The Feedback Trust
Scottish Charity No. SC023568

Construction of a new school building for the Tanakambana Secondary School in Madagascar

(FF 00359)

Final report

October 2016

Feedback Madagascar/Ny Tanintsika (FBM/NT) – The Eagle Foundation

Contents

Introduction

The Eagle Foundation agreed to fund a total of £39,940 for the project to construct eight new school classrooms for Tanakambana Secondary School in Tanakambana village, Tanakambana rural municipality ('commune'), Ikongo district, Vatovavy Fitovinany region, SE Madagascar. This involved the construction of three new school buildings; two comprising three classrooms and the third comprising 2 classrooms; plus latrines/urinal and hand-washing unit and the purchase of school furniture. This village is 32 km from the town of Ikongo (itself 397 km by road from Fianarantsoa) and 17km from Ifanirea (which is 137 km by road from Manakara). The expected period of the project was from October 2015 to September 2016.

The funding agreement, dated 2nd November 2015, was signed by the FBM UK administrator and the funds were received in the UK bank account on the 18th November 2015. This amounted to 188,596,680 MGA after transfer to Madagascar.

Figure 1: Map locating Tanakambana in relation to the capital city Antananarivo & FBM/NT's regional office in Fianarantsoa.

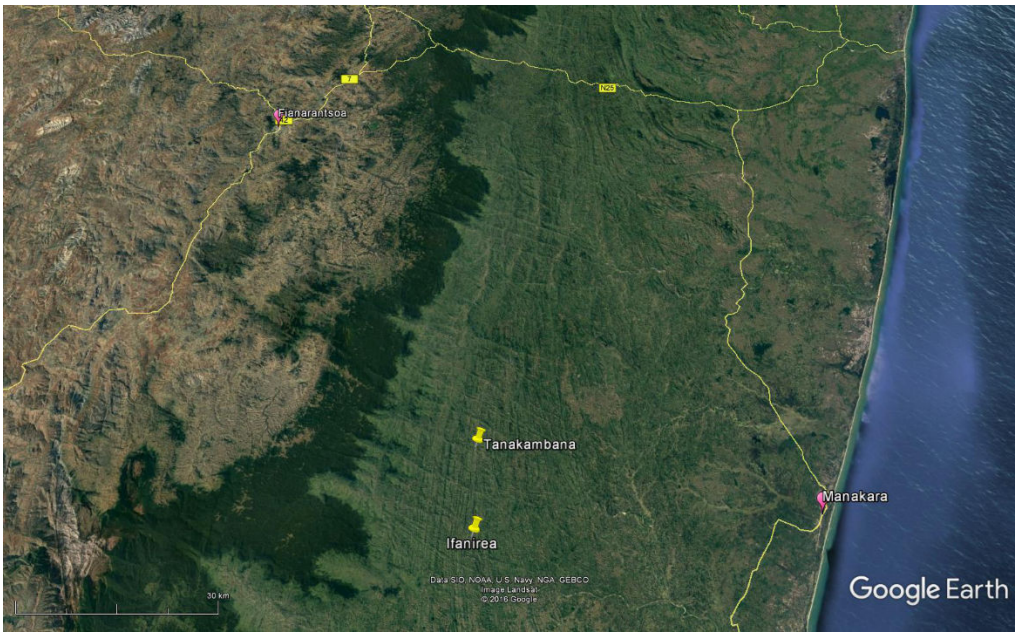

Figure 2: Map showing the road from Fianarantsoa via Manakara and Ifanirea to Tanakambana.

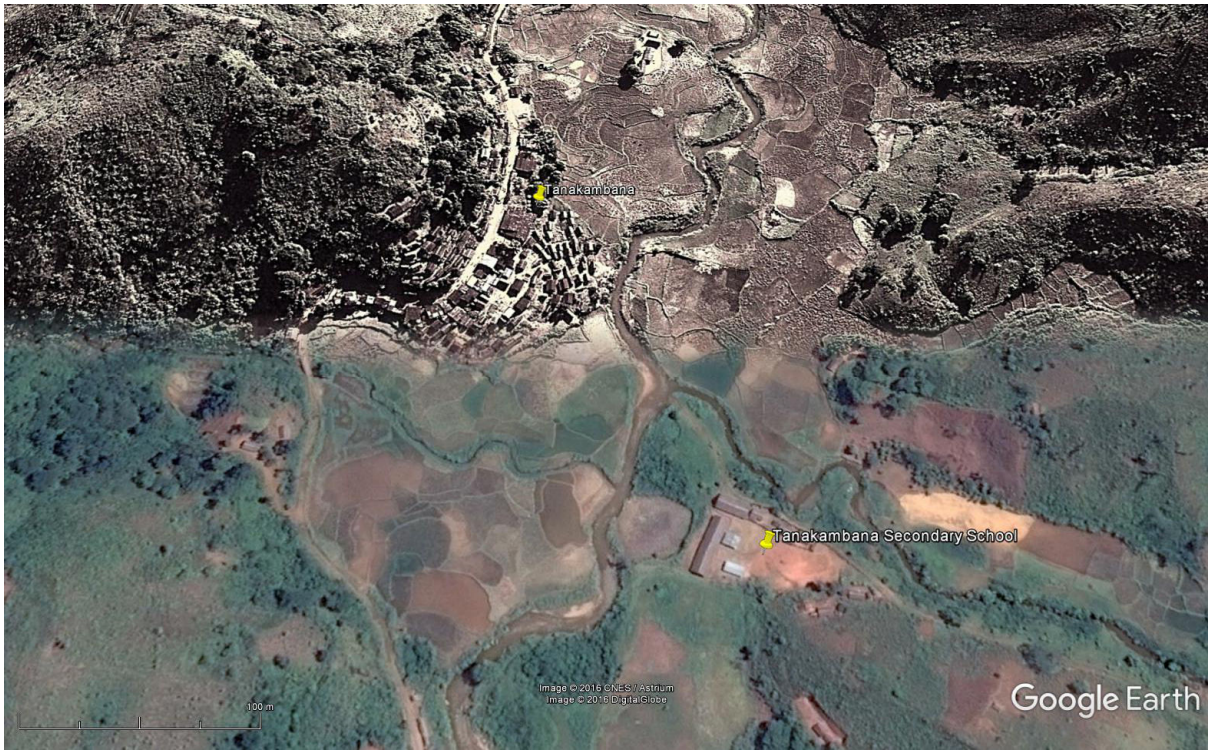

Figure 3: Map showing the (previous building of the) Tanakambana Secondary School in relation to the central village of Tanakambana.

Calendar of achievements

Activity	2015		2016									
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
Information letter sent to the local authorities and partners concerned with the project.	X											
Initial meeting in Tanakambana to sign the agreement setting out each stakeholders' roles and responsibilities in the project, to identify members of the local committee to oversee & monitor work ('COST'), to identify the storeroom & to develop an action plan regarding local materials.		X										
Contracting of team to make the cement breezeblocks and to break stones.		X										
Ordering and procurement of materials & equipment required, including doors & windows, furniture, etc.		X	X	X	X	X	X	X				
Recruiting of storekeeper & community mobilisation agent.		X										
Fabrication of 10,000 cements breezeblocks and preparation of building stones.			X	X								

Activity	2015		2016									
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
Meetings in Tanakambana with the community & local authorities.			X	X			X	X	X	X		
Contracting of builders for the project.							X					
Training of the local committee to oversee & monitor work ('COST').					X							
Foundations ceremony on the 15th May 2016.							X					
Building work (school and sanitation block).							X	X				
Transporting cement for breezeblocks (via Manakara & Ifanirea).		X	X									
Transporting other materials (via Manakara & Ifanirea).						X	X	X	X	X		
Regular monitoring of work and achievement of community contributions.		X	X	X		X	X	X	X	X		
Election & training of members of the school maintenance & repairs committee ('CER'), & provision of tool kit.									X			
Delivery of school furniture (128 desks, 8 tables & 8 chairs).										X		
Building work.							X	X	X	X		
Provisional technical acceptance of the work on the 26th August 2016.										X		
Installation of guttering.											X	
Final technical acceptance (3/10/16).												X

Details on the new school building

Building work began on the 15th May 2016 and ended on the 25th August 2016. A provisional verification of work was carried out between FBM/NT and the builders on the 26th August 2016 and the official verification of work was carried out on the 3rd October in the presence of the mayor, the head of education in the municipality, the teachers and head teacher, the parents association, the traditional authorities, the local community and students.

After inspection of the building and accompanying infrastructure, everybody was entirely satisfied with the work and no complaints or recommendations were made. A simple ceremony for the handing over of the keys was held, involving thank-you speeches.

Figure 4: View of the completed 3 buildings (before installation of guttering).

Features of the new school building are as follows:

- Building three buildings: Two buildings of 3 classrooms, measuring 21.88m x 7.94m x 4.4m, and one building of 2 classrooms measuring 14.66m x 7.94m x 4,4m.
- Stone foundations and cement breezeblock walls with a reinforced concrete structure.
- Cement rendering on inside and outside walls.
- Cyclone-proof tin roofing.
- Double metal doors with hooks to hold them open on the outside.
- Each classroom with 3 windows. Windows with glass panes, opening to the inside with protection grill on the outside.
- Front and back guttering on both buildings with an additional downpipe in the middle of the 3-classroom buildings due to heavy rainfall in this area (to prevent damage).
- Building guttering linking to a 7m³ water tank for rainwater serving as a hand-washing station to the side of the building, connected to 4 taps. The system is raised-up to be at a convenient height for hand-washing. This is located between the latrines and the school to promote hand-washing at key moments. The tank is equipped with a manhole cover on the top to enable cleaning as well as refill during the dry season, with steps built up to the top of the water tank.

Figure 5: The water tank and hand-washing station (before installation of guttering/down-pipes).

- Two-tone colouring (interior and exterior); oil paint at the base to protect from dirt and water-based paint higher-up.
- Wooden pine ceiling (of classrooms and veranda) painted with oil paint.
- Concrete blackboard with concrete chalkboard and raised stage for the teacher and their desk.
- Concrete flooring.
- In-built shelving in each classroom made of bricks, lockable with a door to store books / materials or supplies.

Figure 6: The 5-cubicle sanitation block.

Figure 7: One of the 'fly-proof' latrine compartments (left) & girls/boys urinals (right).

- A sanitation block composed of five-compartments: washable and 'fly-proof' latrines (long-drop toilets with a 6m-deep hole) with separate girls/boys urinal behind. The urinals are roofed to prevent rainwater from entering the toilets (risk of damage in the cyclone season) as urine will be channelled directly into the latrine pit.
- 128 school desks with integrated benches (16 in each new classroom), 8 tables and 8 chairs for teachers.

Figure 8: Interior of one of the classrooms.

Following recommendations from the last round of schools built, the main improvements to design applied were these:

- Installation of doors on the shelves in each classroom, so as to prevent theft of chalk, books and other materials.
- Integrating a chalk-holder shelf under the blackboard.
- Locating steps up to the water tank between the tank and the school building for safety reasons.
- Adding an additional concrete channel to drain water around the veranda.
- Provision of a tools kit for the school maintenance and repairs committee, who are a new structure put-in-place to improve maintenance of the infrastructure.

The document with building specifications / guidelines was updated with these changes.

Figure 9: Students at the Tanakambana Secondary School.

Project beneficiaries

Information on student numbers for this school year 2015-2016:

	School year 2014-2015	**School year 2015-2016**	**School year 2016-2017**	**Remarks**
Number of students	429	465	482	Of the 12 teachers, just 2 are civil servants. In addition to the teachers, the administrative staff are made up of the headmaster and 2 school supervisors. The number of students has steadily risen since 2011.
Number of teachers	11	NA	12	
Number of pupils per class:				
6^{th}	123	104	105	
5^{th}	93	101	121	
4^{th}	90	86	88	
3^{rd}	123	174	168	
Number of parents of students.	236	NA	246	

This project indirectly benefits the population of Tanakambana municipality, numbering 13,881 (data from 2015 population census by the Tanakambana municipality).

Community contributions to the project.

All of the local population of the Tanakambana municipality contributed to this project.
A committee was created to oversee and monitor work at the school, particularly in relation to the achievement of community contributions. Planning took into account the timing of the builders' requirements for different materials, to reduce the risk of delays to work.

Figure 10: Work underway with the community of Tanakambana.

The following were community contributions to the project:

- Housing the builders;
- Unskilled labour. People were divided into 10 groups of 8 to 12 people, who were responsible for fetching work required during building, for cement-mixing and helping the builders, carrying materials and other needs;
- Half of the required building stones and gravel. Financial contributions from members of the parents association enabled these to be bought from suppliers, who broke the rock 2km away from the project site.
- Fetching water for the building work;
- Sand, which was fetched from the stream near to the project site;
- Round wood (for scaffolding), which were supplied by members of the parents association and by villages;
- Transporting the materials from the store-house to the building site (150 metres across rice-fields and a stream), or from where they were supplied.

Community contributions	**Coarse sand**	**Fine sand**	**Round wood**	**Pebbles (« 4/7 »)**	**Building stones**	**Gravel**
Per village (61 villages)	50 daba	30 daba	11	50 daba	50	50 daba
For 500 villagers/ member of the parents association	7 daba	5 daba	2	5 daba	12	5 daba

Note: A 'daba' is a local unit used, roughly equivalent to the capacity of a 15 litre bucket.

- The Tanakambana municipality demanded that each adult male in the municipality pay 1,000 Ariary (about 25 pence), to cover the cost of stones and of unloading materials transported from Manakara.

Difficulties encountered

- Bad weather held up work slightly, leading to project achievement being two weeks behind schedule.
- However, the main difficulties were related to the bad state of the road, particularly that from Vohipeno to Ifanirea (67km) and between Ifanirea and Tanakambana (17km). The transporter was only able to carry out one journey per week, and after each journey they were obliged to carry out repairs to their truck. Equally, the logistics of delivering materials over such significant distances was challenging; particularly ensuring that materials transported from Manakara corresponded to builders' immediate needs.

Figure 11: The precarious "ferry" crossing at Angado River, between Vohipeno and Ifanirea.

- Difficulties were experienced with community organisation for transporting the stones, gravel and sand, since the majority of villages are located far away from the centre of the municipality (where the project is). It was particularly challenging to contact the following neighbourhoods: Sahampaly (10km), Mafitoaka (9km), Fanjakasoa (10km), Nanarena (5km). Meetings with the mayor of Tanakambana were necessary to resolve the problem, who mobilised personnel to inform and motivate villages regarding their contributions to the project. Likewise, because of the distances involved, labourers from far away villages often arrived at 8 or 9am and had to leave the building site at 2pm to go home.
- There were some delays to the supply of stones and gravel required for building work.

Recommandations

Recommendations were given to Tanakambana Secondary School to improve landscaping around the school grounds, including planting grass on slopes, laying gravel around the base of the school and planting a hedge to the north-east of the school.

For future projects, it is suggested that metal guttering is replaced by reinforced concrete guttering integrated into the building work. This is considered to be the most long-lasting, and could be cleaned periodically to avoid drains getting blocked.

In addition, improvements have been identified for future projects with regard to design of the 'impluvium' rainwater catchment system, with the integration of a means to prevent the first rainwater (likely to be dirty) from entering the water tank.

Figure 11: The team of builders before leaving Tanakambana.

Positive points

The building team numbered 25 - of which 15 were experienced builders and 10 experienced labourers – in addition to the 10+ local labourers provided by the community. As a result, building work was rapid initially.

Overall, high levels of stakeholder motivation and community solidarity meant that the project went very well. Every Thursday, the majority of the population came to the building site to give an additional helping hand with the work underway. Any difficulties encountered were resolved thanks to the dynamism of the local authorities and parents association.

On completion of the project, the president of the parents association and the head-teacher declared that it was decided in their Annual General Meeting to recruit a caretaker/guard to ensure the security of the new school buildings. The recruitment process is already underway and the parents association has already built housing for the school caretaker / guard next to the school.

Figure 12: The housing built for the caretaker/guard (left).

Likewise, members of the « COST » (Organisation and Monitoring Committee) were dedicated in their role to ensure work went smoothly, taking note of everything that arose and working alongside the storekeeper to control stock movements and the presence of local labourers.

The Maintenance and Repairs Committee « CER » also plays an important role for the sustainability of the school building, furniture and impluvium. This committee is led by 2 members of the parents association who are knowledgeable in building work, and regroups a teacher representative as well as one pupil per class. It works closely with the head-teacher and the president of the parents association. The community are hence responsible for maintenance and repairs after the handing-over of the keys to the new buildings. Pupils were trained to report any defect to the head-teacher, who then reports this to a member of the « CER », who will plan its reparation. A tool kit was provided to the « CER » in order to make repairs.

Included in the contract signed between the school and Feedback Madagascar-Ny Tanintsika, the head-teacher is required to send annual reports of progress within the school which also includes any repairs carried out.

Figure 13: Members of the parents association, teachers and local authorities after the technical acceptance ceremony.

Expenditure summary

Items	Budget (£)	Funds received (MGA)	Expenditure (£)	Difference with amount received (£)	Explanation for difference
Materials for the new school buildings (8 classrooms), Latrines/ urinal & Hand-washing unit	21,000	99,163,090.47	20,902.82	96.97	
School furniture (not including transport costs)	1,658	7,830,063.02	1,576.84	81.33	
Transport costs (building materials and furniture)	6,886	32,517,942.64	7,327.25	-440.92	Transport costs between Manaraka & Ifanirea very high, & some materials were also purchased in Fianarantsoa
Labour costs	6,614	31,230,103.33	6,607.70	5.91	
Monitoring & evaluation costs	970	4,578,984.58	1,070.55	-100.86	The significant distances involved meant that field trips were long.
Administration/ overheads (7%)	2,812	13,277,536.38	2,794.55	17.23	
Total	**39,940**	**188,597,720**	**40,280**	**-340**	

Figure 14: Students thrilled with their new school.

Current situation

	Situation pre-project	Expected situation post-project	Real situation post-project
Number of existing parent-built classrooms	2 buildings: one with 2 classrooms and one with 1 classroom. The building of 2 classrooms is very unstable/ tilting and is likely to not last longer through the next rainy season.	1 existing classroom will still be used, which will make 9 classrooms in total (along with the 8 new classrooms). With a total of around 450 pupils, there will be on average 50 students per classroom.	1 existing classroom will still be used, after being improved by the parents' association. The other existing classrooms are now in such a bad state that they cannot be used, and will be demolished. There will be 10 classrooms in total (this 1 existing classroom, the 8 new classrooms and another classroom to be built with excess cement breezeblocks and roofing materials recovered from the demolished buildings).
Number of classrooms currently borrowed/ makeshift rooms	2 rooms from the mayor's office and 1 church. Classes take it in turn to use these rooms.	No rooms will be borrowed.	No rooms will be borrowed.
School office	1 building built by parents.	The existing building will continue to be used.	The existing building will continue to be used for the office of the parent's association. A new school office will be built using excess cement breezeblocks and the roofing material from an existing classroom.
WASH (Water – Sanitation – Hygiene)	No latrines. No hand-washing unit. Students fetch water from the river.	Sanitation block of 5-compartment latrines and boys/girls urinals will be built, along with a hand-washing unit. Co-funding will be used to supply the school with water filters for drinking water, and the potential of drilling a borehole/installing a hand-pump will be investigated.	Sanitation block of 5-compartment latrines and boys/girls urinals, along with a hand-washing unit with 4 taps. Co-funding will be used to supply the school with filters for drinking water. The school has formally requested help for the provision of a borehole/installation of a hand-pump and this is planned for 2017.

Conclusion

This project proved the solidarity of everyone involved (builders, community, local authorities, teachers, etc.). No major obstacle was encountered, and the main building works started after the end of the rainy season. The community's happiness is evident at this project, having waited since June 2011 for a response to their request for help. Thanks so much to the Eagle Foundation for funding this project!

Thank-you letter from the community & school

Translation: Comments and Thanks. We have the pleasure to attest that the work carried out by FBM-NT regarding the building of 3 school buildings with 8 classrooms has been completed (walls, doors, roofing, WC, interior and exterior painting, ceiling, impluvium, furniture, …) and we beneficiaries are really satisfied. So we would like to offer you our entire thanks for this, and we still hope to continue our collaboration. Signed by the head-teacher, the president of the parents association and members of the "COST".

Tanakambana le 26 Août 2016
Ny TALEN'NY SEKOLY,
Ny FILOHAN' NY FRAM.
Ny MPIKAMBANA ao amin'ny COST
eto amin' ny SEKOLY AMBARATONGA
FAHAROA TANAKAMBANA
- IKONGO -

Ho amin' ny
RAMATOA MPANDRINDRAM. PARITRY
NY ONG NY TANINTSIKA
- FIANARANTSOA -

ANTONY: Fanamarinana sy Fisaorana

Tompoko.

Voninahitra ho anay ny valaza etsy ambony ny manamarina fa ny asa nataon' ireo Mpiasan' ny ONG NY TANINTSIKA momba ny fanamboarana trano miisa telo (03) izay misy efitra valo (08) dia vita tanteraka (rindrina, varavarana, tafo, W.C, mandoko ny ivelany sy ny anatiny, ny fanambaniny sy ny plafond, ny impluvium, ny armoire sy latabatra,...) dia vita manontolo ary tena mahafa-po anay rehetra mpahita tombontsoa izany.

Koa tolorana fisaorana feno ny ONG NY TANINTSIKA ao amin' izany ary mbola maniry hatrany ny fitohizan' ny fiaraha-miasa feno sy harorany hatrany aminareo izahay manoloana izany.

Raiso Tompoko ny haja ambony atolotray anareo.

Ny COST
RANDRIANSAIVO José Ludovic
ZAFITOANDRO Raymond Stephane

LE PRESIDENT
Ny Filohan'ny FRAM
RANAIVOSON André

Ny Talen'ny Sekoly
ANDRIAMBOLOLONA Bernard Jean Julien

COLLEGE D'ENSEIGNEMENT GENERAL FRAM TANAKAMBANA

More photos

Figure 15: Front and posterior views of school buildings.

Figure 16: Installation of guttering at Tanakambana Secondary School.

Figure 17: Participants inspecting the school before the technical acceptance of works.

Figure 18: Pupils in their new classroom.

Figure 19: The Mayor speaks at the meeting for the technical acceptance of works.

Figure 20: From left to right: FBM/NT project officer handing over the keys to the mayor, the mayor handing over the keys to the head of education in the municipality, and then handing over the keys to the headmaster and the president of the parents association.

Figure 21: Happy students (above) and teachers (below)!