



Health Care in Belhi, Nepal

Second Report | Access Health Care | Oct. 2019

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Preface

This report summarizes the work carried out by a biomedical engineering team from NGO's Access Health Care (AHC) and Engineering World Health (EWH) in October 2019 in Belhi, Nepal.

The work carried out in Belhi had mainly two purposes: 1) Ensuring utilization of a donation of medical equipment received by local NGO Social Eco Innovative Trust (SEIT) from Denmark in early 2017 and 2) providing recommendations towards a strategy for provision of health care services in Belhi.

Regarding the latter aim, some guiding input is given regarding implementation of new and more advanced health care services in the region.



December 6, 2019

David Kovacs

Acknowledgements

Access Health Care has a vision, that in the future, quality and affordable health care will be available to all Nepalese people. The work in Belhi is a flagship project, which in the future can set higher standard of health care in remote areas of Nepal. We are grateful to collaborate with, and would like to thank:

Dan Charly Christensen, Flemming Topsøe and Vagn Frikke-Schmidt for their continuous support and trust.

Amit Shah and Guru Prashant for being a consistent long-term Nepali counterpart in this project.

Sunil Baniya and Sanjay Bahadur Singh for their indispensable with several of our projects in Nepal.

Ferenc Kovacs and Tine Holmbæck Petersen for their inputs and help in the field.

Electrician Surendra Yadav and team for providing the necessary technical support to ensure success of our field work.

Chief Radiographer Johnny Mädelung for guiding us about the design of X-Ray rooms.

Christine Voetmann and Niels Beck Jensen from Center for Centre for IT, Medical Technology and Telephony Services (CIMT) for helping with troubleshooting the donated C-arm during the trip.

Executive Summary

Donated medical equipment

- Due to reasons described in the section *Overview and Introduction*, a large part of the donated equipment cannot be used within the scope of SEIT and the Belhi Health Clinic (BHC).
- Final decisions have been made about which pieces equipment will remain in the possession of SEIT.
- All equipment kept by SEIT will be used for one of two purposes: 1) Active use at BHC or 2) lending to partner institutions in exchange for health services.
- Equipment which has not been marked explicitly to be kept by SEIT will be auctioned at one or several charity event in Janakpur and/or Kathmandu. All proceeds from charity auctions will be spent towards the purpose of improving health care at BHC.
- All equipment where possible has been repaired, refurbished, cleaned and thoroughly packaged by the biomedical engineering team. A show room has been created, where equipment can be presented for interested partners of SEIT.
- The X-ray unit (Siemens Mobilett) is currently out of order. It is recommended that it is repaired by local professionals. In this regard an offer has been prepared by biomedical engineer Sanjay Bahadur Singh.

Strategy for Health Care

- It is recommended that BGN shall adopt a three year gradual strategy for implementation of more advanced health care services in Belhi.
- A step-wise implementation is recommended in 3-6 milestones, in which funding for each level after the first is conditioned upon the completion of a set of predetermined set of goals for each milestone. The goals for each milestone should be agreed in collaboration with SEIT, biomedical engineers, medical professionals and BGN to ensure feasibility. In this report we provide some recommendations towards which steps could be considered, however the full a full implementation plan is beyond the scope of this report.
- Concrete plans for an X-ray and Operation Theatre (OT) facility in Belhi in the future are also outlined.

Introduction and Overview

A thorough evaluation of the donated hospital equipment was carried out during the first field trip in April 2017 as described in the project report "Donation of Medical Equipment I Belhi, Nepal". After a period of 2,5 years the second field trip was arranged in October 2019 in order to follow-up on plans from the first trip and to investigate the opportunities for a sustainable development of health care in Belhi. This report describes the work carried out during the latest field trip.

After gaining an updated overview of the equipment in the storeroom during the field trip, it was decided in collaboration with SEIT that a charity auction should be organized to put into use equipment which is outside the scope of BHC and SEIT. This equipment is not suitable for the infrastructure of Belhi and hence it would be more suitable use the equipment elsewhere.

In the following chapters, the management of the equipment including the charity auction is described followed by a framework for a sustainable development of BHC. Based on assessments, a few recommendations for a new clinic run by SEIT are provided. This includes the design of a potential new X-ray room and OT facility in Belhi.

In the following a detailed timeline of the field work in Nepal in October 2019 is provided.

Field Work Timeline

A day-to-day summary of activities of AHC in Nepal between October 8 and October 17, 2019, is provided. Troubleshooting the X-ray unit (Siemens Mobilett) was carried out in parallel with the other activities mentioned below from Day 4-9.

Day 1 (8/10)	Flight from Copenhagen to Kathmandu.
Day 2 (9/10)	Arrival to Kathmandu. Initial meetings and plans are outlined with Sunil and Sanjay. Visited National Innovation Center (NIC).
Day 3 (10/10)	Transportation from Kathmandu to Janakpur. Initial meeting with Guru.
Day 4 (11/10)	Visited: 1) The former BHC Clinic and now SEIT office 2) The new building which accommodate a bank, Belhi Technical Institute and the BHC Clinic in order to evaluate the possibilities of maintaining a clinic 3) Bagchauda Healthpost for possible collaboration 4) Nava Jiwan Hospital in order to troubleshoot the donated C-arm 5) The storeroom to inspect the state of the equipment since last visit.
Day 5 (12/10)	Updated the inventory from last visit based on identification of equipment in the storeroom. Cleaning of the storeroom and equipment was initiated. OT-lights were inspected. Initial visit from potential buyer for OT-light.
Day 6 (13/10)	Further work organizing equipment at the storeroom. Necessary equipment for testing equipment in the storeroom were acquired including cleaning tools. A meeting between architects and AHC was arranged in order to get an overview of the land SEIT owns/leases. The updated inventory was discussed with Guru Prashant and equipment for auction was marked.
Day 7 (14/10)	Further work organizing the equipment at the storeroom. Contacted potential buyers and invited them to the auction through mails, phone calls and personal visits. David and Amit visited Janakpur Zonal Hospital and returned unused OT-light transformer to SEIT.

Day 8 (15/10)	Final organizing for the auction. All equipment were tested and packed. Final minimum auction prices were set in collaboration with Guru. Pallets were built and a pallet-lifter was acquired to properly organize the store room, which had now been turned into a de-facto showroom.
Day 9 (16/10)	Sanjay troubleshooted the C-arm again in Nava Jiwan Hospital and rest of the team prepared for the auction by labelling the equipment with minimum auction prices. Auction completed in the evening and all equipment were packed thoroughly with plastic before we left.
Day 10 (17/10)	Transportation from Belhi to Kathmandu.



Figure 1: *Top:* A thick layer of sand and dust was found on the equipment as the windows in the store room have no glass. In order to ensure safe storage all equipment was cleaned thoroughly and covered with plastic. *Bottom left:* Cecilie and David refurbishing with the OT-lights. *Bottom right:* Surendra and Nitesh testing the OT-lights.

Organization and Auction of the Donated Equipment

In order to gain an updated overview of the equipment in the storeroom since last field trip and form the basis of the charity auction, the previous inventory was updated and expanded by inspecting the storeroom. Information which was not filled in during last trip was completed. This updated inventory was discussed between SEIT (Guru) and AHC in order to decide which equipment would be suitable for auction and which equipment SEIT may keep for future use. The first page of the updated inventory list is shown in Appendix I. The full version can be provided separately to the reader upon request to the authors.

The following sections describe the methods used during decision making and preparations for the charity auction.

Distribution and Test Status of Equipment

Updated inventory

The following new information was introduced to the original inventory list.

Status October 2019

The possible status categories used were:

- *Working*
- *Needs repair*
- *Not tested*
- *Missing part*

Plan October 2019

Each item was placed in one the following categories:

- *BHC - Now:* Equipment currently used by BHC.
- *Present in store room:* Equipment present in the store room and planned for auction.
- *Present in store room - keep for BHC:* Equipment in the store room saved for BHC for later use.
- *Donated to other Hospital:* Donated by SEIT to other hospital (Dhanusha Hospital, dental clinic, Nava Jiwan Hospital, Janaki Health Care and Research Centre (JHCRC)).
- *SEIT Office:* Equipment currently used by SEIT office.
- *Non-Existent on site since donation:* Equipment was a part of the original inventory, but was not found in the store room during the first field trip.
- *Non-existent on site since last visit:* Equipment was a part of the previous inventory, but was not found in the store room during this field trip.
- *Disposed:* Used for expired items.

Equipment test status at each location

Focus of repairs was mainly kept on the most valuable equipment which was feasible to repair locally, namely OT-lights and the Siemens Mobilett. Figure 2 provides an overview of the test status distributed by location.

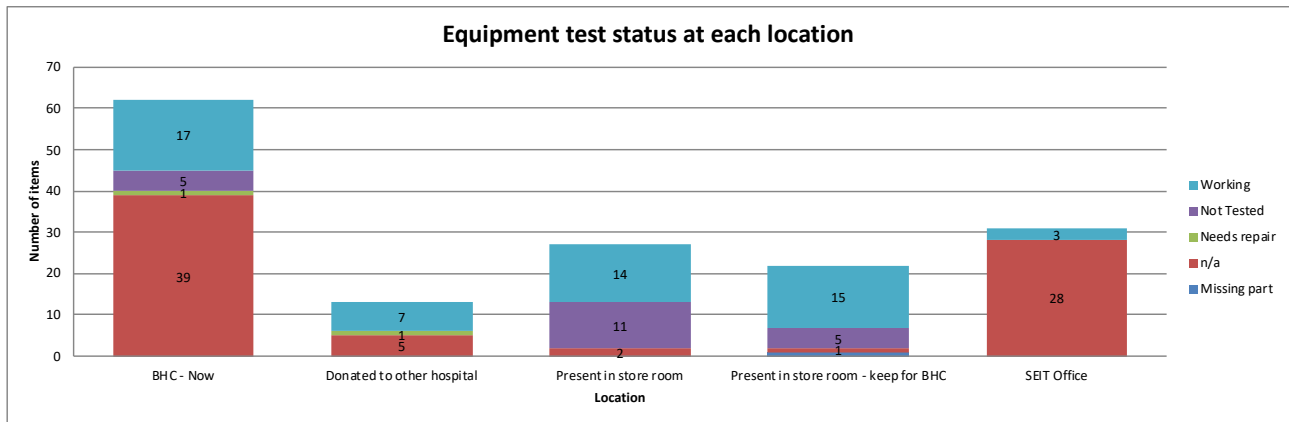


Figure 2: Distribution of items and their test status. The status n/a covers items for which testing was not necessary. This includes office and kitchen equipment, medically related consumables and spare parts, clothing and pillows. The figure does not include the three auctioned items - elaborated in later sections.

Most equipment being currently used by BHC and SEIT is working and so is the equipment kept aside for BHC in the storeroom (c.f. Figure 2). The donated equipment to other hospitals is working except from the C-arm donated to Nava Jiwan Hospital, which needs repair. The OT-light donated and installed at Janakpur Zonal Hospital during the last trip is in the meantime taken down and stored at the hospital, where it is completely ruined. Figure 3 shows the current state of the donated OT-light in Janakpur Zonal Hospital.



Figure 3: *Left:* The donated coupled OT-light at JHCRC is disassembled and stored at a store room covered with moulds. *Top Right and Bottom Right:* Close up of the OT-light.

X-ray unit (Siemens Mobilett)

The X-ray unit was not in working order and traces of rats were found inside it upon inspection in the store room. Surendra Yadav, Sanjay Bahadur Singh and AHC managed to start the unit, but it was not possible to solve thea all errors within the timeframe of the project. It is recommended that it is repaired by local professionals who have access to spare parts. In this regard an offer has been prepared by biomedical engineer Sanjay Bahadur Singh from NIC. The quote for this offer is attached in Appendix II.



Figure 4: Left & Right: Cecilie and Sanjay are repairing the X-unit.

Missing equipment

Five pieces of equipment was not found in the store room since last the last field trip. The missing equipment is listed in Table 1.

AHC-#	Equipment type	Manufacturer	Model	Serial Number
38	Armholder	-	-	-
47	#3OT Light 4 point	Heraeus	Hanlux 2004	2000004
49	#5OT light (small)	ALM	ECL 152	-
59	#8OT light transformer	Heraeus	4AM4895	-
87	Blood pressure	PyMah	-	-

Table 1: Non-existent equipment in store room since last visit.

Charity Auction

Updated inventory

The following new information was introduced to the original inventory list in connection with the charity auction.

Estimated price in NPR

Estimated prices in NPR were calculated by converting the column *Estimated COST USD* from the previous inventory using a conversion rate of 113.68. The estimated costs were originally determined by finding the items online in used condition. If multiple results were found, the lowest available price was used to determine the estimate. In cases where used equipment was not found, half of the price of new equipment was used. If the exact model was not found, the price of an equivalent model was used for the estimate.

Minimum auction price

The minimum auction prices were set as 2/3 of the estimated price in NPR. In some cases the final minimum auction prices were set based on specific assessments by Guru Prashant, Sanjay Bahadur Singh and AHC based on experience from former auctions and understanding of the Nepalese market.

Auction type¹

Two types of auctions were used during the charity auction

- *Live auction*: An auctioneer is at the helm, and people indicate their bids. The highest bidder wins.
- *Silent auction*: Participants bid secretly before the live auction. At an appointed time, the bidding closes, and the winner is announced.

Difference between estimate and auction price

The difference between *Estimated price in NPR* and *Minimum auction price*.

Auction inventory

In total 29 items were planned for auctioning. A detailed overview of these are provided in Appendix III.

Not Tested Equipment for Auction

Currently 11 pieces of equipment are planned to be auctioned, but not tested as we do not have the suitable infrastructure and equipment for the purpose. Hence it would be disproportionately expensive for SEIT/AHC to perform testing, and we recommend selling instead. These are listed in Table 2.

¹ <https://www.nolo.com/legal-encyclopedia/is-live-silent-online-auction-best-your-nonprofit.html>, visited 01-12-19

AHC-#	Equipment type	Manufacturer	Model	Serial Number
8	Bloodpressure sphyg. (Mercury)	Riester	empire N	27358
19	Ultrasound Therapy	Enraf Nonius	Sonopuls 434	8-021
20	Ultrasound Therapy	Enraf Nonius	Sonoplus 434	08-835
23	Small muscle stimulator	Biometer Denmark	Elpha 2000	n/a
62	Washing machine	Olympus	ETD2plus	n/a
63	Washing machine	Olympus	ETD2plus	n/a
69	Sterilization system	Johnson & Johnson	ASP Sterrad 100s	20014
70	High Flow Water Purification System	ELGA	MP030RBM1-230	MP00001741
71	Compressor	Granzow A/S	WIS 16	1607-822
94	X-ray quality control (dose)	RTI electronics AB	Type: PMX - III - R/CT Ver 6.0	2249
63b	Washing machine	Olympus	ETD2plus	n/a

Table 2: Equipment planned to be auctioned, but not tested.

Guest list for auction

A potential list of 34 buyers was prepared by SEIT, the medical supplier Santosh and AHC. The potential buyers were local institutions in Janakpur and larger institutions in Nepal with the capacity to utilize advanced medical equipment (such as endoscope washing machines and the oil free compressor). 17 of these were contacted through mail and the rest were (attempted) contacted personally by phone or through other channels. Generally the word about the auction was actively spread in the team's network. This guest list is attached in Appendix IV.

Overview of auctioned equipment

Table 3 provides an overview of the auctioned equipment. For more details please refer to the auction agreements attached in Appendix V.

AHC-#	Equipment type	Manufacturer	Model	SN	Minimum auction price in NPR	Auction type	Bid amount in NPR	Buyer
29	Hospital Gurney	Stryker	Instacare	10317	Rs30,000.00	Live, SOLD	Rs30,000.00	Nava Jiwan Hospital Pvt. Ltd. (Akilesh Sah)
66	X-Ray back light	Planelux	BW#1	n/a	Rs22,000.00	Live, SOLD	Rs22,000.00	Lifecare superspeciality Polyclinic Pvt. Ltd. (Dr. Kirti Kumari Sah)
73	Patient Bed	Enraf Nonius	Type 3445,490	22-0 929	Rs48,000.00	Live, SOLD	Rs48,000.00	Lifecare superspeciality Polyclinic Pvt. Ltd. (Dr. Kirti Kumari Sah)

Table 3: Overview of auctioned equipment. SN = Serial number.

Income from first charity auction

3 out of the 29 items planned for auction was successfully auctioned for a total price of 100.000,00 NPR. The estimated cost of these 3 items were 127.429,81 NPR. This leaves 26 items left for a total minimum action price of 2.283.223,83 NPR, which have the estimate value of 4.967.147,91 NPR.

Distribution of donation in terms of cash value

Figure 5 shows the distribution of donation in terms of percentage value share for each of the location/recipients.

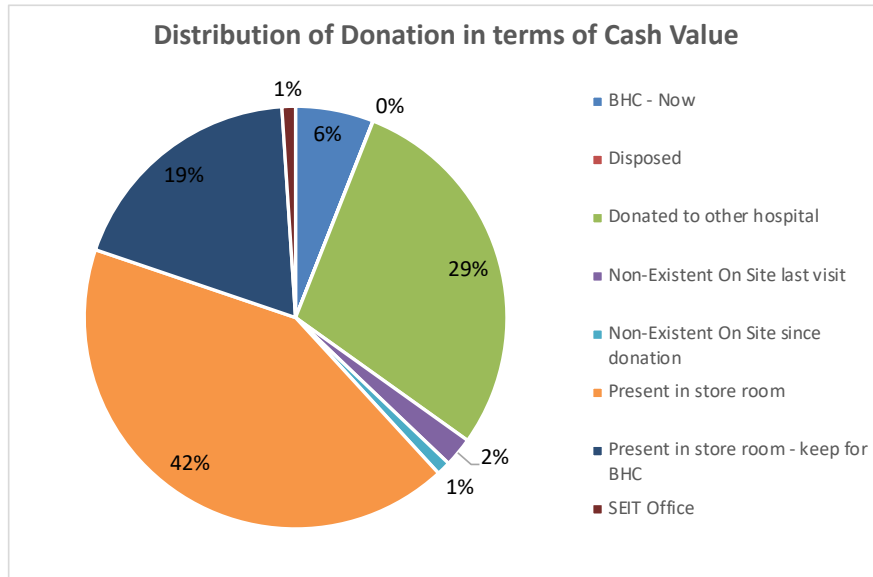


Figure 5: Distribution of donation in terms of cash value.

In terms of cash value, 26% of the donation is planned to be used by BHC or is currently being used by BHC and SEIT, while 29 % is already donated to other hospitals. The remainder 42 % planned for auction will benefit BHC in terms of cash amount which can be used to buy services for BHC. A distribution of the donation in terms of cash value for each of the locations is provided in Appendix VI.

Plan and timeline for future charity auction

Due to the short time frame, only few interested parties managed to participate in the held auction. We expect, that it is possible to reach a higher number of interested parties if the auction is planned in a more timely manner. AHC recommends to hold another auction and sell as much as possible equipment in Janakpur. There should be a silent auction for a period of 2-3 weeks up to the actual auction, where interested buyers can register their bids, but where the final sale will take place on the auction date. In this way, it is ensured that all interested buyers are gathered at the same time. After the auction in Janakpur it is recommended that the remaining equipment is auctioned in Kathmandu. The auction in Kathmandu can beside SEIT be co-facilitated by NIC, where the equipment may also be stored. We recommend, that equipment which is not needed for BHC should not remain in Janakpur any later than January 15 2020, after which the equipment should be transported to Kathmandu, where the equipment is more likely to be sold at a good price.

The New Clinic - Milestones

To ensure sustainability of BHC, we recommend a number of specific milestones. These milestones are described in Table 4. The milestones are suggestions and their exact content, order, timeframes and budget for their implementation should be reviewed and finalized between BGN and SEIT. It is important, that Guru Prashant as leader of the Health Care division of SEIT agrees on the feasibility of the overall outlined plan, and that the plan encourages and motivates him to work actively, permanently and on location as a medical professional and GP local administrator in Belhi.

The completion of a milestone should be documented by BHC/SEIT before next milestone can be reached. The report might preferably include the clinical results and a financial reported. If the content of the report is found sufficient by BGN, funding for the next level of the plan should be released.

Milestone 0: Donated equipment

Firstly the equipment planned for auction should be auctioned off or traded for health care services. Documentation should be provided about the income generated and on-going financial accounting should show, that income from the donation is used towards the health care purpose of SEIT. Followed by Milestone 0 are the milestones described in Table 4. The milestones are recommendations and essentially a draft for a plan which should be elaborated with advice from several professionals until a final plan is reached and agreed. The final milestones plan should also be based on the most pressing needs in Belhi.

Milestones			
#	SERVICE	DESCRIPTION	SUGGESTED EQUIPMENT
I	Basic GP services and maternal care		
	A) Basic physical examination		Sphygmomanometer, height measure, and weight, stethoscope
	C) Basic pharmacy	This medicine cabinet is used to store medicine in a cold environment for better durability.	Medicine cabinet could be a 160 L mini medical refrigerator for drugstoring.
	D) Wound care		
II	Basic laboratory		
	A) Biochemistry	Biochemistry uses chemical knowledge and techniques to analyse biological problems found in blood, serum, plasma, cerebrospinal fluid and urine.	A semi automatic biochemistry analyzer.
	B) Medical microbiology	Medical microbiology is the prevention, diagnosis and treatment of infectious diseases.	An Auto Microbiology Analyzer is a machine, that identifies bacteria, in some cases within a couple of minutes.
III	Special Care		

Milestones		
	Gynaecology and obstetrics	<p>Gynaecology and obstetrics is a wide speciality ranging from infertility, pregnancy related diseases, bleeding disorders.</p> <p>Birth bed, ultrasound, incubator, baby warmer, monitoring equipment. To be able to do gynaecology and obstetrics a proper bed should be bought along with tools as speculum. Autoclave should be installed to for sterilization</p>
	Dentistry	<p>Guru Prashant made a service deal with a dentist, who would bring his own equipment to the clinic. It should be investigated if a dentist chair should be bought.</p> <p>An autoclave is necessary.</p>
IV	X-Ray	
	X-Ray room and dark room	Equipment needed are discussed in the section <i>X-Ray</i> .
V	A basic operating theatre	<p>This only includes minor surgeries.</p> <p>A proper surgical bed is already in the inventory list. Thus, suction pumps, anesthesia machine, machines for monitoring vital signs and other surgical equipment must be acquired.</p> <p>The operation theater light is discussed in the section <i>Operation Theater Light</i>.</p> <p>An autoclave is necessary.</p>

Table 4: Overview of milestones.

X-Ray

X-Ray Room

A functional X-Ray room, which is compatible with newer X-Ray machines (which often include a patient bed), should measure 4x7 metres in size with 3 metres to the ceiling. To properly shield the room for radiation ensuring that radiation does not escape, four layers of 13 mm barium plaster should be applied (equivalent to 2,5 mm lead or 30 centimeter concrete walls). The ceiling does not have to be covered, since the radiation from a X-Ray machine does not spread uniformly in the room. The door has to be 1.15 meter wide to allow for a patient bed. These requirements would lead to a fully functional X-Ray room, which meets Danish standards.

The placement of the X-Ray room could either be on the first floor of the new Belhi clinic or a new underground extension. Depending on the placement, we face different requirements to keep the patients and staff safe from radiation. If the X-Ray room is placed on the first floor, barium plaster must be used on all walls. If the X-Ray room is placed in a basement, barium plaster is only needed on walls separating to other rooms where patients or staff could be (a wall built explicitly to protect staff is typically referred to as an *X-ray shield*). In case a basement is built, a ramp should also be built to make sure immobile patients can be transported safely down to the X-Ray room.

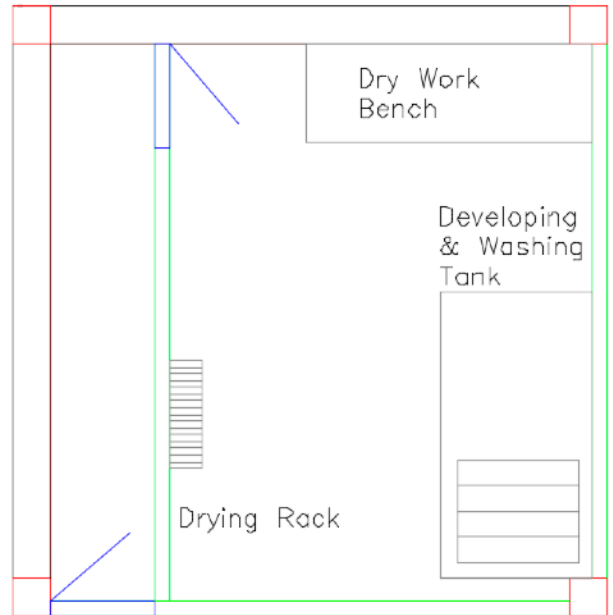


Figure 5: Plan for the dark room.

Dark Room

A dark room to elicit x-rays or digital detectors is needed, for the donated X-ray machine to be used. Given the limited digital infrastructure in Belhi, a dark room is recommended rather than digital x-ray detector. Thus, investments are needed to build a functional dark room. A suggestion for construction of a dark room is presented in Figure 5. This could be a 3x4 meter room.

A dry work bench, developing and washing the tank together with a dry rack is needed to produce the X-Ray image. Non-white light of any kind, should also be installed. The developing and washing tanks should be connected to running, clean water, thus plumbing is needed. To develop a film, two solutions are needed: Developer and fixer. If the solutions are not mixed beforehand, then they should be mixed in a place with proper ventilation. Instructions on how to evoke the X-Ray image are available in the "Manual of Darkroom Technique" by the World Health Organisation Basic Radiological System, together with instruction on how to handle solutions.² The solution should be changed every month. Depending on in-flow of patients, different size developing and washing tanks are needed. Accordingly, the amount of developer and fixer solution and film also vary.

The X-ray room and the dark room should be built in continuation of each other, to ensure protection from direct sunlight and damage during transportation of the film. Thus, radiation shielding doors may be needed between the rooms, if it should be possible for the staff to go directly from the X-ray room to the dark room.

² <https://apps.who.int/iris/handle/10665/39690>, visited 05-12-19

Budget

A budget for a functional X-ray room and dark room should be prepared by SEIT. Help might be provided by local biomedical engineers. The budget should cover all the expenses to build the X-ray room and dark room depending on the placement.

Operation Theater lights

An OT-light was saved by SEIT for the new Clinic in Belhi. Guru Prashant considers it necessary to keep at least one or two OT-lights, which could be used for surgeries in the future. For this purpose the OT-light labelled AHC-49 was saved for use at BHC.

The mentioned OT-light was manufactured by ALM and the model is ECL 152. Its swing arms and lamp are approximately 90 cm and 50 cm, thus one of the smaller OT-lights donated by the Danish hospitals. AHC-49 was specifically chosen because as its size is a good fit for the available rooms.

The AHC-49 OT-light would be able to focus its light on the desired area, as the minimum distance from the lamp to the patient is 55 cm. It would not interfere with the doctor's work either, as it can be placed higher at an appropriate height. The OT-light has a maximum reach of 2.3 meter in radius from its mounting. Thus, the minimum distance to the wall or a swinging door to the OT-light should be 1.2 meter. Here, the first and main horizontal arm will not hit the wall at any point. The possible mounting areas can be seen in Figure 6. General OPD-, pharmacy-, pathology room and the entrance is not taken into account.

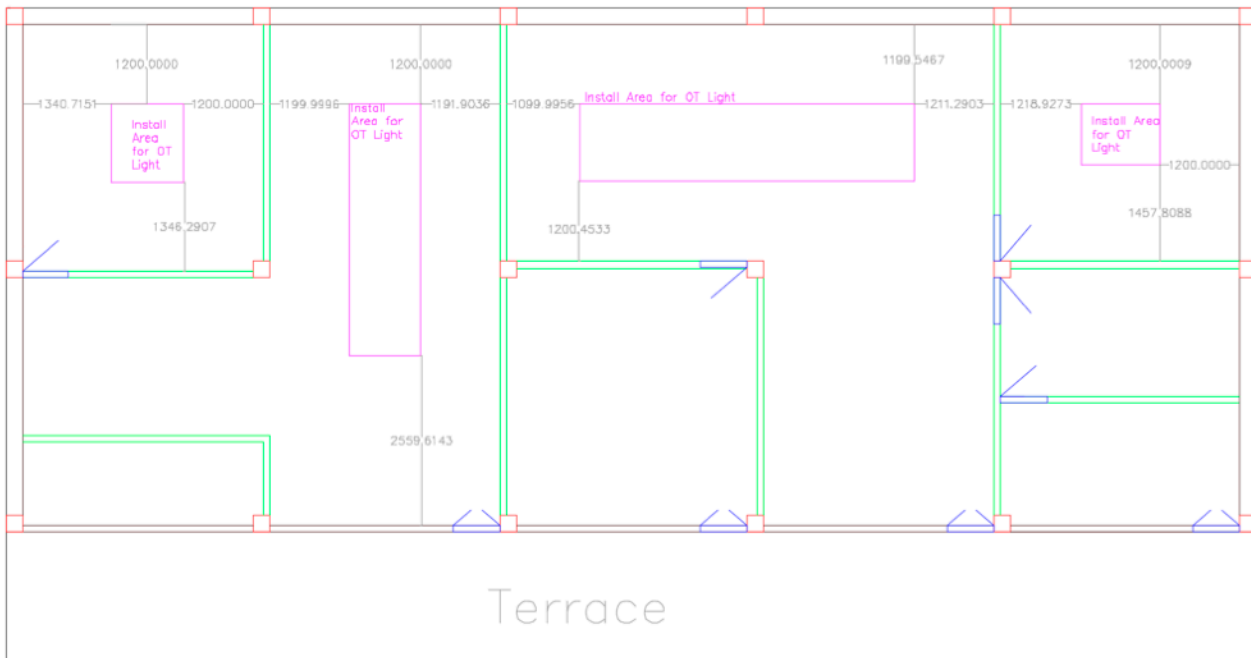



Figure 6: Plan showing different possible areas for mounting the OT-light ACH-49 in the current Belhi Health Clinic

The plan drawing is a 1:1 copy of the original plan drawing of the BHC. Measurements not shown from the original plan drawing (inner wall thickness, door size, etc.) were estimated by Danish standards. The measurements are shown in millimeters (mm).

Appendix II - Quote for Reparation of X-ray Unit

Reg No : 107191/069/070 PAN No : 601224047

 **राष्ट्रिय आविष्कार केन्द्र**
National Innovation Center
राष्ट्रिय आविष्कार केन्द्र

NATIONAL INNOVATION CENTER

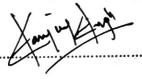
Date: 12-11-2019

SN	QUANTITY	DESCRIPTION	UNIT PRICE(NRS.)	AMOUNT(NRS.)
1	2	Travelling Allowances	1500.00	3000.00
2	2	Daily Allowances(fooding + lodging)	3000.00/day	6000.00
3	1	Repair service charge for maintenance of SEIMENS mobillet X-ray 100mA (corrective/diagnosis without spare parts)	20000.00	20000.00
4		Overhead cost 15%		4350
Total				33,350.00

Rupees Thirty three thousand three hundred fifty

Condition

1. If there is need of any spare parts then extra value of money will be added accordingly.
2. In worst case, the service program could cost around Nrs 1,00,000.00,if it is repairable.
3. Allowances and service charge has to be paid in any case (if repaired or not).


.....
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Appendix III - Auction inventory

Auction inventory - Oct. 2019									
Prepared David Kovacs, Cecilie Andre, Guru Prashant & Sana Ahmed									
AHC#	Equipment type	Manufacturer	Model	Serial Number	Minimum auction price	Estimated price in NPR	Difference between estimate	Auction type	Status October
3	Infusion pump	Terufusion	TE-171	5010003	Rs 11.367,51	Rs 17.051,27	Rs5.683,76	Live	Working
8	Bloodpressure sphyg. (Mercury)	Riester	empire N	27358	Rs 7.578,34	Rs 11.367,51	Rs3.789,17	Silent	Not Tested
19	Ultrasound Therapy	Enraf Nonius	Sonoplus 434	8-021	Rs 26.524,19	Rs 39.786,29	Rs13.262,10	Silent	Not Tested
20	Ultrasound Therapy	Enraf Nonius	Sonoplus 434	08-835	Rs 26.524,19	Rs 39.786,29	Rs13.262,10	Silent	Not Tested
23	Small muscle stimulator	Biometer Denmark	Elpha 2000	n/a	Rs 6.517,37	Rs 9.776,06	Rs3.258,69	Silent	Not Tested
29	Hospital Gurney	Stryker	Instacare	10317	Rs30.000,00	Rs 45.470,05	Rs15.470,05	Live, SOLD	Working
36	Walker with breaks	unknown	n/a	n/a	Rs 2.652,42	Rs 3.978,63	Rs1.326,21	Silent	Working
45	#10OT lights	ALM	Prismatic	3488598		Rs 0,00	Rs0,00	Live	Working
46	#2OT Light (large)	ALM	Prismatic ECL 951	E5001DF027 223R	100000	Rs 147.777,65	Rs47.777,65	Live	Working
48	#4OT light 1 point (2 pcs. 1 point collected)	ALM	ECL152	7904	145000	Rs 215.982,72	Rs70.982,72	Live	Working
50	#5OT light (large)	ALM	ECL 951	5017-82	80000	Rs 102.307,61	Rs22.307,61	Silent	Working
56	#10OT light (large)	ALM	PRC9501DF	0244-17	170000	Rs 102.307,61	-Rs67.692,39	Live	Working
57	#11OT light 4 point	Heraeus	Hanaulux 2004	2000023	300000	Rs 349.550,98	Rs49.550,98	Live	Working
58	#11OT light 4 point	Heraeus	Hanaulux 2004	2000025	0	Rs 0,00	Rs0,00	Live	Working
61	#10OT light stand	n/a	n/a	n/a	0	Rs 0,00	Rs0,00	Silent	n/a
62	Washing machine	Olympus	ETD2plus	n/a	110000	Rs 181.880,19	Rs71.880,19	Live	Not Tested
63	Washing machine	Olympus	ETD2plus	n/a	110000	Rs 181.880,19	Rs71.880,19	Live	Not Tested
66	X-Ray back light	Planelux	BW#1	n/a	Rs22.000,00	Rs 33.534,16	Rs11.534,16	Live, SOLD	Working
67	X-Ray back light	Planelux	BW#1	n/a	Rs 22.356,11	Rs 33.534,16	Rs11.178,05	Live	Working
69	Sterilization system	Johnson & Johnson	ASP Sterrad 100s	20014	400000	Rs 1.023.076,05	Rs623.076,05	Live	Not Tested
70	High Flow Water Purification System	ELGA	MP030RBM1-230	MP00001741	150000	Rs 1.703.194,28	Rs1.553.194,28	Live	Not Tested
71	Compressor	Granzow A/S	WIS 16	1607-822	235000	Rs 407.184,27	Rs172.184,27	Live	Not Tested
73	Patiend Bed	Enraf Nonius	Type 3445,490	22-0929	Rs48.000,00	Rs 48.425,60	Rs425,60	Live, SOLD	Working
94	X-ray quality control (dose)	RTI electronics AB	Type: PMX - III - R/CT Ver 6.0	2249	Rs 17.051,27	Rs 25.576,90	Rs8.525,63	Silent	Not Tested
209	Large adjustable hospital bed.	unknown	n/a	n/a	150000	Rs 60.247,81	-Rs89.752,19	Live	Working
287	Walker with breaks	unknown	n/a	n/a	Rs 2.652,42	Rs 3.978,63	Rs1.326,21	Silent	Working
288	Patient lifter	Guldmann			50000	Rs 62.521,31	Rs12.521,31	Silent	Working
289	Patient lifter	Kebo Care			50000	Rs 62.521,31	Rs12.521,31	Silent	Working
63b	Washing machine	Olympus	ETD2plus	n/a	110000	Rs 181.880,19	Rs71.880,19	Live	Not Tested

Appendix IV - Guest List for Auction

Guest list for auction

Hospital	City	Contact person	E-mail	Telephone	E-mail sent?
1 AG Hospicare	Butwal				
2 Amda Hospital	Damak		ah.damak@amda.org.np		x
3 B.P. Koirala Institute of Health Sciences	Dharan		registrar@bphkhs.edu / bphkhs@bphkhs.edu	977-25-525555	x
4 Bal Hospital	Janakpur		admin@nams.org.npc	977-1-4221119, 4221988, 4222865	x
5 Bir Hospital	Kathmandu				
6 Birgunj Healthcare	Birgunj				
7 Care Medical Center	Janakpur				
8 CIWEC Hospital PVT. LTD.	Kathmandu		info@ciwec-clinic.com	977-1-4424111, 4424242, 4435232	x
9 Dhanusha Hospital	Janakpur				
10 Endoscopy service provider	Janakpur		marketing@grandehospital.com	977-1-5159266, +977-1-5159267, +977 9801202550	x
11 Grande International Hospital	Kathmandu				
12 Janaki Health Care and Research Centre	Janakpur	Dr. Ajay Mishra, Cardiologist, Director		9851036341	
13 Janaki Medical College	Janakpur				
14 Janakpur City Hospital	Janakpur		admin@jphctnepal.org	01-4240806, 01-4250848, 01-4222364	x
15 Kathmandu Model Hospital	Kathmandu		kathmanduneuro@gmail.com	4233733, 4233899	x
16 Kathmandu Neuro and General Hospital	Kathmandu				
17 Kavya Hospital	Janakpur		editor@jmc.edu.np	977-75-411201/411202 Ext: 207, 888	x
18 Lumbini Medical College & Research Center Pvt. Ltd.	Palpa		purchase@manipal.edu.np	977-61-527862, +977-61-526416 Extn 111 (kindly call in between 8:30am & 4:30pm, Sunday to Friday)	x
19 Manipal College of Medical Sciences (MCOMS)	Pokhara				
20 Nava Jeevan Hospital	Janakpur		principal@nmch.edu	977-01-4911008 or number from Guru: 9813700744	x
21 Nepal Medical College Pvt. Ltd (NMC)	Attarkhel, Jopati		info@nepalmediciti.com	977-1-4217766, 977-981-0136491	x
22 Nepal Mediciti Hospital	Karyabinayak		ngmcmdoffice@gmail.com	Phone: +977-81-5215 Hospital Inquire +977-81-522458, 523518	x
23 Nepalgunj Medical College	Nepalgunj Banke		info@nobelmedicalcollege.com.np	Reception: +977 21 460736, 461735 NeuroSciences: +977 21 461772 Mob: +977 9802726909 & +977 9852035782 (5pm to 9am)	x
24 Nobel Medical College	Biratnagar			9844053847	
25 Om Dirgha aayu hospital pvt.ltd.	Janakpur	Dr. Raghvendra Jha	omhrc@omhospitalnepal.com	977 1-4476225	
26 Om Hospital & Research Center	Kathmandu				
27 Operate with endoscopy	Janakpur	Dr. Ram Babu Chaudhry		9801621101	
28 Patan hospital	Lalitpur		pahs@pahs.edu.np	977 1-5522295	x
29 Sahid Gangatal National Heart Center	Kathmandu		sgnhrc@sgnhrc.org.np	01-4371322 01-4371374 01-4370622 01-4370744	x
30 Samar Hospital	Janakpur				
31 Samsi Hospital	Samsi Mahottari				
32 Swastik Hospital pvt. ltd.	Janakpur	Dr. Sambu		9807627320	
33 Tribhuvan University Teaching Hospital	Kathmandu		support@iomdit.org.np	977-01-4421879	x
34 Universal College of Medical Sciences (UCMS)	Rupandehi		msoffice@ucms.com.np		x

Appendix V - Auction Agreements

27

Social Eco Innovative Trust (SEIT) has auctioned the following equipment:

ID and equipment type: AHC 29, Hospital gurney
Manufacturer: Stryker
Model: Instacare
Serial Number: 10317
Bid amount in NPR: ~~30,313~~ 30,000

All proceeds from the auction will be used for provision of health services at Belhi Health Clinic under leadership of Social Eco Innovative Trust, Hansapur-05 Dhanusha. After exchange of payment the buyer renders full rights and ownership of the equipment listed above. The buyer has the full responsibility of the equipment after purchase and SEIT can not be held responsible for any further maintenance.

Details of buyer

Full name: Nava Jivan Hospital Pvt. Ltd. (Akhilash Sah)
Company information: Hospital
Address: Janakpur-3, Dhanusha, Nepal
Phone: 9824858451, 9826883400

Date: 16th Oct. 2019

Date: 16/10/19

Date: 16/10/19

[Signature]
Representative from SEIT

[Signature]
Buyer

[Signature]
External representative

Gum Pratham
Health co-ordinator
SEIT Nepal

David Kovack
MSc Biomedical Eng.
Denmark

Social Eco Innovative Trust (SEIT) has auctioned the following equipment:

ID and equipment type: ^{AHC 66} One X-ray backlight & two spare lights.

Manufacturer: Planelux

Model: BW#1

Serial Number: n/a

Bid amount in NPR: ~~22,356~~ 22,000

All proceeds from the auction will be used for provision of health services at Belhi Health Clinic under leadership of Social Eco Innovative Trust, Hansapur-05 Dhanusha. After exchange of payment the buyer renders full rights and ownership of the equipment listed above. The buyer has the full responsibility of the equipment after purchase and SEIT can not be held responsible for any further maintenance.

Details of buyer

Full name: Dr. KIRTI KUMARI SAH

Company information: Life care Superspeciality Polyclinic Pvt Ltd

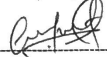
Address: Suket nagar - 9 Ramanand chowk.

Phone: 9844016453

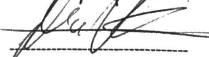
Date: 16/10/2019

Date: 16/10/19

Date: 16/10/19







Representative from SEIT

Buyer

External representative

Guna Prasant
Health Co-ordinator
SEIT Nepal

David Kovacs
MSc Biomedical Eng.
Denmark

Social Eco Innovative Trust (SEIT) has auctioned the following equipment:

ID and equipment type: AHC73, Patient Bed

Manufacturer: Enraf Nonius

Model: Type 3445, 790

Serial Number: 22-0929

Bid amount in NPR: 48,000

All proceeds from the auction will be used for provision of health services at Belhi Health Clinic under leadership of Social Eco Innovative Trust, Hansapur-05 Dhanusha. After exchange of payment the buyer renders full rights and ownership of the equipment listed above. The buyer has the full responsibility of the equipment after purchase and SEIT can not be held responsible for any further maintenance.

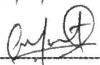
Details of buyer

Full name: Dr. KIRTI KUMARI SAH

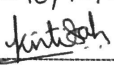
Company information: Lifecare Superspeciality Polyclinic P. Ltd

Address: Saketnagar - 9 Ramanand chowk, Janakpur

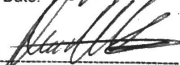
Phone: 9844016453

Date: 16/10/2019


Representative from SEIT
Guna Prashant
Health Co-ordinator
SEIT Nepal

Date: 16/10/19


Buyer

Date: 16/10/19


External representative
David Kovacs
MSc Biomedical Eng.
Denmark

Appendix VI - Distribution in terms of Cash Value

Figure A shows the distribution of donation in terms of cash value for each of the locations/recipients.

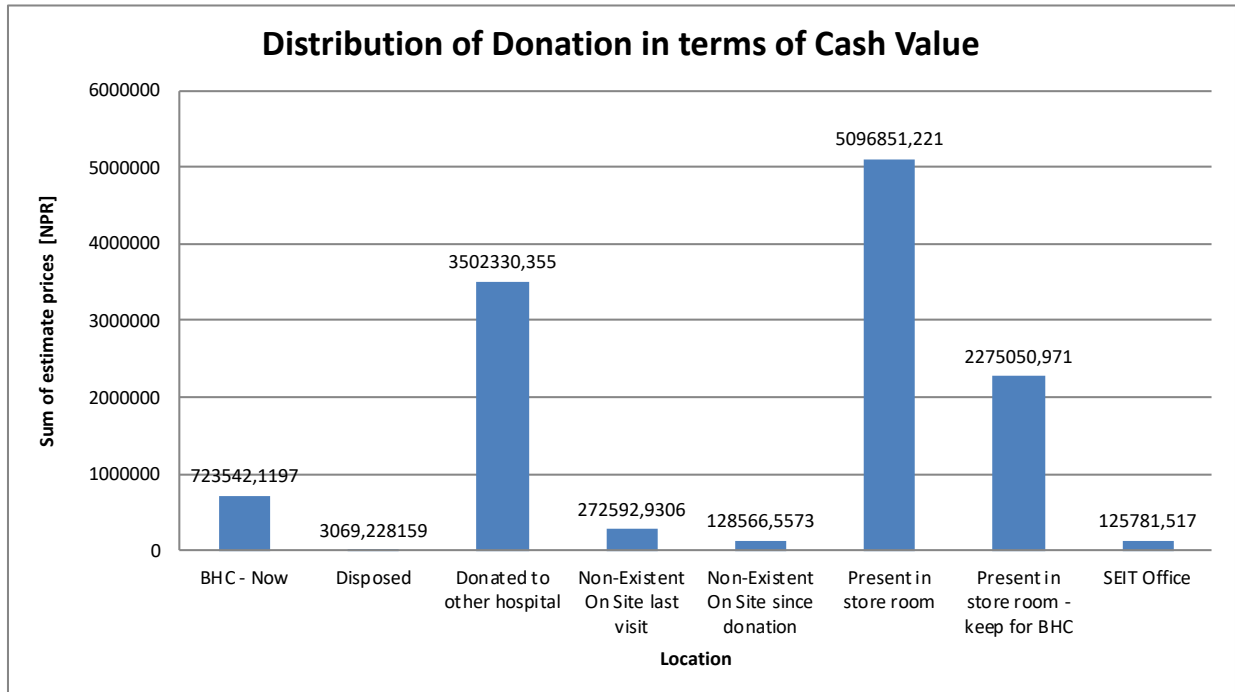
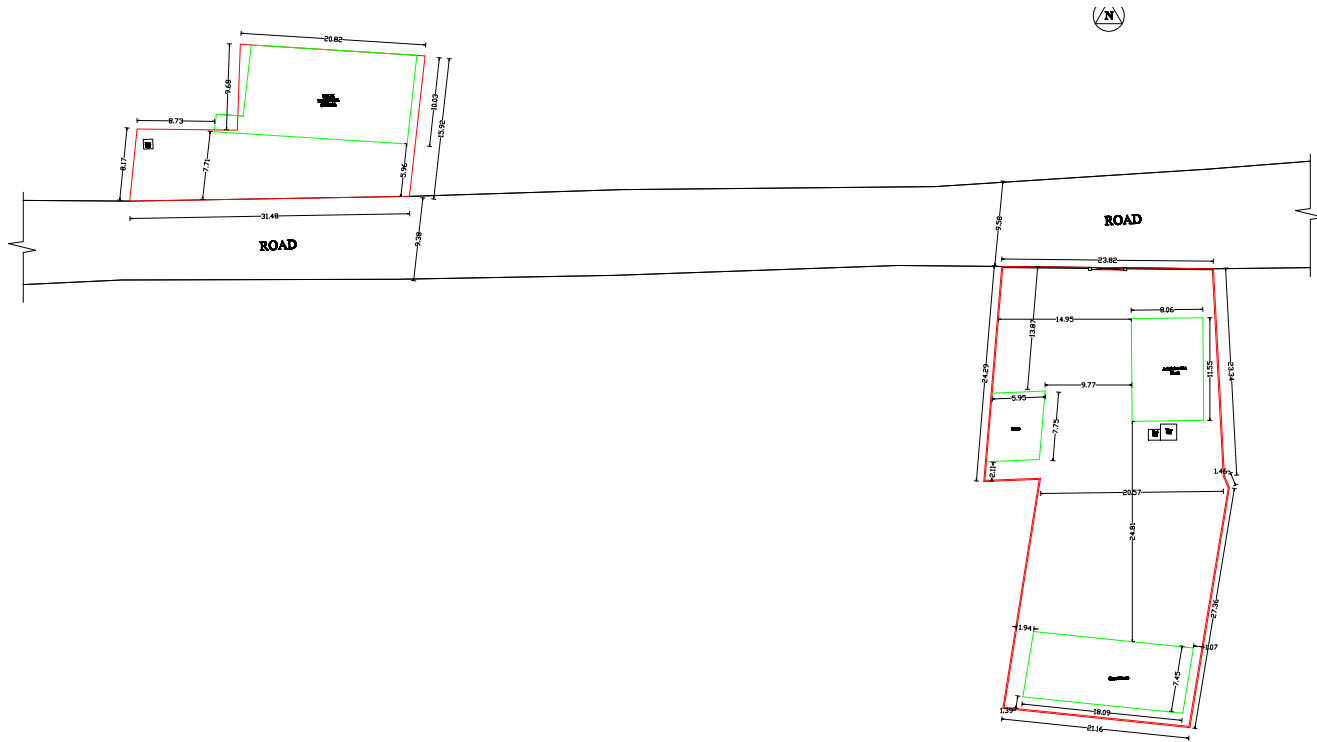


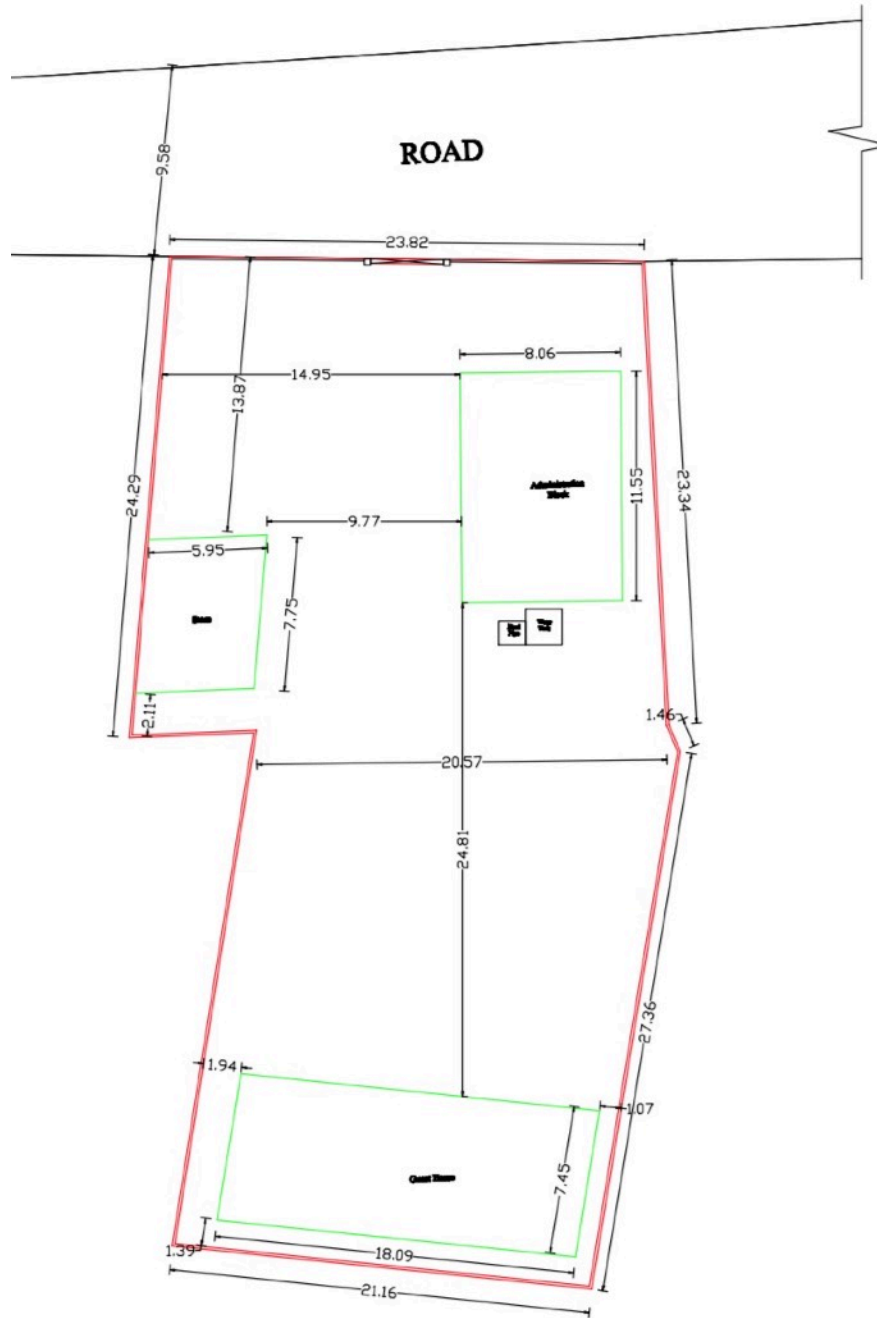
Figure A: Distribution of equipment by cash value at the different locations/recipients.

Appendix VII - SEIT grounds in Belhi

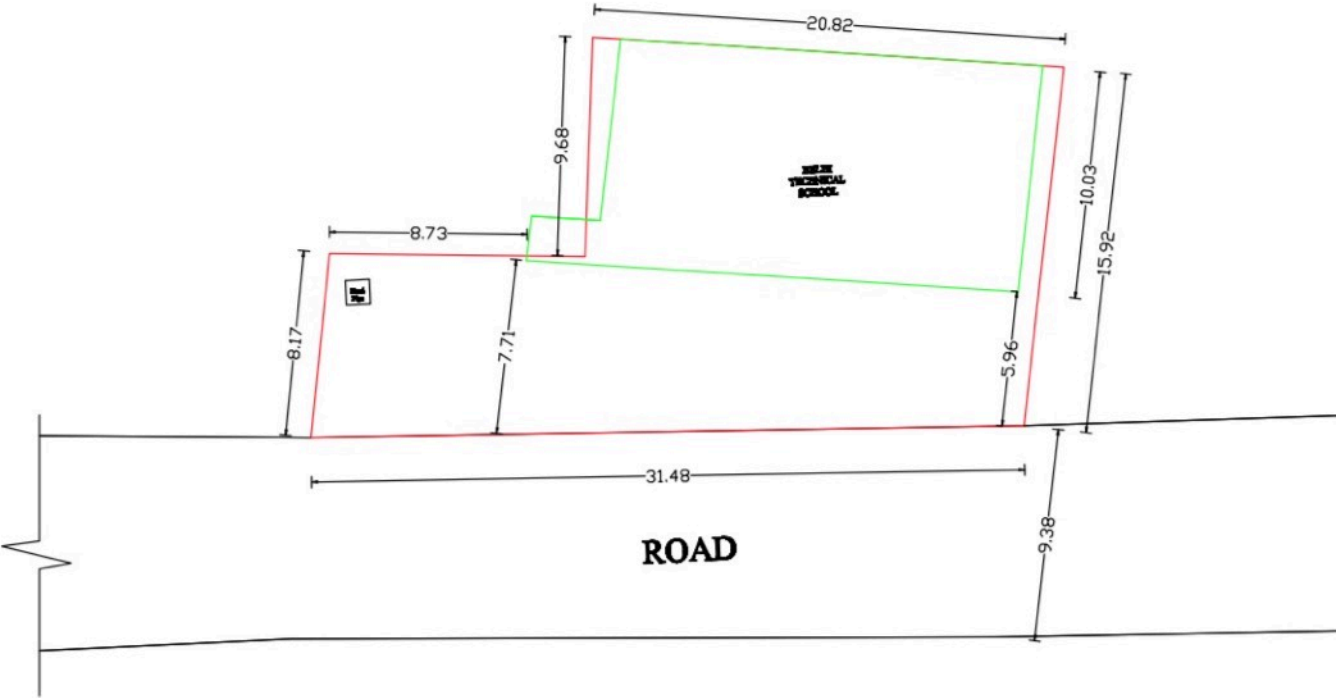
SEIT main grounds in Belhi, site of Belhi Technical institute a and BHC as well as the road connected the two pieces of land.



Main site of SEIT with current guest house, common rooms, administration rooms. The western wing of the property is a potential site for a new location for the BHC.



Land for BTI and current BHC.



Appendix VIII - Belhi Health Clinic

Drawing of current BHC

