneficiaries

The population in the Southern province of Zambia is approximately 2.000.000 people. A large group of 37,000 beneficiaries is expected to be affected by an eye condition resulting in low vision or blindness.
The gender balance within the beneficiaries is expected to be slightly skewed towards females. The expected percentage of beneficiaries below 18 years is 40%. The number of people coming from rural areas is estimated to be 95%. The eye clinic aims to care for 5.000 patients annually; screening 1.500 school children annually, treating 3000 patients annually, correcting refractive errors in 500-800 cases and operating 500 cases annually. For more details on these numbers please go to *annex I.*

Beneficiaries and local stakeholders have actively participated during the planning and orientation phase of this project. The implementation of this project under close monitoring of local chiefs and Macha Mission Hospital creates a feeling of local ownership and participation among beneficiaries.
The construction process itself will be undertaken by local workers from surrounding communities as much as possible.

Activities

The Eye Clinic Project consists of different activities. For a schematic overview and more details we refer to *annex II.*

The following phases with corresponding activities can be identified:

1. *Needs assessment*, description of current situation and desired situation
2. *Orientation phase*, collecting information and data from similar projects and partner organisations, discussions with partners and stakeholders. Making risks visible and thinking of ways to mitigate the identified risks
3. *Planning phase*, consolidation of data into concrete construction plans. Preparing for an invitation to bid, finalizing and agreeing on blueprint.
4. *Contracting phase*, setting the boundaries, formal process of signing contract on agreed endpoints and quality.
5. *Construction phase*, actual building of eye clinic according to agreed timeline and availability of funds. Excellent execution is key, so this phase of the project is supervised carefully.
6. *Embedding phase.* After the implementation it is important to make the project

"stick". Adjustments will be identified and possibly executed

7. *Closure phase*, proper completion of project, plans for continuous improvement and investment are made.
8. *Monitoring and reporting*, continuous cycle of reflection and assessment. Are all necessary steps taken (information, dissemination, critical analysis) before next move can be made? This phase is cross-cutting, and runs thru all above phases.

Expected results

A well-established, furnished and equipped and spacious eye-clinic, in line with the pre-defined criteria:

Two rooms for screening, four rooms for additional testing, an optic shop and working place, operation theatre and two small wards for male and female patients. Furnishing and equipment will be in line with proposed plan (*Annex II*).

Additionally, this Eye Clinic will have secured water supply throughout the year, water storage and sufficient steady power supply with a back-up system.
Annex III describes the blueprint and specifications which are expected after realisation of this project. Annex IV includes the actual blueprint.

Ultimately, this project is expected to improve the general living condition of eye patients by providing complete and holistic services in a rural eye clinic. The (surgical) outcome of eye services is expected to be optimal if hygiene standards are met sufficiently and continuously.

Context

Except for a tertiary hospital in Livingstone, 3-4 hours driving from Macha, there are no other hospitals or partners in the province who are able to provide the services Eye for Zambia is aiming for. Beneficiaries in the province might have some support in eye care from foreign 'eye camps' however these are temporary without a long-term and sustainable plan.

For the *orientation phase* various local eye clinics have been visited. Experience from visits and work at Choma, Zimba and Mukinge have contributed to a robust and solid plan for Macha area.

Local, regional and national authorities have been approached for assistance. While they are all supportive, financial and technical assistance cannot be expected from them. Strong collaboration with authorities remains paramount, and their advice and guidance will be asked where needed to increase local ownership and knowledge. The local Zambian eye care team, consisting of eye nurses, optic technicians and a cataract surgeon in-training (clinical officer) are all actively involved in the planning of this project.

Other (international) NGOs have been approached for consultation and advice,

including some with extensive experience in the field of eye care in low- and middle income countries (e.g. Eye Care Foundation).

Sustainability

Legal ownership of all the assets (land, building, equipment) will be the local Macha Mission Hospital management. The Eye for Zambia foundation will implement most of this project, however, from the beginning it has not been the ambition to continue with eye care services only relying on expatriates. Strong emphasis has been laid on local training, building up local capacity of the health workers and investing in human resources to operate the clinic more or less independently by late 2019. It is expected that regular supervision visits will be required after 2019, although the majority of services would be running without continuous involvement of Eye for Zambia. More details on legal ownership can be found in *annex VI.*

Responsibility for managing activities once the project has been completed		
Mr. S Verkerk / Mrs. T. Verkerk-Brussee	Opthalmologist, Optometrist (both local representatives of Eye for Zambia)	Until late 2019
Mr. E. Munguya	Clinical officer, cataract surgeon in-training	From late 2019
Mr. deBoe	Macha Misison Hospital director	Delegating responsibility to Eye for Zambia according to MOU (*annex VI*)

C Detailed budget

A bill of quantity (BOQ) has been made, which is shown in Annex V. A BOQ is an basic impression of the building costs which can be used as guidance for quotations. In this case it is used to estimate the building costs. It was made by a local engineer with extensive building experience in the region. In the next phase several local building companies will be invited to bid and give their quotations. A procurement policy has been adopted, and will be applied for this process (Annex VII). The procurement document is accompanied by a financial policy document which can be provided upon request.

The summary of this BOQ is shown in the table below

BOQ SUMMARY

	ZMK	EUR
SUBSTRUCTURE	175.015,30	14.707,16
CONCRETE WORK	314.708,00	26.446,05
BRICKWORK AND BLOCKWORK	187.050,00	15.718,49
ROOFING	364.250,00	30.609,24
CARPENTRY, JOINERY AND IRONMONGERY	335.520,00	28.194,96
ELECTRICAL INSTALLATIONS	98.235,00	8.255,04
METAL AND PLUMBING WORK	191.300,00	16.075,63
FLOOR, WALL AND CEILING FINISHINGS	151.880,00	12.763,03
GLAZING	34.800,00	2.924,37
PAINTING AND DECORATING	156.430,00	13.145,38
MATERIALS TOTAL	**2.009.188,30**	**168.839,35**
Add labour (30%)	602.756,49	50.651,81
Add Design and Consultancy	2.000,00	168,07
Add contingency	50.000,00	4.201,69
TOTAL AMOUNT OF TENDER	**2.663.944,79**	**223.860,91**

(average exchange rate of 11,9 Kwacha per Euro, in the last 30 days on 13 January 2018, http://www.xe.com/currencyconverter/convert/?Amount=1&From=EUR&To=ZMW)

For a risk analysis concerning this design we refer to Annex II. It should be noted that the construction work will be done by phase (Annex III), and according to the financial status.

A separate BOQ summary and quotations (Annex VIII) with additional costs can be expected for the furnishing of the clinic (hospital beds, chairs, desks, etc.) This element of budgeting is included in the narrative of Annex II, and is expected to be completed and more accurate in the first quarter of 2018.

D Reporting

The smooth implementation of this project is paramount to complete the objective. In line with annex II, regular verification and reporting will take place by the local representatives of Eye for Zambia.

The annual report will narratively describe the project progress. For specific reporting needs by supporting funds, Eye for Zambia will provide information needed in such a way that other interested parties might be served.

Eye cline construction project - Monitoring and reporting

Date: 11-1-2018

eye for zambia

Timeline total project

	< dec-17	dec-17	jan-18	feb-18	mrt-18	apr-18	mei-18	jun-18	jul-18	aug-18	sep-18	okt-18	nov-18	dec-18	> dec-18
Needs asssessment															
Orientation phase															
Planning phase															
Contracting phase															
Construction phase															
Embedding phase															
Closure phase															
Monitoring and reporting															

Construction phase	Forecast (will be updated on a monthly basis)															Actuals YTD	To be spent	% to be spent	Status subp
	< dec-17	dec-17	jan-18	feb-18	mrt-18	apr-18	mei-18	jun-18	jul-18	aug-18	sep-18	okt-18	nov-18	dec-18	> dec-18	11-1-2018			
Phase 1: Building the Eye Clinic																			
Construction																	€ -	#DEEL/0!	To be start
Roof and ceiling																	€ -	#DEEL/0!	To be start
Fencing and gate																	€ -	#DEEL/0!	To be start
Furnishings and fixtures																	€ -	#DEEL/0!	To be start
Windows, glass, door frames																	€ -	#DEEL/0!	To be start
Electrical (will be solar-energy-ready)																	€ -	#DEEL/0!	To be start
Water, plumbing																	€ -	#DEEL/0!	To be start
Phase 2: Addition of guesthouse																			
Construction																	€ -	#DEEL/0!	To be start
Roof and ceiling																	€ -	#DEEL/0!	To be start
Furnishings and fixtures																	€ -	#DEEL/0!	To be start
Windows, glass, door frames																	€ -	#DEEL/0!	To be start
Electrical (will be solar-energy-ready)																	€ -	#DEEL/0!	To be start
Water, plumbing																	€ -	#DEEL/0!	To be start
Water and electricity																			
Bore hole																	€ -	#DEEL/0!	To be start
Generator set																	€ -	#DEEL/0!	To be start
Necessary funding					€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	#DEEL/0!	
Necessary funding YTD					€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -				
Available funding					€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -				
Available funding YTD					€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -				
Deficit or surplus YTD					€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -				