



# ZONGO water project

## PHASE 1 community engagement

[OBDL] open boundary design lab  
Emily Williamson, Project Leader and Founder

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# THANK YOU

Dear Family, Friends, and Colleagues,

Thank you so much for all of your support throughout this first phase of the ZONGO Water Project. With your help, we were able to implement the very beginnings, the seeds, of what we believe will be an innovative, adaptive long-term strategic plan for improving the lives of the Zongo community.

During this last month, we were able to lay the groundwork that will enable us to continue this work in full force next year and hopefully for years to come. We met with community stakeholders, interviewed community members individually and in groups, discovered leaders amongst the community (young and old, men and women), held workshops and presentations, worked with children, met with local experts in water conservation, agriculture, and soil management, initiated a water conservation committee, and executed a very basic but incredibly successful pilot project that met the immediate needs of the community.

Next year we hope to continue the deepening of this work by increasing the number of people helping on the ground, developing multiple pilot projects that test the ideas at multiple scales, providing more educational programming, and continuing to expand the blue water collection system begun in phase one.

Even just yesterday I spoke with Hammad, a community member in the Zongo, who said that the Water Conservation Committee has already met once and that they will be meeting again next week to discuss a small project to tackle on their own in the next few months. It's very encouraging that the community is already beginning to sustain these efforts themselves!

Please let me know if you have any questions, comments, and if you're interested in being more involved in the future (either on the ground in Ghana or from the States). This is just the beginning!

Thanks again for your support.

Best,  
Emily



# overview

## EXECUTIVE SUMMARY

The ZONGO Water Project is about using water as a way to improve the quality of life for the Zongo Community, a minority Islamic settlement in Ghana, West Africa. Even though this migrant community has lived and traded in the city of Cape Coast for over a century, the residents are still treated as outsiders and most of the buildings don't have access to the city's public infrastructure. While the problems of flood and drought, sanitation, and erosion, are germane to the entirety of Ghana's Central region, these issues are of particular concern for the visibly impoverished Zongo community.

Rather than developing a master plan to be executed by the municipal government, this human-centered approach creates a sustainable, long-term, community-based strategy for a new water infrastructure by incrementally adding simple built and landscape elements to existing ones. By constructing these systems (or "kits of parts") consisting of roof, edge, ridge, weir, and ground, over time

the residents will form a new water and social infrastructure capable of collecting, storing, filtering, distributing, and absorbing water on-site.

## HOW IS THIS PROJECT DIFFERENT?

While there are many NGOs that employ small, community-based design strategies and others that tackle large scale infrastructure projects, the ZONGO Water Project has the potential to plug into the benefits of both. By working closely with the community on a small scale and spending the time to develop strategies that respond very specifically to their local cultural, economic and environmental needs, the project engages, educates, and empowers the Zongo community for change. At the same time, the project also operates on the large scale of environmental systems. Though it begins by improving water conservation, sanitation and erosion within a specific set of local conditions, these inevitably feed into and affect larger global systems. And even more importantly, since these issues relative to water are not limited to the Zongo community,

this project's interdependent human and environmental strategies have the opportunity to be adapted, transformed and employed in cultures and territories across the globe.



proposed landscape, along a weir at the top of hill



proposed landscape, an entry point at the bottom of hill





**FLOOD + DROUGHT**



**SANITATION**



**EROSION**

## current issues

While flood and drought, sanitation, and erosion are not unique to the Zongo community, they have been identified by both the residents and OBDL as the three most important issues to be addressed as part of this project. By creating an educational framework involving local soil and water experts, testing iterations through a series of pilot projects, and initiating community-based design-build efforts, OBDL and the community will not only improve the natural environment, but also the quality of life for its inhabitants.









## project history

The ZONGO Water Project provides a flexible long-term, community-based plan for improving the current unsanitary and inefficient water systems in the Zongo. The initial research for the project began when Emily Williamson was introduced to the Chief Imam and the community in 2008. At this point, Williamson not only observed the issues of sanitation and erosion, but also recognized potential in the community's strong collective identity. Through a grant from the University of Virginia, Williamson returned to Ghana the following fall to pursue her graduate architecture thesis work in the Zongo. Working with the residents, she mapped the Zongo's territory, which then

facilitated a UVA January-Term Architecture Studio to focus its efforts there. Since graduating, Williamson has continued her research relative to the Zongo. She was a Fulbright Finalist in 2011, the work has been exhibited nationally and internationally, and she published an article in the University of Chicago Art Journal entitled, "ZONGO water infrastructure and public life". In the fall, Williamson will begin a post-professional degree at MIT in the Aga Khan Program for Islamic Architecture to continue and expand upon this research begun over five years ago.



late Chief Imam Abubakar Hammad, Williamson and Chief in October 2008

# phase 1 + projected future phases

## PHASE 1 COMMUNITY ENGAGEMENT

In the month of June 2012, Open Boundary Design Lab [OBDL], led by Emily Williamson, initiated the first phase of the ZONGO Water Project during which the organization reassessed the needs of the community, identified and met with local stakeholders, local technical experts and community leaders, interviewed residents individually and in groups, presented the long-term plan to the community, provided self-documentation in the form of a journal, helped to establish “a water conservation committee, and implemented a low-cost, high impact pilot project. Responding to basic needs voiced by the community at the workshop, the pilot project added simple water collection systems to ten houses. The newly formed water conservation committee distributed roofing repair applications to every household and from these, decided which houses were to receive eight new roofing sheets, a gutter and collection container. In return, each house provided 4 additional roofing sheets and labor.

## PHASES 2/3

While the implementation plan for this phase has not yet been fully realized and will depend upon the amount of funding raised, the overarching goal is to build upon what was begun in phase 1 and focus more explicitly on the educational component. OBDL (hopefully with students and other volunteers) will work with local technical experts at the University of Cape Coast, local craftsmen, and the community to develop multiple iterations of pilot projects testing out strategies for water conservation by increasing water storage capacity, separating the black water from the gray and white water (perhaps by using composting toilets as part of the bathhouse system) and slowing the water down by adding weirs and other water retention systems. In addition to these pilot projects, we also hope to continue adding to the roofing, gutter, and collection system begun in phase 1 as this system provides immediately visible, low-cost, high-impact change for the community.

## PHASES 4/5

This phase will be highly contingent on the outcomes of the earlier phases, but it is projected that the community will have full ownership of the project. At this point, OBDL hopes to have established a partnership with a local organization that will be able to employ a Zongo community member to be the on-the-ground ZONGO Water Project manager. OBDL will continue to work with the community as facilitators, but the residents will have developed more tools to construct and maintain the components independently.

1 +1 volunteer  
+\$1,500

2 +5 volunteers  
+\$7,000

3 +10 volunteers  
+\$15,000

4 +15 volunteers  
+\$30,000

5 +20 volunteers  
+\$100,000

## RESEARCH

Uses a variety of methodologies including but not limited to individual interviews, group interviews, in-context immersion, daily self-documentation, and expert interviews.

## CREATE

Creates short and long-term strategies that meet the needs of the residents and improve the natural environment at the same time.

## EDUCATE

Develops comprehensive educational programs and workshops led by local experts and educated community members.

## DELIVER

Tests multiple pilot-project iterations, coordinates and oversees the construction, and creates an implementation timeline.

## EVALUATE

Evaluates successes, failures, and next steps in the project. Tracks qualitative and quantitative impacts, evaluates its economic viability and community sustainability, and recalibrates the needs and future work based on the results.





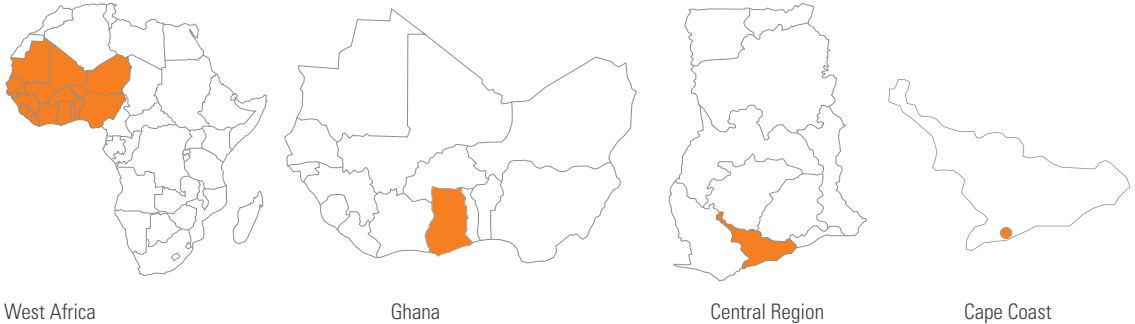
# theory and context

*A truly ecological landscape architecture might be less about the construction of finished and complete works, and more about the design of 'processes,' 'strategies,' 'agencies,' and 'scaffoldings' - catalytic frameworks that might enable a diversity of relationships to create, emerge, network, interconnect, and differentiate."*  
 - James Corner

The ZONGO Water Project proposes long-term strategies for restructuring the current unsanitary and inefficient water systems in a minority Islamic community called the Zongo in Cape Coast, Ghana. Rather than developing a master plan to be executed by the

municipal government, the design approach is to create a community-based watershed framework that collects, filters, stores, distributes, and absorbs water by incrementally adding new constructed systems to extant ones. By constructing these systems of roof, edge, ridge, weir, and ground over time, residents form a new water and social infrastructure. To achieve a sustained result, new community-based organizations are necessary. These organizations will be able to produce simple architectural and landscape systems that perform like a watershed, while simultaneously providing the Zongo with new opportunities for social and cultural gathering. Integral to this way of working with the community is a

design approach that privileges a bottom-up, grassroots strategy in which residents drive the entire process from beginning to end. This project aims to overlay political, cultural, and ecological contexts to create a vast range of choreographed systems able to adapt to changing seasons, needs, and desires. Instead of a formal product or complete aesthetic vision, the intended outcome is a transdisciplinary, open and flexible process that empowers the community with new social and economic opportunities.



West Africa                      Ghana                      Central Region                      Cape Coast

“These issues are not unique to the Zongo community; they are everywhere but the Zongo can serve as the example to do it right.”

-Hammad Abubakar, Zongo community member

## POLITICAL CONTEXT

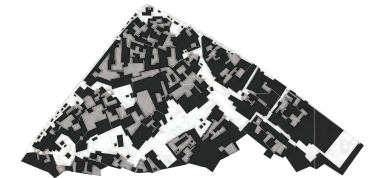
Throughout Western Africa, religious minority Islamic communities live in impoverished residential/commercial districts known as Zongos, the Hausa word for ‘stranger quarter’. These economically marginalized, politically isolated communities can be found in almost every urban center. In the Central Region of Ghana, a predominantly Christian area, the Zongo of Cape Coast originated in the late 19th century as a temporary settlement for Nigerian Hausa migrants who were recruited by the majority Fante to fight against British colonial authorities. Even though the Zongo settlement has been situated in Cape Coast for over a century, its position within the city remains provisional.

While its community members participate in most of Cape Coast’s economic, cultural, and political practices, the city’s municipal government forbids construction of any permanent architecture in the Zongo district. The one exception is the large mosque built in cast-in-place concrete that sits at the edge of the neighborhood, along one of Cape Coast’s busiest streets. Despite the precarious position of living in a situation of political exclusion resulting

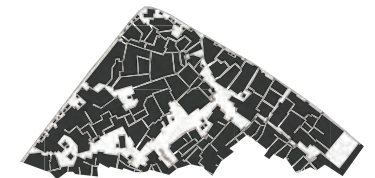
in destitution of the built environment, the majority of the Zongo residents see this area as their permanent and rightful home. They are dependent upon the market adjacent to their community for trading, and if the government were to relocate them to another city or even to the outskirts of Cape Coast, it would be devastating to their livelihoods.

Pocketed within the dense urban fabric of the city, the Zongo territory itself is sited on a steep slope and is demarcated by Cape Coast’s municipal government complex to the north, an old dumping ground for waste to the west, and Kotokaraba, the city’s largest market to the east. Inside this boundary, the organization of earthen dwellings appears to have been constructed haphazardly without recourse to any underlying systematic urban plan. Thin passages weave around the houses, making room for pedestrian movement through the neighborhood. Occasionally these paths open out into larger open spaces that serve as sewers for the deposition of trash and human waste. It is precisely where these sewers connect to the urban water infrastructure that the neighborhood meets its oppositional, predominantly Christian context. In contrast to the Zongo’s unplanned urban fabric that has grown organically over time, the

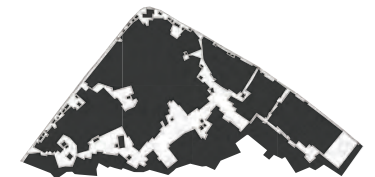
structure of the rest of the city echoes western colonial influences in its systemized, grid-like organization and orthogonally built, internally contained dwellings that adhere to land use regulations.



public zone + paths + semi-private zones



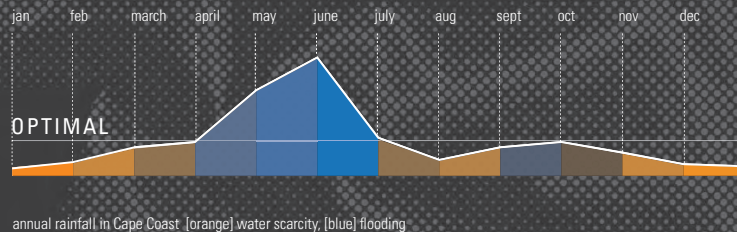
public zone + paths



public zone

## CULTURAL CONTEXT

Clusters of housing dominate the Zongo urban fabric with small shops lining its edges. While the Western understanding of the single-family home often implies a single private unit for a nuclear family subdivided into parts assigned to different activities, the condition in the Zongo suggests a very different conception of dwelling. The internal and external spaces are of equal importance and satisfy different needs for the inhabitants. Just as the interior provides privacy and shelter from the sun and rain, the shared exterior courtyard sponsors human exchange and serves as the site for washing and cooking. As the inhabitants require more space, new components of the house such as bathhouses, shelters for tenants, or porches are added to either the courtyard itself or to the structure's outermost edges. Not only do these houses have the ability to expand or contract quickly depending upon need, but also its form has changed over time to accommodate cultural modifications. For instance, over the past century, the roof systems have changed from flat to pitched roofs. Aside from the house, shops and other temporary structures are often assembled in the morning just to be taken down once night falls.

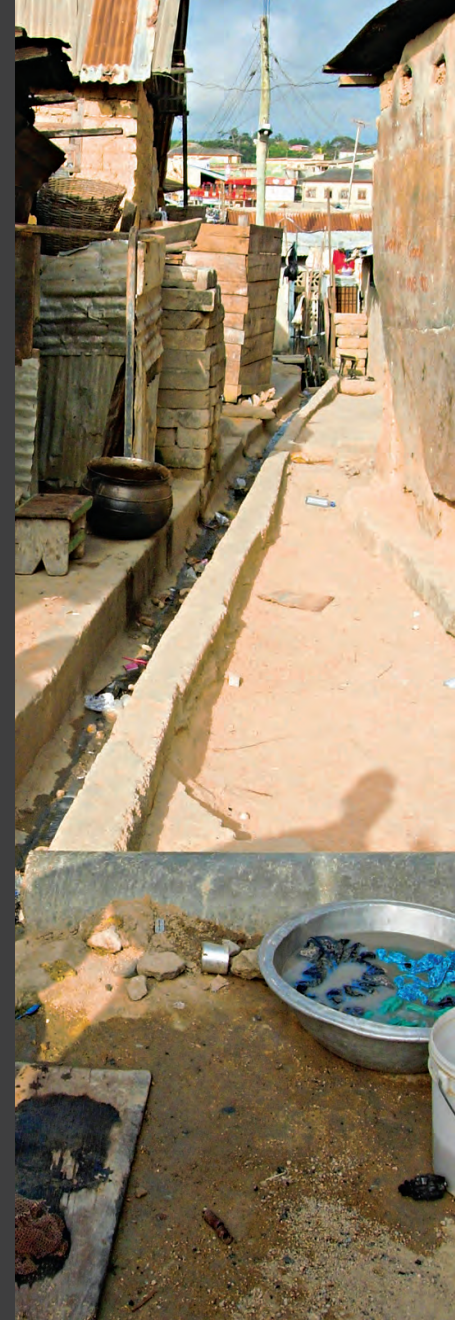


## ECOLOGICAL CONTEXT

Presently, vast networks of open sewers containing acid rain runoff, trash, and human waste move down the slope of the Zongo, through the rest of the city, and empty out into the ocean creating increasingly unsanitary conditions downhill. The amount of water the region receives is also an issue. Over the course of a year the community receives plenty of water (44 inches) but the amount of rainfall per month is extremely inconsistent and there are long periods of flooding and drought.

To resolve these problems, water needs to not only be collected and stored on site, but also separated by use so that the clean water is not contaminated. While the existing built systems of the Zongo fail to establish relationships with one another that could improve the efficiency and sanitation of water use, a natural watershed system is able to collect, store, filter, distribute, and absorb water through a series of linked dynamic processes related to the land, climate, and other ecologies. Its structure is comprised of high areas called ridges connecting to low areas called valleys.

Water runs from the high to the low, accumulating more and more volume as various tributaries merge with one another. In addition to distribution through the branches of the watershed's rivers and streams, water is also collected and stored in ponds, lakes, and aquifers, filtered through plants and sediment, and absorbed by permeable ground surfaces. If the community could develop its infrastructure to operate in a similar way to that of a natural system such as that of a watershed, then there could be opportunity to create a mutually reinforcing landscape in which the human systems and natural systems build upon and support one another. The constructed systems of roof, edge, ground, weir and ridge provide a range of programmatic configurations that take on performative attributes of the watershed while simultaneously providing spaces for social and cultural exchange.

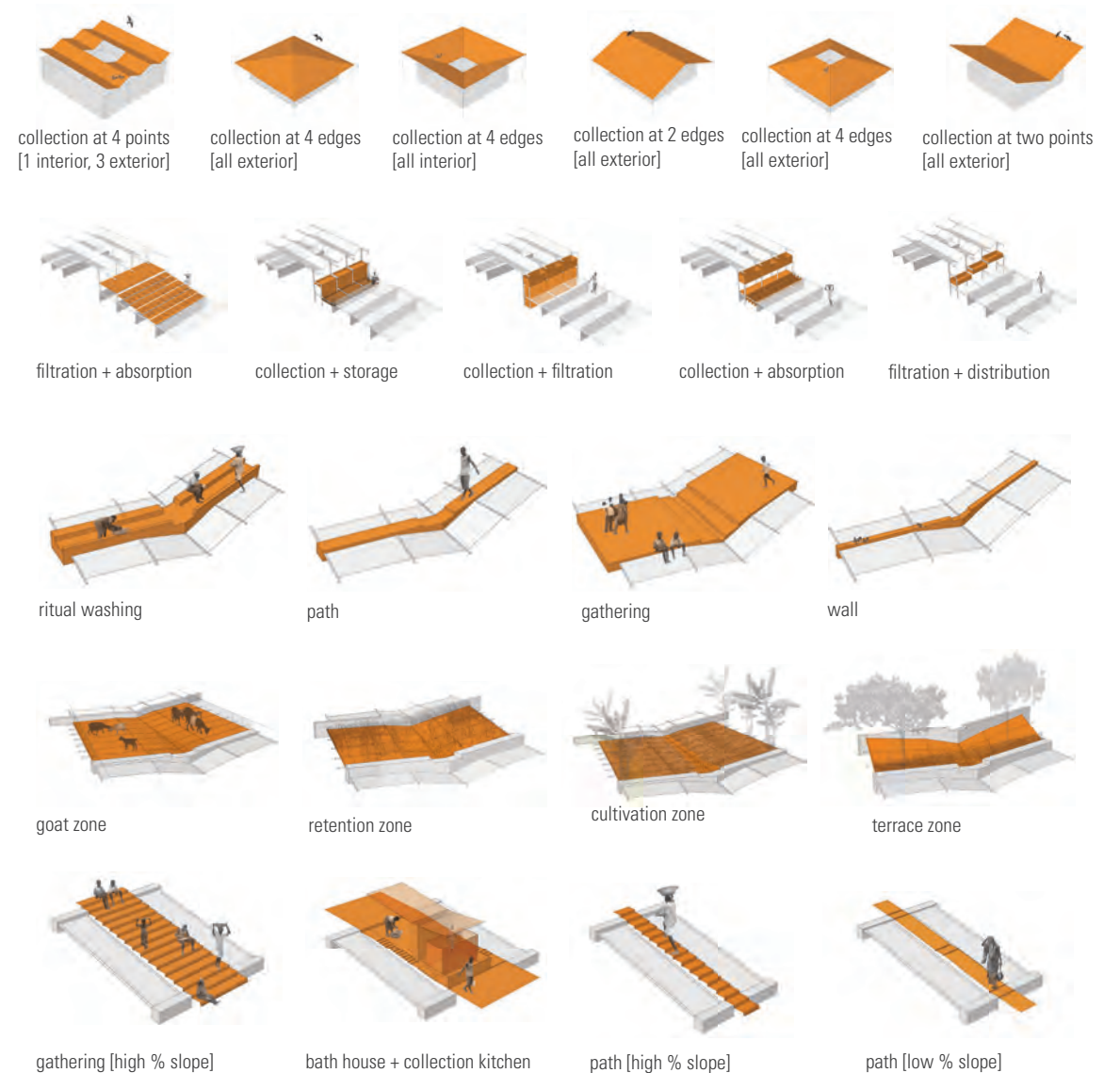
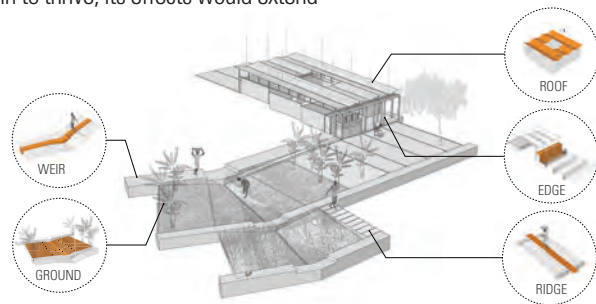


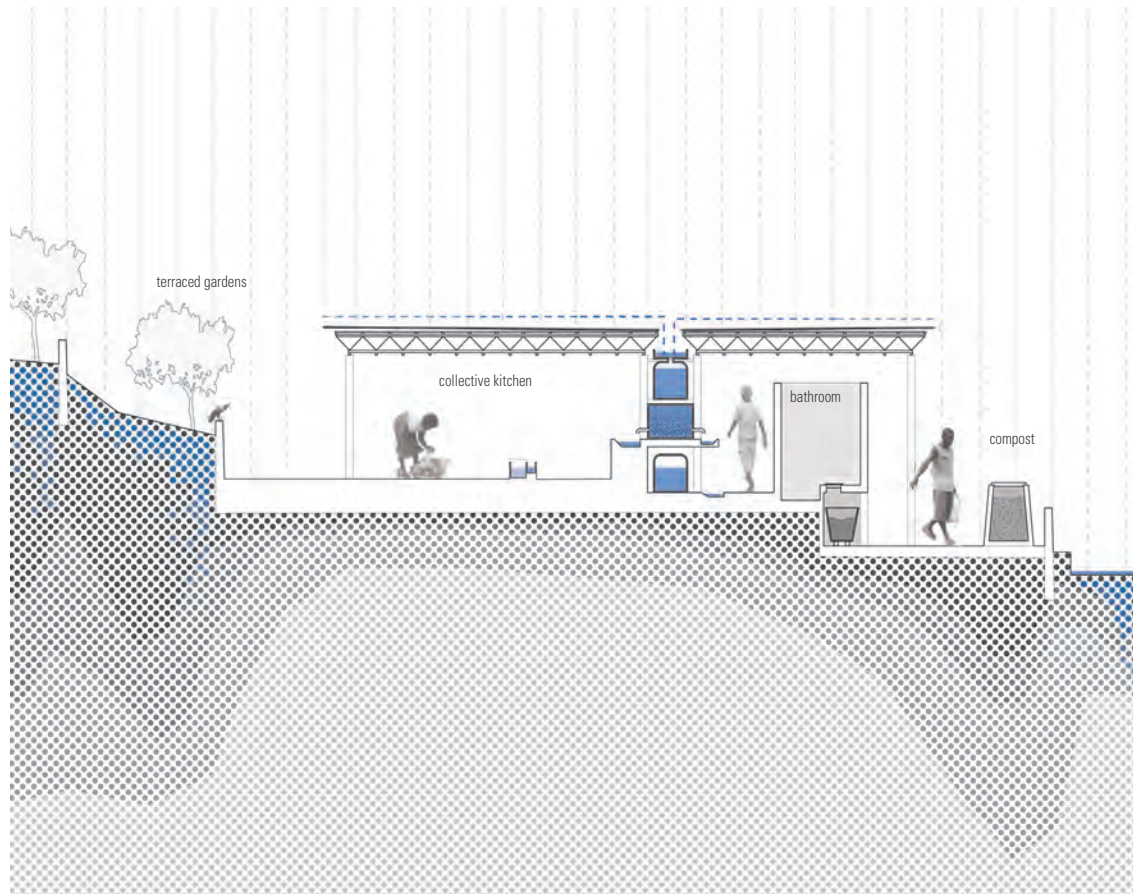
# constructed systems and processes

The roof systems, composed of local folded corrugated metal sheets and steel trusses, would be constructed over an existing dwelling with a separate structural support like a tent. Depending on the system chosen, water would be channeled to specific points or sides of the roof. In order to accommodate the courtyard house, the roof construction distributes most of the water to the public edge of the house and a small amount to the private. From the roof, water would then move to the vertical edge of the structure where it could be filtered, stored, and/or distributed depending upon the needs of the inhabitant. In one example, this edge might become a terraced garden where the water could be filtered and then absorbed by the plants and soil. Once the water hits the ground, weirs spanning from one ridge to another could slow the water down in the valley between and encourage absorption. The weir could also become wider to accommodate human activity. For instance, it might include an area where one could wash his/her hands and feet before prayer. The ground between the weirs could be developed as zones for cultivation, water retention, or even converted into contained pasture for goats. Finally,

because the ridges are the highest and driest areas within the community, they could serve as zones for the bathhouse and collective kitchen unit, human movement and exchange. Either attached to the edge of the house or sitting independently along a ridge, the bathhouse and collective kitchen unit performs like a small scale watershed, collecting water from its roof, storing it in a tank, and then filtering it before use. In a separate zone, the composting toilet would enable community members to safely mix human waste, soil and agricultural waste products to eventually produce new nutrient-rich soil that could then be layered upon the existing exhausted landscape. This action is one of many dry and wet cycles that could become part of the larger cyclical ecological system within the Zongo. As this dynamic set of natural and human systems would begin to thrive, its effects would extend

beyond the boundaries of the Zongo into the rest of the city. To further legitimize the contributions of Zongo residents, it would also be crucial for the Zongo and the rest of Cape Coast to share in both the endeavor and its benefits. Perhaps Kotokaraba Market, the one place of exchange and gathering for all inhabitants of Cape Coast, could become the location to first test out some of these ideas. In this way, everyone would immediately benefit. While some of the contextual systems would need to be adapted to fit this larger framework of cultural convergence, the infrastructure of the water system, from roof to edge to ground, would remain constant. The water collected from the roof could be shared and what is learned from this demonstration could be applied to the Zongo and adapted to operate in other areas throughout Cape Coast.

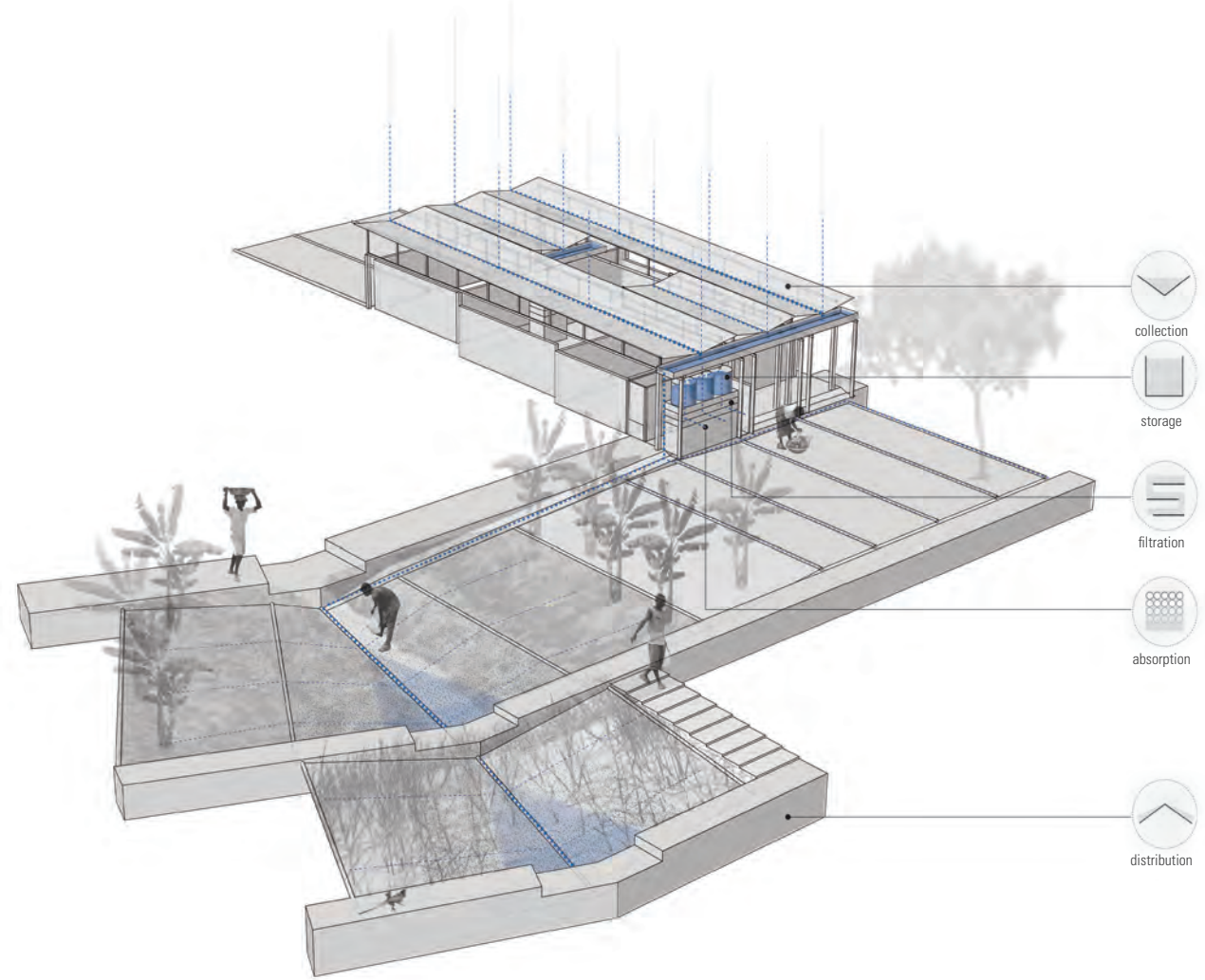




section through the bathhouse + collective kitchen showing water system and porosity of ground



materials local and readily available in cape coast



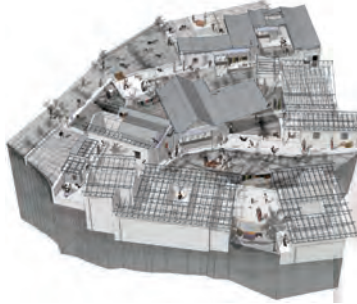
roof to ground water system

## A NEGOTIATED URBAN LANDSCAPE

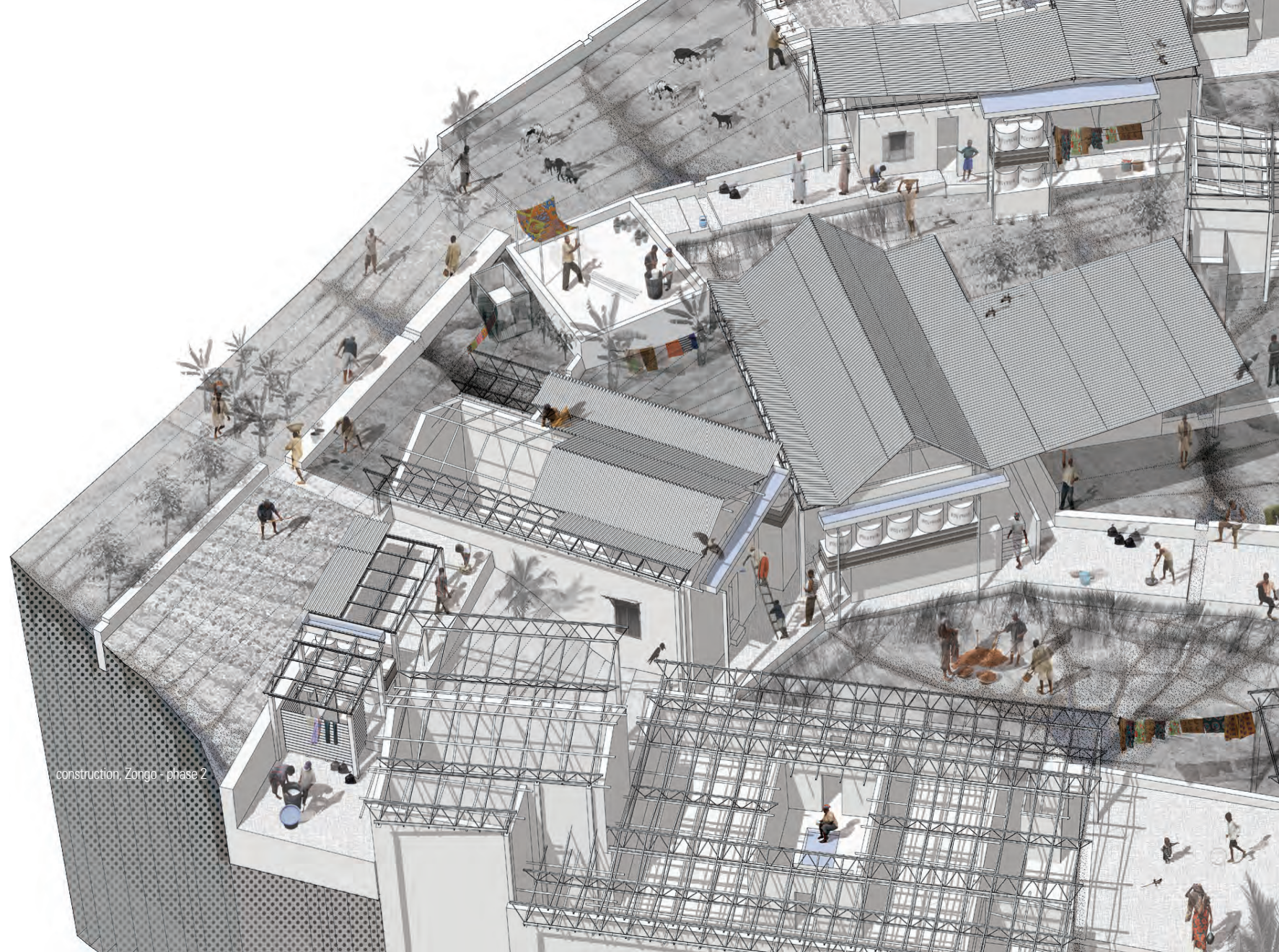
Derived from the existing political, cultural, and ecological contexts, the ZONGO Water Project, is composed of simple constructed systems that negotiate between the natural and built landscapes. These elements come together to generate an open and flexible process that plugs into and affects local, regional, and global networks. Beyond the specific strategies for the Zongo, an 'open' design methodology that focuses on process, adaptability, and community sustainability is especially germane to the extremely impoverished zones around the world such as informal settlements whose human systems remain elastic and adaptable. The project, therefore, provides new ways of conceiving and implementing urban infrastructure in any culture: it not only supplies an economy of function but is also an active contributor to public life.



construction, Zongo - phase 1



construction, Zongo - phase 3



construction, Zongo - phase 2



# phase 1: community engagement

In June 2012, OBDL began the first phase of the project called "community engagement" in which the organization worked with residents to initiate conversations about why water is important, identified current problems (ie: sanitation, water, and erosion) and talked about ways to solve these problems. The overarching goal of this first phase was to get the community invested in these issues and to provide them with a set of tools for solving them.





exhibition of thesis at workshop



women at workshop



men at workshop



My roof leaks and there is water all over the walls and floor. I have four roofing sheets so far and I want to know if this project will help me figure out how to buy more and to install the ones I already have.

-Family Anatu

#### **COMMUNITY WORKSHOP**

As part of the initial research phase, Williamson worked with residents to organize a workshop that would serve to formally introduce her to the community through a presentation of her work and allow the community to voice their opinions, concerns, and hopes for the project. Men, women and children all contributed to the workshop discussion and by the end of the program, the residents agreed that the two most fundamental issues were to fix leaking roofs and to collect water closer to the houses.

## WORKSHOP ANALYSIS

While days before, Williamson had thought that perhaps the small pilot project would be implemented in one of the Zongo's public spaces such as the ritual washing areas around the mosque. After the workshop though, it was clear that the project needed to begin with the house. The house was not only the location where the residents spent the majority of their time, but also the cultural foundation of their lives. It is where families grow and disperse, and also where families always return.

In a lot of ways, this decision was the most important for all of phase one. It marked the starting point(s), an anchoring, from which the project would begin to develop its larger water infrastructural framework.

Thus, the project began with the community forming their own Water Conservation Committee. Working with this committee composed of five Zongo members, Williamson developed an "Application for Roof and Gutter Repair + Water Collection Container." The application asked a series of questions such as how

the house collected water, if the residents knew how to filter it, if their roof leaked, and if the house would be able to provide labor for the construction. The Water Conservation Committee then distributed applications to every house, helped residents fill out the forms, collected the completed applications, and reviewed them to select 10 that would receive 8 new roofing sheets, a gutter, and a water collection container.

Even though the system of collecting water from the roof, directing it into a gutter, and storing it in a large container is very elementary, this simple system was exactly what the community needed. It stopped their roofs from leaking, helped them understand how to construct a continuous and efficient water collection system from the roof to the ground, and enabled them to actually collect water for which they would have otherwise had to pay. The process would engage, educate, and empower the community so they would be able to create, sustain, and build upon these systems in the future.



wet wall inside home [view from inside]



holes in roof [view from inside]

“That is it! I love this idea.

It is perfect and will benefit a lot of people. Once we get some of the roofs fixed, add gutters, and collection buckets, this will help them collect water and will even reduce erosion!”

-Hammad Abubakar



collapsing roof in the Zongo



### A CONVERSATION WITH THE CHIEF ZONGO - CAPE COAST

In response to Williamson providing the summary of the project's mission, Muhammad said,

We as Zongo people need to come together. It's about shared responsibility. But, my question for you is, how are we going to keep this going?"

Williamson explained that she had a lot of help to get here in the first place: from family, friends, colleagues, architecture firms, and educational institutions. She also let him know that hopefully there would be even more support in the following years, especially if this month is a success.

Now I am getting answers. We all need to work together. Assuming we get some more funding, our contribution as a community will be to take care of it. One thing I can assure you, is that you have our full support, it (this project) will benefit our community and our society.

Once Muhammad had finished looking through the book Williamson had provided, he smiled and said,

This is good work. We can't leave this in the theoretical, but must put it into practice!



We need to have men and women on the committee. This is a project that affects everyone and everyone should participate.

### A CONVERSATION ABOUT FORMING THE WATER CONSERVATION COMMITTEE



### A CONCERT PARTY

The Ghanaian "Concert Party" is an educational theatre performance in which the actors teach lessons about social, cultural and environmental issues to their audience. The parties are very popular and the stories are often humorous with singing, drumming and dancing interspersed. In the case of this project, the performers acted out how to solve issues of flood + drought, water conservation, sanitation and erosion. Instead of singling out the Zongo community as the problem, the troupe intentionally framed the issues as universal and that these issues need to be addressed in not just one, but all communities across Ghana.

This particular Concert Party took place on neutral ground in front of the Cape Coast Castle and was very well attended by the Cape Coast community. It brought together residents from all areas of the city; not just those from the Zongo.



children in "Madrassa Alley"

### LEARNING WITH STUDENTS IN THE ZONGO

Since it was important to reach all members of the community during this first phase, one day was specifically dedicated to working with the children. The children communicated the importance of water by illustrating a traditional Hausa folktale about an ant that saves water during the rainy season and a cockroach that

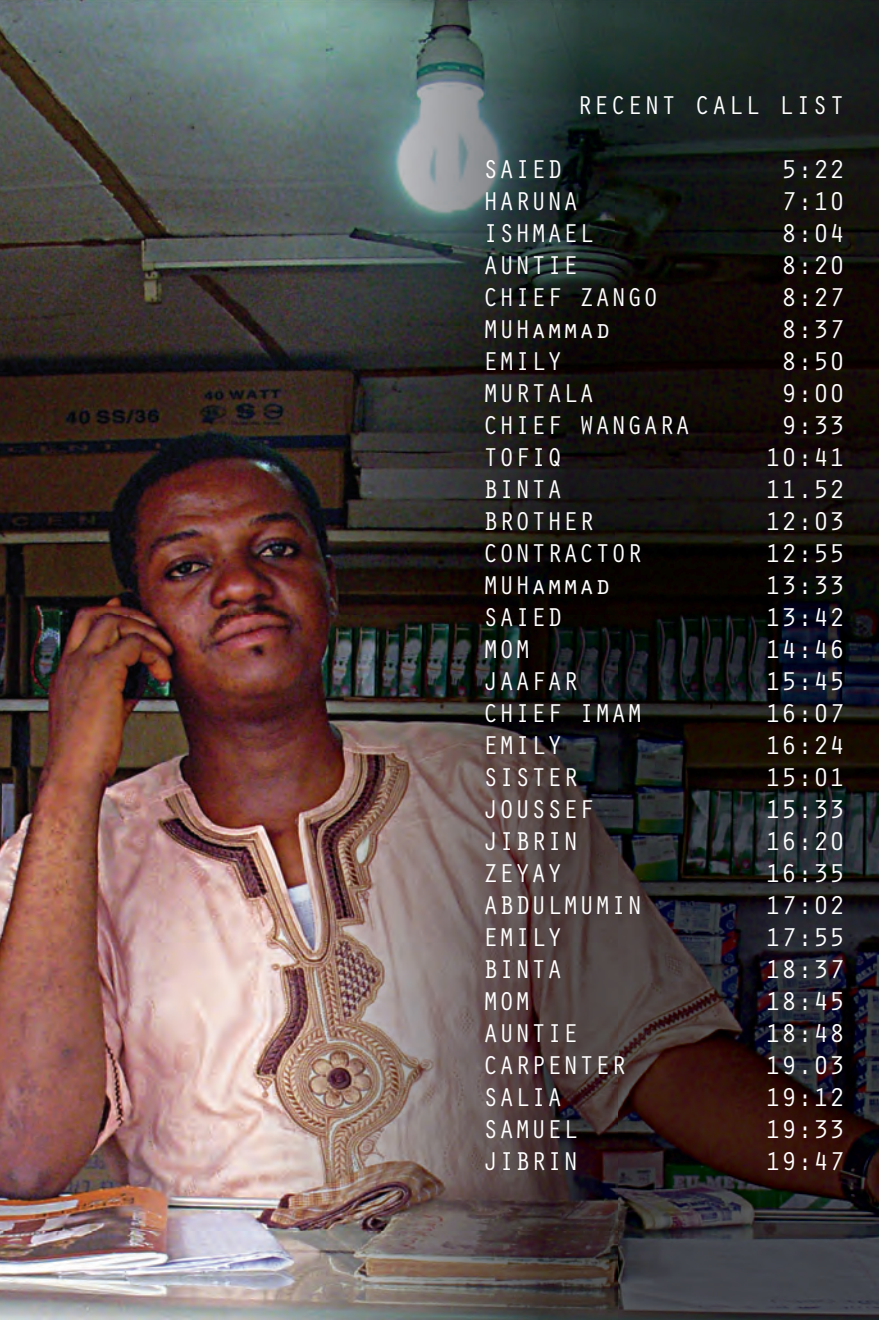
wastes it. In addition to drawing his/her assigned section of the story (see bottom right), each child was also challenged to come up with a different ending to the story in which the ant and cockroach would work together. One boy suggested that the, "Ant can show Cockroach how to collect water from the roof, boil it, sieve it, and then purify it for drinking.". Another child added that the two animals could work together

to create an irrigation system so that the water would drain and not attract mosquitoes. One last child concluded, "Cockroach and Ant can then go to their friends' houses who don't have water and advise them how to save water next year."



### A HAUSA FOLKTALE

The Cockroach came to see Ant during the dry season to get some water. Ant asked Cockroach, what were you doing during the rainy season? Then, Cockroach said, "I was singing because if you sing during the rainy season, it sounds beautiful." Then, Ant responded saying, I fetched a lot of water and reserved it." He scolded Cockroach, "So if you sing during the rainy season and dance during the dry season, you will die. I have no water for you."



RECENT CALL LIST

SAIED	5:22
HARUNA	7:10
ISHMAEL	8:04
AUNTIE	8:20
CHIEF ZANGO	8:27
MUHAMMAD	8:37
EMILY	8:50
MURTALA	9:00
CHIEF WANGARA	9:33
TOFIQ	10:41
BINTA	11:52
BROTHER	12:03
CONTRACTOR	12:55
MUHAMMAD	13:33
SAIED	13:42
MOM	14:46
JAAFAR	15:45
CHIEF IMAM	16:07
EMILY	16:24
SISTER	15:01
JOUSSEF	15:33
JIBRIN	16:20
ZEYAY	16:35
ABDULMUMIN	17:02
EMILY	17:55
BINTA	18:37
MOM	18:45
AUNTIE	18:48
CARPENTER	19:03
SALIA	19:12
SAMUEL	19:33
JIBRIN	19:47

“See, I know a bit of everyone. At first you didn’t maybe believe me but I think you do now. We have lots of people to help us.”

-Hammad Abubakar



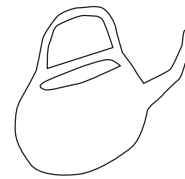
1 OBSERVATION > a photograph of the kettles used for ritual washing in the Zongo

COMMUNITY CONTRIBUTIONS AND LOGO DESIGN

After a series of one-on-one and group interviews with residents, conversations with the leaders of the community, children, and experts in soil engineering and water conservation from the University of Cape Coast, Williamson worked with the community to secure high quality materials at affordable prices and to research methods of construction and assembly.

The process could not have been completed successfully without the help of the Zongo community members such as Hammad Abubakar (to the left) among others, who not only advocated for the work, but also fully participated in it by helping purchase materials, organizing events, finding carpenters, providing the labor force, negotiating pricing, and most importantly communicating the process to the rest of the community.

The kettle images below, illustrate a simple, scaled example of how community members worked together with the OBDL to come up with a logo of which the Zongo feels ownership.



2 REPRESENTATION > a child’s drawing of one of these kettles



3 INITIAL PROPOSAL > an initial proposal for the logo



4 TRANSFORMATION > working with the community, waves replaced stripes and curvilinear lines replaced straight lines



5 IMPLEMENTATION > logo sent to community member who printed them on stickers and adhered the logo to each water collection container.



presentation of materials to the community

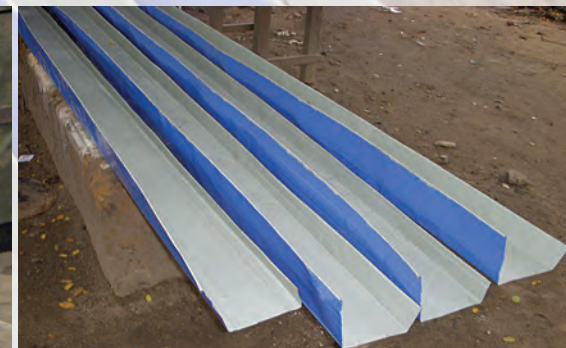
### ASSEMBLY AND DELIVERY

For over a week, Williamson worked with community members and craftsmen to secure 80 roofing sheets that wouldn't rust, create the gutters and their structural components, and purchase containers that could hold as much

water as possible. On the day of delivery, the residents rented a truck to collect and transport all of the materials. By late that afternoon, together with the community, Williamson presented all of the materials to both the chiefs and each of the individual families.



gutter fabrication



completed gutters



gutter structural components



## PROJECT EXECUTION

As part of having been awarded the new water collection system, the residents needed to provide not only 4 of their own roofing sheets, but also the labor. This symbiotic system ensured that at the same time OBDL was giving to the community, that the community was also contributing to their own cause. Instead of controlling every aspect of the construction process, OBDL empowered the residents to make their own decisions as to where the new roofing sheets would go. OBDL created a simple sketch for each family that showed how the water could flow from the roof, to the gutter and into the collection container. In some cases the construction was carried out exactly according to the sketch, but in others, there were long discussions about where the water should be collected such as at the interior courtyard or along an exterior public edge. In one instance, the existing slope of the roof surface determined where the gutter would go and in other, the slope was slightly adjusted to be able to collect water closer to the kitchen. Three days before leaving Cape Coast, the Water Conservation Committee and Williamson inspected each of the houses to make sure the work had been completed and to answer any questions the families might have.

In tandem with UVAs closing ceremony, Williamson presented this work to the residents with a formal ribbon cutting. Communicated over the course of the month and reiterated at this ceremony, was the foundational value of community education, empowerment and sustainability. Thus, far more important than the tangible, built artifacts themselves, are the participatory planning strategies that OBDL employed over the course of the month and will continue to develop in the years to come. The approach is not object-based, singular or static, but instead embraces contingent processes, plurality and long-term, adaptable strategies for sponsoring change in the Zongo community. By empowering the community through education, creating new hubs of exchange, and celebrating the economic and cultural importance of water, this holistic approach facilitates conversations across local social boundaries and generated a dynamic set of relationships that might otherwise never have existed. The project, therefore, not only promotes architecture as a social art with civic purpose, but also has demonstrated the necessity of this 'open' approach for a truly democratic, inclusive architecture that may be adapted and employed across the globe. 🌐

“Emily has done a lot for this community. We need one hundred people like her to help next year.”

-Saied Harun



installed water collection system in blue



installed roof and gutter on a house in the Zongo



DAILY WATER SUPPLY FOR **100** PEOPLE

**500** GALLONS OF WATER SAVED PER DAY

**117** PEOPLE DIRECTLY AFFECTED



# journal entries

The journal entries on the proceeding pages document the trip for phase 1: Community Engagment and are Emily Williamson's interpretation of the project's daily encounters, challenges, and successes. The entries don't include every event or experience, but attempt to capture the sum of her personal experience with the place and people.

## 06 June [Arba'aa/Wednesday] ARRIVAL TO ACCRA AND CAPE COAST

When arriving at the departure gate for Accra, I met two people with indirect connections to the 'Zongo Water Project' (thanks to my MIT sweatshirt!). The first, Emily Adams, is a student who will be working on water infrastructure for the Peace Corps in Ghana over the course of the next 27 months. The second, Janice Sole, was a fourth grade teacher for Jason Chester (a recent graduate from MIT with his Masters in Engineering) who is now working on a water infrastructure project in northern Ghana. I hope to keep in touch with Emily and make contact with Jason while I'm in Cape Coast.

While these connections were exciting, I began to feel the pressure to make my own ambitious itinerary a reality. Throughout the flight, I thought about where and how this project should begin. Even though most of the process in this first phase would be engaging with the community through activities and education, it became clear that even these exchanges would need to occur in a very carefully orchestrated way to ensure that the residents understood the process, would be able to benefit from the educational components, and that its impact would be spread across the entire community, not just in a single location. It would be important, therefore, to engage with the city of Cape Coast about these issues on a number of scales: the scale of the city [the municipal government, exhibitions, and concert parties] the scale of the Zongo community [workshops and pilot projects] and the scale of the individual [conversations with the Chief Zongo, the Chief Imam, and the other residents].

Upon arriving in Accra, my friend Samuel picked me up at the airport. We jumped around from one bus company to another only to find each one had stopped their service to Cape Coast. Finally, after pulling my 68 lb suitcase full of medicine, colored pencils, and water testing kits through the muddy side streets, we found a crowded, boisterous van headed for Cape Coast that night. I arrived at the guesthouse just in time for supper and the first round of Pecha Kucha during which we each introduce ourselves to the rest of the Studio. While I would be working independently throughout the course of the trip, I would stay with, and occasionally collaborate on projects with the UVA Studio. Barka Da Yamma [good evening in Hausa]. 🇳🇮

## 07 June [Khamis/Thursday] INITIAL MEETINGS WITH COMMUNITY

The main item on my agenda today was to re-introduce myself to the Zongo community and to spend time with both Hammad, the son of the recently deceased Chief Imam Abubakar, and Haruna, the representative assembly man for the Zongo. Little did I know that the day would end in a light bulb shop in a neighboring town called Adisadel.

The day began uneventfully with 3 tries on Hammad's cell only to hear, "This phone is switched off". After joining the Studio in meeting with a local bead vendor, I decided to walk along the street at the edge of the Zongo hoping to see someone from the community that I might recognize. As I approached one of the first entry points to the community, I saw a tent stretched across the ground in front of the mosque and Haruna directing people to their seats. He happened to be helping set up for a workshop on health insurance - of all topics!



tent in front of mosque

I re-introduced myself and although he didn't seem to remember me from my last visit, he gladly called Hammad. While Haruna and I waited for Hammad to pick up his cell, I realized that the entry area to the mosque could be a potential location for not only workshops under the shade of the tent but also for a small pilot project. This location is central to the entire Zongo community and also one of the only buildings belonging to the Zongo that is visible from the street.

Hammad called back a few minutes later and directed us to his house in the Zongo. Hammad greeted me warmly on his porch and said, "I have been expecting you." We spent the next few hours on a bench outside talking about water infrastructure planning for the community. As he put it, "Emily, tell me your mission. What is it that you hope to do?". I explained that I had come to work with them to improve the community's sanitation, erosion, and methods for conserving water. I let him know that this is a long-term project and that small pieces of it will be implemented over a long period of time and that the most important, overarching idea is that the community needs to drive the project from the beginning to the end. The goal is for the residents to understand, construct, and maintain these systems themselves and that it is my job to

help initiate it. It seemed like he understood but to make sure, I pulled out the project binder full of laminated images, diagrams, and photographs. We started thumbing through page by page. He pointed to areas he recognized and people he knew. When we came across a photo of the children he laughed, “these children are all grown now!”. When we came to the pages about the “kit of parts” to be implemented his eyes brightened. He pointed to the people carrying the water to the cultivation garden and wondered where they were coming from. He smiled when he saw that it was himself sitting on the stairs along one of the “ridges”, and nodded his head when he understood that the water for the storage tanks was coming from new roofs. I could see that Hammad now not only understood the issues to be resolved, but also believed that the project’s strategies were specific to the Zongo community’s social and cultural needs. When we closed the binder, his immediate response was the perfect transition into what we needed to talk about next. He stated bluntly, “okay, so we have this plan, but how do we construct each of these things?” We talked about the goals for this month: a small tangible pilot project showing how some of these issues might be resolved, educational workshops with the community, communication with local technical experts, and an art project with the children that celebrates water. He loved the ideas and provided a closing comment that summed up the conversation, “Yes, we can do this here and then we can take it to many other communities around. They all have these problems!”.

We spent the remainder of the morning looking at Hammad’s architectural drawings that he had completed in drafting school. I suggested that it would be wonderful if

together, we might be able to draw some of the construction details and sections for the bathroom. He agreed and thought that we should get started right away.

Before leaving the community that afternoon, we walked around the landscape close to his house to understand some of the localized problems including dirty water mixing with clean water, the broken gutter falling from the roof edge, and the garden that had been devastated by the goats and rain. “We need to contain those goats!”, Hammad groaned, “just like your picture!”.

Throughout this walk, Hammad was also continuously on his cell phone calling the local chiefs. Before I realized where we were going, we ended up at the houses of the Chief Imam (the religious leader of the community) and Chief of the Wangara (one of ten local tribes) to be able to introduce myself and the project. Hammad had also organized a time for us to meet with the Chief Zongo so we could decide when and where the first workshop/presentation to the Zongo community would take place.

The last piece of our day was spent talking about politics and sipping lemon Fanta outside of Hammad’s light bulb shop. A couple of Hammad’s friends joined us, one of whom (Jaafar) is the librarian at the University of Cape Coast. I discussed the project with him and he agreed to meet me on Monday at the University so he could introduce me to some of Cape Coast’s local agricultural, crop and soil experts. 🇵🇸



Hammad’s light bulb shop

### **08 June [Jumu’ah/Friday] MEETING WITH THE CHIEF ZONGO AND THE EXECUTIVE DIRECTOR OF THE MUNICIPAL ASSEMBLY**

Today was another full day during which I met two additional key members of the Cape Coast Community: the Chief Zongo and the Executive Director of the Municipal Assembly. It began with a phone call in to Hammad and our meeting at his light bulb shop. I waited for about 20 minutes and Hammad arrived looking anxious. “Time is money”, he exclaimed, “Let’s go!”. We jumped into a group taxi (a taxi that works as a bus would in the United States) and arrived at the Chief Zongo’s house just in time or at least in “African Time” as Hammad would explain later is at least one hour late. I introduced myself to the Chief, gave him a little bit of background as to where I was from, and could immediately see that he understood English very well. So, with a nod from Hammad, I plunged into the explanation of the project.

We spent over two hours with the project binder and like yesterday, paused at every page beginning with a description from me followed by questions and comments from the Chief. After I had explained the mission of this trip: to work with the

Zongo community to improve issues of erosion, sanitation, and lack of water conservation, the Chief wisely summarized what I was trying to say, “We as Zongo people need to come together. It’s about shared responsibility. But, my question for you is, how are we going to keep this going?”. I explained that I had a lot of help to get here in the first place: from family, friends, colleagues, architecture firms, and educational institutions. I let him know that I thought we would be able to get even more support in the following years, especially if this month was a success. In his regal position from across the table, he smiled widely for the first time and clasped his hands together saying, “Now I am getting answers. We all need to work together. Assuming we get some more funding, our contribution as a community will be to take care of it.” We continued this conversation while he poured over each image and diagram. I was continuously taken aback by his wisdom and uncanny ability to look at the big picture. He firmly stated, “Instead of staying in the theoretical, we want to put this project into practice!”

When we turned to the page illustrating the axonometric drawing of the project’s “third phase”, he explained that when he was only a boy in 1960, the community used to look very much like the image I had created but that it had deteriorated over the years. He went on to explain that the community needs more education and that the ideal education is when a child is able to have both a Western and Islamic education. And, that when one says ‘education’, that it means ‘all’ and not one view of things. Muhammad proudly stated that the Zongo community has the ability to have all of these educational perspectives. The religious piece of the education teaches about values

and ethics (to be able to tell the good from the bad and what one should do versus what they should not). On the other hand, the Western education is needed for communication and for understanding the world in a broader, rational sense. Since Hammad is one of the most educated members of the community, Muhammad delegated him to be the leader of this effort, “We need Hammad to communicate this project to all of the educated people in the community so that it may be successful.” At this point, I asked if the Zongo was organized by ethnicity to see if it would be important that each group be represented equally. Muhammad answered saying that no, “We don’t make use of the ethnic aspect. We are all mixed. We all work together.” Once we finished looking over the every piece of the project, Muhammad closed the book and said in finality, “One thing I can assure you, is that you have our full support, it will benefit our community and our society.”

I couldn’t have imagined a more effective, touching meeting and heard from Hammad later that the Chief had called him to tell him how much he appreciates the project and looks forward to the work.

Next, I met Gina, Maurice and the students in town for a quick lunch and was able to briefly catch up with Mr. Cobbinah, our gracious host and the Director of the Ghana Heritage Conservation Trust. He once again affirmed his support of my work in the Zongo and said that since the Zongo community is never going to leave the area, the rest of the city needs to learn to communicate with them and figure out how to improve its condition.

After waiting for the van for over an hour, we eventually decided to just catch a few taxis to the Municipal Assembly’s Office adjacent to the Zongo. Even though we were almost

an hour late, we were just on time to meet with Mr. Anthony Aikens, the Executive Director of the Municipal Assembly. We sat around a grand conference table, briefly introduced ourselves and then Maurice and Gina both explained the mission of the Studio’s trip, “to continue work begun for the long-term tourism and development plan.” Mr. Aikens took notes throughout the presentation and listened intently. Once they finished, I explained my own work to the group emphasizing that the issues of sanitation and erosion are relevant to every culture, not just in the Zongo. At the end of the meeting, Mr. Aikens smiled, thanked us for coming and ensured us that we had the Municipal Assembly’s full support.



Hammad (right) and his friends

The day ended back at the light bulb shop. Hammad was supposed to meet me to discuss the plans for tomorrow but since he had been delayed, I sat with his friends and talked through my project with them. His friend Jaafar seemed to be especially taken with my efforts. He grinned and joked, “If we had a hundred of you, the Zongo communities would all change for the better.” 🇵🇸

## 09 June [Sabt/Saturday] LOCAL MATERIAL SURVEY AND WORKSHOP PREPARATION

Ina Kwana! [good morning in Hausa]. This morning I was to meet Hammad in the Zongo because he teaches Arabic to the children on Saturdays and Sundays outside his home in an alley now nicknamed “Madrasa Alley”. While waiting for him to arrive, I talked with two other young teachers about why I was there and the ideas I brought about involving children in the project. They both agreed that this was important and thought that, “If the students are part of the process, that they will understand the issues about water and will be able to contribute themselves.”. I continued to spend time to get to know the children and gave them all stickers. By the time Hammad arrived, almost the whole class had some sort of polka-dotted or striped chicken sticker pasted to their shirt or leg.

Under the large sheet strung up between the two houses that constituted the temporary “Madrasa Alley”, Hammad and I began talking about the upcoming workshop. Nervously, Hammad explained that there was still a lot of work to do and that he hasn’t yet had the opportunity to tell enough of the community members. He explained that it’s extremely difficult to get a tent for these events last minute (especially on Saturdays and Sundays) and thought that if we could delay the workshop by a day or two that he’d be able to get everything together. We also needed a location to host it. I had talked to Mr. Cobbinah yesterday about holding it at Heritage House but he had needed more preparation time. I had also asked about the Mosque but Hammad explained that it wouldn’t be a good choice

because men and women would need to be seated separately. We all thought it was very important that every voice be heard throughout the process and that men, women, and children would all be able to contribute equally. After more discussion, we finally decided on an open, public space in the Zongo. We would pitch a tent, rent chairs and a PA system, and buy plywood for pinning up the posters. Hammad suggested the ordering for the program as follows:

*Arrival of Invited Guests*  
*Opening Prayers*  
*Introduction of Chairman*  
*Chairman’s Response*  
*Speech by Emily Williamson*  
*-Introduction*  
*-Problems*  
*-Possible Solutions*  
*-Community*  
*Engagement*  
*Questions*  
*Exhibition and Refreshments*  
*Vote of Thanks*  
*Closing Prayers*

To get a better sense of possible locations for a pilot project or “showpiece” as the Chief had liked to call it, Hammad and I began at the mosque. We both agreed that the mosque could be a strategic location because it’s owned by the community, used by everyone at least once a week, and is visible from the street. When I saw the washing areas for prayer, I thought if perhaps there was a way to more effectively celebrate the ritual of washing, then this might be an ideal starting point. These basins, similar in profile to a concrete curb, had clearly been neglected. The paint had washed away and they were falling apart where their edges collided with the ground. In addition, it was unclear where the water was coming from, how it was used,

and where it drained. When I explained these thoughts to Hammad, he agreed that this might be a good place to begin. He further elaborated that if tiles could be added to the walls and the floor that the space would be improved dramatically. I also thought we might be able to create a relevant pattern of mosaics on the wall, perhaps a place to store kettles, and a vessel to catch extra water not used. Later, we also visited another mosque in Abura where many of the people of the Zongo had moved because there was not enough space in town. Hammad had thought it might be important to also consider this location to reach the most number of people in the Zongo.

We finished the day off once more at Hammad’s shop over orange Fanta and fried crackers. Since it was Saturday, there was a huge circle of us sitting around in plastic chairs. Hammad continued to ask friends one by one if they had advice about the project or if there were other issues in the Zongo that needed to be addressed as part of the long-term plan. Youssef thought education for the children was the most important factor. He suggested that there could be workshops about sewing, batik, and rearing animals so that the children would go into the world with a number of skills.

Hammad pointed to an existing image of the Zongo and asked another friend, “If you could change three things in this picture, what would they be?” The man scrutinized the page and responded, “It needs new roofs, clean water, and a better ground.”. He further explained that a long time ago, there was a village close by in which all of the roofs were connected to one another. This canopy, therefore, served as a water catchment device for the whole community.

They were able to store enough water to last the entire dry season. Another man to his right explained that there is another village in Takoradi (about a two hour drive west from Cape Coast) that still operates exactly this way. We finished the conversation on this topic of the roof. Hammad thought the way I had represented the roof as a “butterfly” or v-shape might be problematic for a couple of reasons. First, he thought that in big storms, the wind would catch the roof and blow it off. Second, needing two roofs (one whose purpose is to keep out water and the other to protect the house from animals) would be very expensive. These were good points. I needed to review the local construction techniques and continue these conversations with other residents.

It began getting dark so I said goodbye and quickly marched up the hill to the guesthouse (luckily was within walking distance) to avoid any mosquito encounters.

you get this one?”. I smiled and explained it all came from my computer. “We will wait for my brothers to come. I need them to help me with this translation. You see, the spoken language is very different from what you write. We never learned to write Hausa; only to speak it.”. He thought the rest of the application looked quite good and there were only a few places where we needed to clarify, add or delete. One example is that he didn’t think we should use the downspouts. He said that the rain comes down so torrentially that it just overflows the pipe and that children like to hang from them and break them. I still thought some sort of connection from the gutter to a storage tank would be a good idea down the line but since there isn’t much funding and it doesn’t seem necessary or desired by the community, I crossed it off the list.

We finished the day with a discussion about the Water Conservation Committee. Hammad believed, and I agreed, that the committee should consist of both men and women. He would ask the MC from the workshop yesterday, the Assembly Man, and a few others for a total of 5 members. It was an easy but productive afternoon at the light bulb shop!

This evening back at the guesthouse we spent time developing the ideas for the Concert Party, an educational theatre performance that teaches valuable life lessons. I talked with the coordinator, Zeyay, about the issues I would like addressed for the Zongo portion of the performance and provided him with a brief paragraph about the project.

I finished the day with a draft of a logo for the ZONGO Water Project inspired by the colorful plastic kettles they use for ritual washing. Sai Anjuma! [Goodnight in Hausa] 🌙

## 10 June [Ahad/Sunday] PROJECT WITH CHILDREN IN THE ZONGO



children drawing in Madrasa Alley

I arrived at the Zongo this morning with a tentative lesson plan to tell the children a story from the Hausa tradition that celebrates the importance of water. After completing

the reading, I would assign each child a sentence from the story to illustrate. The overall goal of the lesson would be to encourage the children to think more about water and its importance through the creative act of making. Hammad wasn’t able to find his compilation of folktales, but told me the following three stories first-hand:

### *A STORY ABOUT A COCKROACH AND AN ANT*

*Cockroach came to see Ant during the dry season to get some water. Ant asked Cockroach, what were you doing during the rainy season? Then, Cockroach said, “I was singing because if you sing during the rainy season, it sounds beautiful.” Then, Ant responded saying, “I fetched a lot of water and reserved it.” He scolded Cockroach, “So if you sing during the rainy season and dance during the dry season, you will die. I have no water for you.”*  
*Moral: Save water during the rainy season.*

### *A STORY ABOUT AN ANT AND A BIRD*

*There was a stream. Then, behind the stream there was a very big tree. Ant lived in the ground and Bird lived in a tree. One day, Ant was climbing the tree but fell into the stream. Ant was struggling to swim and get out of the water. Bird on top of the tree saw Ant and threw a stick in the water. Ant crawled into the hollow stick and got out of the water so Ant didn’t die. The next day, Bird was on top of the tree again when Hunter came around. Hunter was ready to shoot Bird but Ant found its way inside the clothing of Hunter and bit him. As he was shooting, Ant bit Hunter so the Bird could fly away.*  
*Moral: Help each other.*

*A BOY WITH HIS FATHER AT THE BEACH*  
*It was the first time the boy tried to swim*

*in the water at the beach. After the swim, the father asked the boy, how do you like swimming at the beach? The boy said he liked it. "But," he said, "some people spoiled the seawater by putting salt into it." The father responded, "No, naturally the seawater already has salt in it."*

Since the first of these three stories captured the importance of water conservation, I told the children a longer version of my own making. I also decided to have a conversation with the children afterwards about the story's ending. Were there other ways the tale about Cockroach and Ant might end that wouldn't involve Cockroach dying of dehydration? How might Ant and Cockroach be able to work together? One boy suggested that perhaps Ant could give Cockroach a little bit of water and then teach Cockroach how to save water during the rainy season for next year. He explained, "Ant can show Cockroach how to collect water from the roof, boil it, sieve it, and then purify it for drinking.". Another child added that the two animals could work together to create an irrigation system so that the water would drain and not attract mosquitoes. One last child, with her hand raised high and grinning concluded, "Cockroach and Ant can then go to their friends' houses who don't have water and advise them how to save water next year." Next, I asked the children what the Cockroach and Ant might do during the dry season. Since cassava and plantains don't need much water, one child suggested that Ant and Cockroach could begin a garden together. Another child suggested smoking fish and storing maize in silos. And then, once they were done with their work that they could play chess or even sing and dance!

The children seemed to very much enjoy the

re-telling of the story and illustrating their own sections. The drawings began in pencil and as each child finished, I gave them each blue, yellow, and brown colored pencils. Blue was to represent everything wet, yellow everything dry, and brown everything between. I ended the session with a video during which the children showed off their drawings and explained to the camera what they had learned. 📺

### 11 June [Ithnayn/Monday] WORKSHOP IN THE ZONGO

Of all days to have sun, today would have been the day. We had completed the organization of the workshop and had informed not only the Zongo I been focusing on [Central Zongo], but also the other Zongos along the periphery of the city. This communication had occurred via cell phone, personal visits, at wedding ceremonies, and in mosques. Ironically on this day so focused on water, I woke up to dark skies and rain pounding on the guesthouse roof. Even with the weather, I still met Hammad and Haruna to figure out how we would most effectively summarize the project's mission at the workshop.



rain in the Zongo

Using the binder of images as a guide, we sat on Hammad's porch and talked through all the components of the project. Haruna

advised that we needed to be careful as to how to approach the community at the workshop this afternoon because the images I had created suggest that there will be a lot of change happening quickly. I reiterated that I have very little funding but that I wanted the community to be able to get together to talk about these issues and the most effective ways of solving them. Haruna also mentioned that too many NGOs have come to Ghana, leave money entrusted to the leaders of the community, and that then the leaders squander it. I reassured him that I was not here to do anything like that. We would need to involve the entire community and agree on a plan of action, together. Of the three problems I had outlined (flooding and drought, erosion, and sanitation), Haruna thought that sanitation and erosion should be tackled first and then water conservation second. I agreed that the ground was a huge issue but that all of these problems are interconnected and that when one problem is resolved, the others improve at the same time.

After Haruna and I finished our conversation, I met with Murtalla, one of Hammad's brothers. He teaches economics at the University of Cape Coast and although he now lives in the flats at the University, he grew up in the Zongo community and his family still lives there. I began by asking him about people's livelihoods in the Zongo. He articulated that most of the community members rely on trade in the market, that no one is a farmer, very few are government workers, and that some are unemployed or "petty" traders selling fruits and vegetables or other inexpensive goods. He further explained, "The biggest problems with the community are lack of education and finance. Those that are educated end up leaving the community and those that are not tend to

stay.". Murtalla thought that if there was a way to bring together the educated members of the community and have them spread the word to the others, that the project would move much faster. He also added, "We need to start with the children. If they learn how important these issues are, they will become the leaders.". I agreed that this seemed like a good idea and reiterated that funders in the United States only want to give to projects if they know the work will be able to be sustained by the community. I could tell that with Murtalla's understanding of the economy and importance of education that he would be an invaluable asset to the project down the line. The rain had finally stopped, at least for now. We spent the remainder of the morning preparing for the workshop. Since there is no public space in the Zongo, only shared space, Hammad and I walked around to ask the residents who owned large open spaces if we would be able to set up our tents there. We ended up receiving permission from a family who lives close to Hammad's own house. We then proceeded to find people to help set up the tents and chairs as well as some older children to buy drinks and purchase plywood for the exhibition.

I picked up Maurice, Gina and the students at the mosque to join us for the workshop and we began just about a half hour late (early for Africa time). Two tents spanned the courtyard with chairs arranged so that the men and women of the community faced each other; the rest of us sat along the third edge. Together, we formed a C-shape with a podium between. The program was quite formal and began with opening prayers and an introduction of the chairman. I was glad to see that the 'MC' turned out to Murtalla who speaks English well and seemed to translate effectively.

Following these introductions, Ismael, the designated Chairman, and Haruna each made speeches that summarized the project. Gina gave a short speech that talked about her long history in Cape Coast and then introduced me as the lead of the Zongo Water efforts. I summarized the project, its problems, potential solutions, and invited the community to provide their own input and ask any questions they might have. I also explained that I had little funding and that the purpose of this short trip is to work with the community to better understand their needs. The community seemed to really like the project and had a lot of questions related to funding, how the trash could be picked up and where to begin. One woman stated, "My roof leaks and there is water all over the walls and floor. I have 4 roofing sheets so far and I want to know if this project will help me figure out how to buy more and to install the ones I already have.". Another man named Yala (who I found out later to be a reporter) suggested that we start a volunteer team for the community to help out with these sorts of questions and provide labor. Some suggestions for pilot projects included improving the roofing, creating a central collection point for water so those without potable water in their house didn't have to walk so far, and adding an incinerator to burn the trash that would also then provide "off the grid" electricity to the community. The workshop ended with one woman pointing to me and saying, "You have chosen to work with the Zongo, you must have a Zongo name! What do you choose to be your Zongo name?!" I told her that the community should pick for me. Immediately, she responded, "From this day forth, we shall call you Habiba!" [sweetie in Arabic].



women at the Workshop in the Zongo

Once the workshop had concluded, it was clear to me that the washing areas at the mosque would not be a good place to begin. It was obvious that the community was worried about very basic issues such as leaky roofs and collecting water, not improving what seemed to already be working at a basic level (ie. the wash basins). I thought that perhaps we could develop a small program for repairing roofs, adding gutters (hopefully a bright blue if I could find them), downspouts, and buckets for water collection. Each house could fill out an application and list what they would be able to provide (roofing sheets, labor, etc.). A committee would then collect these, walk around to the different houses to assess need and decide on ten houses to receive the work. In this way, the community would be driving the process themselves and I would be the facilitator. 📺

### 12 June [Thulaathaa/Tuesday] HOUSING APPLICATION AND LOGO

I woke up again this morning to rain pounding on our metal roof. Since no one does anything in the rain here except watch it (a bit like when we receive more than an 1" of snow in Washington, DC), we spent the morning trapped in the guesthouse at

our computers. In case we were able to go through with the idea about roof repair, I developed a draft of the “Application for Roof and Gutter Repair + Water Collection Container” for the soon to be formed Water Conservation Committee to distribute to all of the houses in the Central Zongo area. The application states the overall long-term mission of the Zongo Water Project and outlines the responsibilities of each household receiving the grant (to provide 4 roofing sheets and labor). The Water Conservation Committee would work with each household to fill to out the list of 8 questions. They would then review all of the applications and decide which houses should receive the grants. Once I completed the draft of the application, Hammad called to say that the rain had slowed enough for us to meet at his shop.

We talked in depth about the workshop yesterday. Hammad thought the project was received very well by the community and that everyone is excited to take part. I then eagerly shared with him the idea I had thought might address the residents’ questions and concerns about fetching water, conserving it, and stopping the leaking roofs. Once I finished my explanation, Hammad threw his hands up in the air and exclaimed, “That is it! I love this project. It is perfect and will benefit a lot of people. Once we get some of the roofs fixed, add gutters, and collection buckets, this will help them collect water and will even reduce erosion! This idea is perfect.”. We wrote out a list of everything we thought we would need:

*Coated Aluminum Sheets*  
*Gutters*  
*Metal hangers*  
*Wood (for reinforcing)*

*Nails*  
*Buckets*  
*Stencils for TBD logo on buckets*

We then spent time going over the draft of the application. I had used Google to translate the English to Hausa so each question could be read in either language. Hammad squinted at the Hausa and laughed pointing to a word, “Where did you get this one?”. I smiled and explained it all came from my computer. “We will wait for my brothers to come. I need them to help me with this translation. You see, the spoken language is very different from what you write. We never learned to write Hausa; only to speak it.”. He thought the rest of the application looked quite good and there were only a few places where we needed to clarify, add or delete. One example is that he didn’t think we should use the downspouts. He said that the rain comes down so torrentially that it just overflows the pipe and that children like to hang from them and break them. I still thought some sort of connection from the gutter to a storage tank would be a good idea down the line but since there isn’t much funding and it doesn’t seem necessary or desired by the community, I crossed it off the list.

We finished the day with a discussion about the Water Conservation Committee. Hammad believed, and I agreed, that the committee should consist of both men and women. He would ask the MC from the workshop yesterday, the Assembly Man, and a few others for a total of 5 members. It was an easy but productive afternoon at the light bulb shop!

This evening back at the guesthouse we spent time developing the ideas for the Concert Party, an educational theatre performance that teaches valuable life lessons. I talked

with the coordinator, Zeyay, about the issues I would like addressed for the Zongo portion of the performance and provided him with a brief paragraph about the project.

I finished the day with a draft of a logo for the ZONGO Water Project inspired by the colorful plastic kettles they use for ritual washing. Sai Anjuma! [Goodnight in Hausa] 🇳🇮



kettles used for washing

### **13 June [Arba’aa’/Wednesday]** **UNIVERSITY OF CAPE COAST,** **WATER CONSERVATION COMMITTEE** **FORMATION AND MATERIAL** **RESEARCH**

I woke up this morning with a sense of relief because the sun was out! In stark contrast to my experience getting to the Zongo yesterday via a rusted out taxi in the pouring rain, today I was picked up in a decked out Mercedes with 3 TV screens and Dolly Parton blasting from its speakers. Since there was no easy way to get to the University of Cape Coast, Jibrin, one of Hammad’s friends had offered to pick me up. UCC was just about 20 minutes from the guesthouse and unlike most other landscapes in the city, its grounds were extremely well cared for. Jibrin handed me off to Jaafar, another friend of Hammad’s who runs the Library at the Department of Agriculture.



UCC, School of Agriculture

Jaafar began by introducing me to the Dean who seemed less than enamored by my visit. He thought the idea of working in the Zongo would be too hard and that no one at the University would be interested. I continued to ask him questions to at least see if there were other possible contacts in his department. After a lot of prodding, he finally directed me to both Dr. Edward Ampofo, Professor of Soil and Water Conservation and Dr. Kwame Frimpong, Professor of Soil Fertility Management. These two contacts ended up making my visit to UCC worthwhile. They both thought that the ZONGO Water Project is a good one and that many of the issues (erosion, sanitation and water conservation) overlapped with their own research. Dr. Edward Ampofo explained that 70% of the trash in Ghana is actually agricultural waste. He talked a lot about his current research relative to composting and how he’s beginning research to better understand the chemical and nutrient make-up of this waste and whether it’s easily compostable. I asked him whether Zoom Lion (the trash pick-up company) was effective and whether they might be able to take on recycling or composting as part of their efforts. He explained that while Zoom Lion does a good job cleaning the areas they are told to focus on, that they’re not getting paid enough by the Municipal government.

“Attitude, Education, and Coordination are the combination of issues,” Dr. Edward Ampofo explained, “No one understands why they should separate their trash and what they would get out of it if they did.” Overall, he believes that there is a lot of potential for us to coordinate and learn from one another through our research. He feels that it’s his “social responsibility” to help places in need like the Zongo and that we should develop a proposal together for upcoming years. I thanked him very much for his time and we exchanged e-mails for future contact. Dr. Edward Ampofo had been on his way to a meeting but also seemed very interested in pursuing future grant opportunities so I made sure to collect his contact information as well.

After Jaafar led me to a quick visit of the crocodile cage at the edge of the University, I grabbed a group taxi back to town to meet Hammad. When I arrived in the Zongo, he was in a deep conversation with one of his brothers. They were talking about the Water Conservation Committee and whether the applications should only go out to the ten houses that would be selected or if they should go out to all of the houses. I stated vehemently that absolutely they should go out to all the houses. We needed to collect survey information from everyone if this were going to be a democratic process. His brother nodded his head firmly and Hammad smiled and said, “Okay, I have my reservations because our community is difficult, but majority rules!”. This whole exchange made me very wary, but at least his brother had agreed with me.

We spent the remainder of the day hopping from one vendor to another for comparative pricing of everything we needed to purchase including aluminum sheets, buckets, gutters, wood, metal hangers, and nails. Eventually,

Hammad even went to some shops by himself as they seemed to bump up the prices as soon as they saw me. We finally found everything we needed except for the gutters because they don’t actually seem to exist in Cape Coast! Luckily, Hammad knew a local metal worker whose shop was just a couple doors down from his own. I let him know that we were interested but that would like to get pricing from at least one other craftsman and to see a sample of the gutter made before committing.

Before the end of the day, Hammad had also put together the members of the Water Conservation Committee consisting of the following residents: Hammad Abubakar, Saeid Harun, Murtala Musah, Haruna Abubakar and Mrs. Anatu MoHammad (to be confirmed). They had yet to finalize which woman would be able to join the group but luckily they were adamant that females needed a voice or the men “would get in big trouble by the women!”.

I stapled the one hundred copies of the final draft of the application, handed them over to Hammad for the Water Conservation Committee to distribute and headed home to meet with other local contractors over a dinner of plantains, rice, and chicken. 🇳🇮

### **14 June [Khamis/Thursday]** **FINAL MATERIAL SELECTION GUTTER** **AND FABRICATION**

This morning I met with Hammad and his brother Saeid Harun on the family porch in the Zongo. I was hoping this would be a “productive” day during which we would wrap up final material selections, pricing, and even begin fabrication of the gutters. Of course, here in the Zongo, productivity



also involved a lot of sitting, listening, and patience. Slowness, I have learned at times is important. Just as much as I needed to complete tasks, I had to indulge in the slowness of getting to know the community with whom I am working. Even though I might not always have something completed per se, sitting and listening to conversations in Hausa that I couldn't understand helped me gain perspective and also I hoped, respect for the community. And, just through facial expressions, hand gestures, and posture I could get a sense of the exchange. This morning was full of slowness. We sat in the plastic chairs on the porch for over an hour. I kept wanting to jump up and say, "Okay, let's get this day started. There is work to be done.". Every time I was about to say something though, I stopped myself. The day had already started, they knew that there was work to be done and I could tell their heated discussion was about the Water Conservation Committee because I could make out words like "committee", "serious?!!", and "gutters". After almost an hour, Hammad rose from his seat and said, "Emily, okay, let's go. Time is money!".

The first material on our list, and the most important because we needed 85 of them, was the coated aluminum roofing sheet. So far, we had only found 4'x8' roofing sheets for 25 cedis each (about \$12.50). Starting at the mosque, our search took us down Commercial Street towards the ocean. We stopped at every vendor with roofing sheets piled out in front of their kiosks but none would offer a price less than 25 cedis. Hammad urged us to move on to the next item: spray paint to be used for our logo. One vendor led us to another, who walked us to another that might have spray paint. After talking with 7 different vendors, only

2 had even heard of spray paint, and only 1 knew of a paint that could be used on plastic but that they didn't seem to carry it any more. The idea of stickers began to seem more appealing. Hammad assured me that he had used them on his sister's kiosk and that they had not only lasted a long time, but were also very inexpensive. I asked, "What do you think the community would like more (the stencil or the sticker) and which method would they be more likely to continue to use in the future?" Without hesitation, Hammad said defiantly, "Definitely the sticker! I can tell you are doubting me." I responded with a smile, "We'll do a test and see what we like better."

Next, we stopped briefly at an Islamic fabric shop to purchase material for two dresses I needed made for the final presentations and then caught a taxi to Hammad's sister's shop in the outlying suburb of Abura. While I ate pudding with "Auntie" and Hammad's wife, Binta at the shop, Hammad went from one construction vendor to another until he was finally able to get the price of the roofing down to 22 cedis per sheet. I took the deal graciously, gave him the money for the purchase and he arrived shortly thereafter in a taxi proudly presenting the receipt and the first 5 blue roofing sheets to be used for the gutters. There will be 4 gutters made per roofing sheet and (2) 8'-0" gutters available per house. I talked with the metal worker more about the construction of the gutters and how to most effectively shape them to catch water without having it splash out. We agreed that he would do a test and we would then look at the result together. Thankfully, his shop was only a few doors down from Hammad's light shop so we sat and waited in the usual plastic chairs under a tree.

Again, the slowness factor kicked in. I waited patiently for about 45 minutes just talking

with Hammad but then had to ask if I might be able to just go take a few photos of the metalworker while he worked. While Hammad prayed in the shop (his "mosque" as he liked to call it), I took pictures of the gutters in progress. After a few snapshots of the metalworker pounding down the sheets and cutting them into strips, I returned to our chairs and continued to wait. In about 30 more minutes, I asked Hammad, "So, do you think I could just go take a few more pictures?" Hammad laughed and said, "Emily, just relax. Just sit here. He will be done soon.". One hour later the metal worker had completed not just 1, but all 4 gutters from 1 sheet of aluminum roofing. They looked terrific and were a big improvement over the only other gutters I had seen in Cape Coast (semi-circular roofing ridge caps).

Even though today was full of slowness, we had made our first component of the pilot project to be installed in the Zongo! 🇳🇬



Gutter fabrication

### 15 June - 17 June TRIP TO KUMASI

I will keep this entry short as it's less related to the project in the Zongo. This past weekend, I joined the Studio on a trip to the

cultural capital of Ghana, Kumasi. It was a wild 5 hour drive that took us over crater-sized pot holes, eroded sections of ground, and large wood advertising boards posted in the middle of the street. Since the road was a single lane in each direction, it was common when passing to be facing vehicles head-on in the same lane. With all of these obstacles, we were all relieved when we finally arrived at the hotel unscathed. According to Gina, the number 1 cause for death in Ghana is car accidents. It was easy to see why. We spent the remainder of the day visiting the military museum and touring the Cultural Center where you could watch the locals make crafts.



Asante Traditional Shrine

The next morning, Gina and I woke up before the rest of the group at about 5am to go and document a beautiful, historic Asante Traditional Shrine for which she would be writing a paper. After providing Schnapps as an offering to the community chief, we had full reign of the shrine to take pictures and document its existing conditions. Made up of entirely earthen construction, the shrine was split into two courtyards surrounded by rooms on all four sides. One courtyard was dedicated to ritual and the other to every day use. Though this particular shrine hadn't been restored and thus had an almost flat tin roof, the original was a steeply

pitched thatched roof that reminded me of cottages in the English countryside.

A couple of hours later, we met the Studio at another shrine that had been restored and then went on an adventurous tour through West Africa's largest market. Maurice bought a crab to be able to sketch, others bought fabric made in China, and we were able to witness vats of peanut butter being stirred by hand. We ended the day at the hippest pizza joint in the city that happened to have the dual purpose of a gas station! The last day of the trip we visited the Asante king's palace. Steeped with traditional artifacts and sculptures of each chief in power, the palace is one of the most impressive in Ghana.

After a long and obstacle-ridden ride home to Cape Coast, we were greeted with an incredible spread of fried plantain, fried fish, and fried cassava for dinner. Over our crispy meal, we began to strategize for the week and brainstorm "Guerrilla Art" to be implemented along side the other Design-build projects. More on this tomorrow! 🇳🇬

### 18 June [Ithnayn/Monday] GUERRILLA ART CAMPAIGN, WATER CONSERVATION COMMITTEE MEETING RESULTS, AND GUTTER FABRICATION

During last night's discussion about "guerrilla art" (potential architecture and/or temporary art installations that subversively suggest an agenda), each of us came up with at least one idea to share with the group. Ideas ranged from recycled art sculptures, street tagging with stencils, and banners promoting locally made crafts, to brightly painted planks spanning across the gutters. The purpose of these urban installations is to be suggestive of a greater issue; to bring attention to an idea to be celebrated or addressed. In the

end, we decided to move forward with the banners and the planks. Since I had suggested the planks bridging across the open sewers, I would be heading up this arm of the guerrilla art. The overarching purpose of this particular colored plank installation would be to both illustrate that the open sewers are a problem while simultaneously providing the community with new ways of connecting across the city.

This morning, I began the day with mapping, photographing and drawing the existing sectional conditions of these open sewers as one moves from the castle up to the Zongo community. As I measured the spans and noted uneven ground, I also took inventory of the existing bridge typologies used. In some cases, pieces of wood sat on concrete shelves that had been inserted into the gutters and in others, pre-cast concrete tiles were permanently cemented in place.



rendering of blue bridges

Once I had completed almost an entire loop around Cape Coast's downtown, Hammad called to say that he was waiting for me at his house in the Zongo. We sat together on the porch and I asked him how the distribution of the surveys had gone

this past weekend while I was gone. “We announced it at the mosque on Friday and began to distribute the applications on Saturday, but on Sunday it rained so we all needed to stay inside.” He explained. We agreed that tonight the Water Conservation Committee would be able complete the collection of the applications and pick the 10 houses whose roofs would be renovated. Hammad went on to suggest that his sister would be willing to take on the task of finding the most affordable water collection buckets. He needed to get in touch with our vendor for the roofing sheets to confirm that she had been able to procure 80 of them. We spent more time talking about the community social structure, upcoming important days and months of fasting and celebration in Islam, and making final measurements for my dress. Just as we were about to leave, Hammad excused himself and went around the corner of his house out of view. The two twins, his nieces, who had been sitting on the stoop with us curiously got up and followed him. When I glanced up, I saw Hammad’s fist gripping a black and white feathered chicken by the neck. I too got up from my seat and rounded the corner of the house to see him very carefully slicing the chicken’s neck, and then pouring water over it to wash away the blood. He repeated this task slowly and with utmost precision until the bird had stopped flailing. I had expected that seeing this rather gruesome event would upset me, but the way he had so cared for the dying animal altered my perception and I felt respect towards both the animal that had given its life and towards Hammad in the way he had undertaken the task. Once Hammad was finished, he smiled and said, “This is not for me to eat. I don’t eat anything with two legs.”

Upon arriving at Hammad’s shop this afternoon, we noticed that water had flowed from the street, across the broken curb in front of his kiosk and had completely soaked his front porch endangering the electrical goods inside. I said, “Hammad, It’s time. Let’s go get you some cement to fix this problem. It will be a personal gift to you; not part of the ZONGO Water Project.” He thanked me graciously and let me know that from now on I would officially be part of his “club” (the group of men that met every day in front of his shop to talk, pray and eat). Just as we were unloading the bags of cement into the shop, the metalworker, Abdulmumin, called to say that the gutters and their structural metal supports were complete. Hammad announced, “I need to wash and pray first. One day you should also try. Maybe tomorrow. Tomorrow we shall do that.”

The gutters and supports looked very well-crafted and the blue coating didn’t show dents as much as I had thought it might. The only change we wanted to make was to paint the supports blue to match the gutters. On his phone once more, Hammad called one of his brothers to fetch the paint for us so the we could get started as soon as possible.

Once again, the day felt slow yet still productive. I hoped tomorrow might move faster since we would actually be able to take photographs and measure the houses chosen by the committee. In the meantime, I would continue to develop the guerrilla art project. 🎨

### **19 June [Thulaathaa/Tuesday] WATER TEST, CONCERT PARTY PLANNING AND REVIEW OF 10 HOUSES**

I arrived at Hammad’s house in the Zongo this morning at 10am just as we had planned.

After waiting for a half hour, Hammad called to say he was running late which meant he might not actually arrive for another couple of hours. We are in “Africa time” after all. Instead of making my way back to the guesthouse or meeting up with the Studio, I decided to take advantage of my time in the Zongo by testing the pH of the soil and the quality of the water both from the roof and on the ground. As expected, the soil turned out to be extremely Alkaline at a pH range of 8.0.

Hammad finally arrived around noon and he exclaimed when he saw me, “Oh! You have been waiting here the whole time. We have wasted time. We must get to work.”. Before we started though, he handed me a doorbell he had dug up from his house that he wanted to install at his light bulb shop. When I began stuffing it in my bag, its ringer echoed back, “Salamu Alaikum!”.

Since the Water Conservation Committee had decided upon the 10 houses to receive the work last night, we spent the remainder of the morning visiting the first 5. Hammad introduced me to each of the owners and then they showed me where their roofs were leaking. One owner invited me inside one of the bedrooms, pointed first to the water dripping down the brightly painted blue wall and then drew her finger across the room and pointed to a baby laying on the floor with her mother. Even though I couldn’t understand her words in Hausa that paired with the gestures, it was clear that she was deeply concerned about the baby’s room becoming flooded in the night and that it had happened before. I assured her that we would be able to replace the existing rusting roofing sheets with new ones to stop the leaking. She took both my hands and said, “Nagodiye. Nagodiye! Nagodiye Habiba!”.

I thanked her for inviting me into her house and as I leaned down to put my shoes back on and pick up my bag, the doorbell announced again, “Salumu Alaikum!”.

In addition to the roof patching, each of the houses also contained its own set of issues relative to the flow of water from the roof, to the gutter, and into the container. In one case, the roofing sheets would need to change direction so that the corrugated sheets would run parallel to the water and perpendicular to the gutter. And in all cases, we needed to determine where the 16’ gutter would go, in which direction the water should flow, and where the collection container should be located. After documenting these first 5 houses through photographing, rough measuring, and sketching, we left the Zongo for Abura to finish buying materials for the official material distribution tomorrow. Hammad leaned against his counter in his kiosk with his phone pressed to his ear almost the entire afternoon. He talked with a contractor who would secure the roofing sheets, an artist who would help with the logos, the metalworker who was completing the structure for the gutters, and Youssef, one of his Arabic students, who had been helping us with odds and ends. When Hammad had finally gotten off the phone, he laughed and said, “See, I know a bit of everyone. At first you didn’t maybe believe me but I think you do now. We have lots of people to help us.”

While sharing dry biscuits, drinking pineapple flavored malt soda and picking off the ants that kept crawling up our legs (the ants always come out during the rainy season), Hammad and I talked about how to handle tomorrow’s material distribution. He explained that all of the chiefs should be there and that those who couldn’t make it

would send a representative.

My phone started ringing. As I scrounged around for it in my bag, the doorbell let its presence be known one more time, “Salamu Alaikum!”. Before answering the phone, I passed off the ornery apparatus to Hammad and jokingly told him we might need to get new batteries if I kept it. The phone call was from Zeyay, the organizer for the upcoming Concert Party. He had wanted to meet with Hammad to learn more about the ZONGO Water Project and how the theatre troupe might most effectively interpret some of the community’s concerns about erosion, sanitation, and water collection. The conversation went very well; the gist being that the problems are not always with the authority but often people’s attitudes and the need for more education. Even so, Hammad reiterated that, “these issues are not unique to the Zongo community; they are everywhere but the Zongo can serve as the example to do it right.” Zeyay nodded his head, took some notes, and continued with a series of thoughtful questions to make sure no one would be offended and that everyone would feel included at the Concert Party. “I am so glad you came.”. Hammad said, “I now understand much better what it is you are trying to accomplish on Saturday.”

After Zeyay left and I had received the official receipt for all 80 roofing sheets, I left to meet the Water Conservation Committee in the Zongo to review the remaining five houses on the list. 🎨

### **20 June [Arba’aa/Wednesday] MATERIALS DISTRIBUTION AND FILMMAKER INTRODUCTION**

Hammad and I both knew today was going to be a big day and also perhaps the turning

point when the project would truly become the community’s project more than our own undertaking. We met again on his front porch in the Zongo, “US time”. “This organizing is not easy”, Hammad said, “I am tired.”

The plan for today would be to present the materials to the chiefs + community and then distribute them to the 10 houses. We talked about how to get so many people involved so quickly and once again Hammad picked up his cell phone and started making calls. While he was explaining this afternoon’s program to one person after another, I sketched out a few architectural details for the roof to gutter transitions. Eventually, we left the porch and grabbed a car headed for Auntie’s shop. I sat and chatted with the ladies while Hammad scoped out the pricing for the fascia boards. Hammad returned shortly with a look of disbelief on his face after finding out that a 14’-0” piece of wood was going to cost us 20 cedis (\$10). “I don’t get it”, he complained. “I thought I knew the prices here, but everything has been going up. Construction materials are too expensive. I am going to try and find us a better price.”.



view of Cape Coast from Fort William

In the end, we decided to provide the community with the wood later on and just present the containers, roofing sheets, nails, gutters, and supports. While Hammad

continued to rally people to come help carry materials and get a car large enough for everything. I left to go meet Gina and Brian back at Madrasa Alley. This was Brian's first venture into the Zongo so we decided to do the full walking, talking and filming tour. Beginning at the mosque, we walked through the winding alleyways that connected us into the dense patchwork of earthen houses of the Zongo. We walked by several open shared but private spaces with wells at their centers and then

continued up the eroded hillside along the same path as the community's largest open sewer. Bombarded by children the entire way yelling out, "Abruni, abruni!" ("white" in Fanti), we made our way out of the Zongo and back around to Kotokaraba Market. Since we still had extra time before Hammad would arrive with the materials, we decided to take the steep climb up to Fort William so Brian could situate the Zongo within the larger context of the city.

Hammad finally called around 5pm. "Come to my sister's shop. We are here with the materials!" Brian and I made our way back to the edge of the Zongo but before we even saw Hammad, a band of other Zongo community members led by Tofik, Hammad's brother, joined us. "Emily!", He said, "Where are you going? Do you need help? Let's go together." We paraded up the street and spotted Hammad leaning out the window, "Emily, we are here!". The truck pulled over to the side of the street and some of the members of the Water Conservation Committee jumped out the back. The chiefs lined the sides of the street and Brian took a series of formal photographs of me presenting the materials to the community.

We spent the remainder of the evening delivering the materials to each of the houses and taking more photographs with the recipients. Even though I couldn't understand much of what they were saying, each resident seemed extremely grateful and kept repeating the words, "Nagodiye. Nagodiye! Nagodiye Habiba!". Hammad also let me know later that he received calls throughout the remainder of that evening and the next morning thanking me for my contributions to the community. 📷



material distribution ceremony

## 21 June [Khamis/Thursday] INTERVIEWS IN THE RAIN AND STENCIL APPLICATION

Hammad and I took cover under the porch in Madrasa Alley this morning just before it began to pour. Since we knew no one would be able to begin construction in the torrential storm, we re-planned our day and decided to begin it with an informal conversational interview aimed at future grant opportunities in the Zongo. I asked first how the community would be able to sustain and build upon not only the new water collection systems, but also the organizational teams that have been created. He responded, "Emily, you keep asking this type of question. As for maintaining, we won't have a problem. You come and see it and you will be happy always." He then listed the five pillars of Islam.

Hammad added extra emphasis to the third pillar. "You see", he said, "One of the pillars of Islam is to know how to help one another. It is part of us." We continued talking more about the idea of community stewardship and I asked if there were committees or associations already established that helped organize educational workshops and other events. He answered that yes, there were many of these groups. One example he gave was the "Faila" that organized programs almost every Saturday including weddings, funerals, and press conferences. Hammad also mentioned that the community often pools its money together towards a specific cause such as fixing someone's roof that has fallen apart.

The next topic we discussed was specific to the quality of water in the community. Since I had spent time this morning going over the answers to the applications, it appeared that hardly anyone knew how to filter their water from the roof. I also expressed concern about the well water as it did not look fit for drinking. Hammad explained that most of the residents do know how to filter their water. They sieve the water and then add inexpensive "Aquatabs" to purify it for drinking. The well water however, is only used for washing and cooking, never drinking because it's salty. I also asked about washing and using the toilet. The washing occurs in makeshift outdoor enclosed areas often made from old corrugated sheet metal or wood. The water then passes underneath these structures and empties out into the main drainage system. As for the toilet, the residents have to walk over a mile to get to the closest public toilets which are unsanitary and often overcrowded. "One problem in the Zongo", Hammad explained, is that there is no road access so it's impossible for vehicles to pick up any human

waste." I was thinking that if the community could sustain composting toilets, that these might be the best option for the future. One last set of questions I asked was about the roofing itself. "Did the original houses have earthen roofs?" I asked, "or were they always just the corrugated tin?". Hammad didn't know the answer but he did know that people currently either had no sub-roofing in which their living quarters were open to the wood structure and roofing sheets above) or that they had added plywood supported by a secondary wood frame structure.



wash house

Later that afternoon when Hammad had left for his shop, I went with Saeid, one of the Water Conservation Committee members, to place the logo stencils on each of the large containers that we had distributed to the community. The logos were even more well received than I had thought. The residents seemed very touched that the concept of using the kettle was used, as it was such an important part of their daily spiritual life in the Zongo. 📷

## 22 June [Jumu'ah/Friday] GUERRILLA ART IMPLEMENTATION + FILMING IN THE ZONGO

Since today was Friday and Hammad would be at the mosque praying until early afternoon, Brian and I volunteered to help out with the banner guerrilla art project in the morning. We spent a few hours putting together a set of five banners; each containing a photograph depicting hands doing a particular type of craft local to Cape Coast (i.e. woodworking, sewing, beading, etc.). We then branded each 84" x 54" poster with a stamp that read, "Made in Cape Coast". By 2pm, we finished the graphics and left for the Zongo to meet Hammad who would be delivering the 14' fascia boards to each house. I had finally come to expect some delay, so before the delivery I planned for us to climb up the two hills to either side of the Zongo to get some 'before' photographs of the Zongo urban landscape. While the hill behind the market provided a good panoramic view, the steep eroded cliff directly adjacent to the Zongo enabled us to see the landscape of the Zongo's roof system; some of which had already transformed to the blue roofing sheets! I couldn't believe that even with the heavy rains from yesterday and the full day of praying today that at least 3 houses had already completed the roof construction. Even though Hammad had told me over and over again that it wouldn't be a problem for the community to do the work themselves, I had needed to see it for myself.



Zongo roof landscape

We made our way down the slippery path from the cliff that also served as an open sewer. On the way down, we interviewed Amoro Muhammad, a Zongo resident, about the issues related to water in the community. He explained that his roof was leaking into his bedroom and that he would very much like to help provide some roofing sheets and labor to get the work done. He further elaborated that the other side of his earthen house was eroded away because so many of the roofing sheets were missing and that water had infiltrated the walls.

There was still no word from Hammad so Brian suggested that he interview me about the project's goals and how it had progressed so far. Upon finishing this conversation in Madrasa Alley, I put a call in to Hammad. He said that he was coming with the wood but that it been very difficult to get a car. "Just wait. I'm coming. Any moment I'll be there." he said. We peered among various fabric kiosks while waiting and visited with Saied who was also the tailor for my dresses.

Still, there was no word from Hammad. Finally, I called to let him know that we had to return to the guesthouse as I was responsible for meeting Zeyay to talk more about the Concert Party. He let us know that the wood was on its way to the Zongo and that I'd be able to see it at each of the houses tomorrow morning. Relieved that the delivery had actually taken place, we left in a taxi headed for the guesthouse. After dropping off Brian and picking up two other students, our driver took us to Zeyay's office on the road to Accra. Little did we know what was in store for us. The dance and theatre group ended up performing an entire dress rehearsal show for us! Although most of the acting was in Fante (one of the local languages), Zeyay provided us with

a full narration before they began. Each of the four projects (one being the Zongo Water Project) became a chapter in the very well choreographed, artful performance full of drumming and dancing. We then covered basic logistics for tomorrow's public performance to be held at the castle and thanked him again for all of his hard work. Mendasi! (thank you in Fante). 🇳🇬

### **23 June [Sabt/Saturday]** **FILMING IN THE ZONGO AND CONCERT PARTY**

This morning, Brian and I walked through the Zongo again to continue filming. Instead of documenting the existing conditions though as we had previously, I walked through the Zongo pointing to locations where various components of the "kit of parts" might be able to be adopted. In some areas stairs or weirs were needed, in others new roofs and collection tanks, and still others, the ground had the opportunity to be built up for growing banana trees. Once completing this tour of the Zongo's potential, we met Hammad in Madrasa Alley. Since it was Saturday, the children were learning Arabic and chanting verses. We asked Hammad if this would be a good time to interview him but he shook his head and said, "Something like this, we need to involve the community. I don't want it to be my own decision." He further explained that the entire Water Conservation Committee should be part of the interview and that we could schedule it for Monday.



children in the Zongo

Brian spent a bit more time filming the children and then he left to meet up with some of the other Studio groups down by the castle. Hammad and I walked around to look at some of the completed blue roofs, delivered the last pieces of wood to be attached to the gutters, and then collected my nearly completed, elaborately stitched dress from Saied.

Back in Adisadel at Hammad's shop, we waited for a second tailor to finish sewing the two pieces together. In the meantime, Hammad explained about a few of the important events that take place during different times in the Islamic calendar. Today, he would be celebrating "Isra", when the prophet goes to heaven and comes back on the same day. Two other important days include the "Birth of the Prophet" and the "Night of Power" (the 27th day of Ramadan). Hammad went on to explain the importance of these holidays and how everyone contributes to the festivities, whether in money, oil, or rice. Along these same lines, he talked to me about a speech he gave at the mosque yesterday about unity "for all people, not just Muslims". He had given the congregation an analogy of unity that relates to the human body. "If your toe was cut off," he explained, "then your mouth will scream, your eyes will have tears, and your feet will want to run away. It is not just your toe that responds,

it is all of the pieces of your body working together." The same idea extends from one person to another. If one person gets hurt, it affects and puts others into action. They need to work in unison. We continued this

conversation until I let Hammad know I needed to go home to prepare for the Concert Party. He joked, "The mosquitoes are coming. We are not afraid of them. They salute us, but they will be after you!"

The Concert Party was a huge success. People came from all over Cape Coast to join in the festivities. There was drumming, dancing, and stunts for the first hour and then the theatre troupe performed their skits about each of the projects in Fante. Even though we couldn't understand most of what was being said, it was clearly appreciated as everyone was laughing and clapping their hands almost the entire show. 🇳🇬



Concert Party

### **24 June [Ahad/Sunday]** **KAKUM NATIONAL PARK**

Since today was essentially a day off from the project during which we traveled to Kakum National Park, I will be brief. I had invited Hammad and his wife, Binta to come with us. Exhausted from the day before, Hammad had said in response to my invitation, "Emily, I will sleep on it. I am tired, but maybe my wife can convince me

to come."

I was happy to receive a call from Hammad in the morning confirming that they would join us. Fifteen of us crammed into our bright green van with a hand of god sticker pasted to the rear windshield. We arrived at the park, received our badges for entry and made our way nervously to the canopy walk. I had already completed what I felt was a treacherous journey across these tippy planks over 100 feet off the ground years before and so thought I could avoid the experience all together. Hammad and Binta seemed determined to do it though, so I attempted to hide my fears and accompany my guests across. I would conquer "the phobia" as the guide called it.

Just as Hammad stepped onto the first plank, it dipped down a few inches and he jumped back saying that there was no way he would go across. Finally, Binta convinced him that he needed to be brave and so we all gingerly made our way across the first set of bridges. They both grew comfortable on the bridges quickly, but my legs started shaking and my hands became red from gripping the rope too tightly. The guide suggested I take the "shortcut" and I gladly accepted the offer which meant I only needed to cross three bridges rather than seven. After emerging from the trees, we completed our Kakum experience with phenomenal dancing and singing from the Bamboo Orchestra.

We ended the afternoon at a restaurant close by called Hans Cottage with crocodiles as its unique main attraction. We crossed a series of bridges to get to the main structure surrounded by a crocodile-filled swamp. An old, faded wood sign read, "Attention. Beware of crocodiles. The management is not responsible for any missing persons.

Watch your children carefully.". While waiting for the food, I toured the resort with Hammad and Binta. They seemed to enjoy their stay and wanted photos at the pool, on the bridges, and at lunch. Just before dropping them off, Hammad said, "Emily, I am so glad we came. We thoroughly enjoyed it. It was perfect; even better than I would have thought." I thanked him for taking the time and let him know I'd call him in the morning with Monday's plans. 🇳🇬

### **25 June [Ithnayn/Monday]** **BUSINESS DEVELOPMENT WORKSHOP AND INTERVIEWS**

Unfortunately, Monday's plans changed quickly when I woke up feeling ill. I decided to move slowly and spend the first half of the morning helping to paint the bright blue bridges for the guerrilla art at the guesthouse. After a couple of hours, I was feeling well enough to at least meet with Warren Buford, the Executive Director of the UVA A-school Foundation, for a conversation about business development. We talked at length about my experiences in the Zongo community and what I planned for the future. We delved into the various types of funding, potential local Cape Coast support, and what it would take to begin a non-profit. Even though I was still feeling under the weather, the conversation was very helpful and brought back the bigger perspective to the project.

After some roasted plantains and groundnuts for lunch, I finally met Hammad in the Zongo at Madrasa Alley. I explained that I wasn't feeling well and he shook his head, "Me too! I blame that juice from yesterday at lunch. We both had it. It must have been bad."

Since Warren Buford would be holding a workshop at the guesthouse on business development targeting the local stakeholders of each project that afternoon, Hammad and I grabbed a taxi to meet his brother, Tofik, a communications lecturer at Cape Coast Polytechnic, who would join us. One hour later, Tofik finally called saying he was at the junction just five minutes away. We waited for another half hour. Hammad muttered jokingly, "My brother is late. These cell phones, they make us tell lies!". We finally arrived at the workshop almost 2 hours late. Luckily, it had just begun. The session focused on how to run a good business, what elements enable success, and how might you develop a long-term business plan.

After taking extensive notes, we left for an interview with the members of the Water Conservation Committee. Although Hammad couldn't attend this particular interview session, he organized for Brian and me to meet with the rest of the committee. We met in Saied's tailor shop and talked about everything from education and the economics of the project, to how people have begun to see the place transform and the importance of the residents being at the center of the process. While these interviews were helpful, I was glad we would be able to have a separate interview with Hammad. He is soft spoken and having the space and time to answer the questions without interruption will be important. 🇳🇬

### **26 June [Thulaathaa/Tuesday]** **PREPARATION + FINAL PRESENTATION TO THE COMMUNITY**

I spent the morning preparing for our presentation to the community. In addition, we developed a project sheet that included

all 4 interventions accompanied with an image for each.

An hour before the ceremony was to begin, we piled in the van and arrived at Heritage House Garden in plenty of time for set up. The ceremony itself went smoothly and was well attended by 4 local newscasters. I gave a short speech and because it was so formal, it was entirely scripted:

*Good afternoon everyone and thank you so much again for coming to our closing ceremony here in the beautiful Heritage House Garden.*

*My name is Emily Williamson and just a couple of weeks ago I was also given a second name, Habiba, as residents in the Zongo community now call me.*

*Over the last few weeks, working with the Zongo community, we have launched the "The Zongo Water Project" whose mission is to use water as a way to improve the lives of its residents. Rather than developing a top-down master plan, the approach is to create a long-term, community-based strategy that the residents are able to sustain themselves. By adding built and landscape elements to existing ones, issues such as flood and drought, erosion, and sanitation will be able to be solved.*

*Over the course of this past month, together, we implemented the first phase of the project called "community engagement" in which we worked with the residents to initiate conversations about why water is important, identify current issues, and talk about ways to solve them. The community invited me warmly into the community and I had the opportunity to meet with the Chief Zongo, Cape Coast, the Chief Imam Zongo,*

*Central Region Cape Coast and many other residents. During our first program workshop, the community raised a number of important questions and concerns. There were some questions about how to get potable water closer to the houses, there were other questions about how to fix leaking roofs, and still others about how and when the project would begin.*

*To address to these concerns, the Zongo residents formed a Water Conservation Committee composed of members from the community. Working with the Committee, we decided on a small pilot project that would respond to the needs of the Zongo residents. We thought that by beginning with 10 houses, we could add new roofing sheets to prevent leaking, new gutters for water collection, and new containers for water storage. Through an application process, the committee picked the houses for the roof repairs and in return, each house supplied additional roofing sheets and labor. We presented the materials to each of the houses and construction of this new water collection system will be complete before I leave Cape Coast.*

*I have very much enjoyed working with the Zongo community over the last few weeks and hope to raise more funding to be able to continue this long-term water project next year. Thank you so much again to the Chief Zongo, Cape Coast, the Chief Imam Zongo, Central Region Cape Coast, the members of the Water Conservation Committee and all of the residents of the Zongo community. Nagodiye. Thank you.*



ribbon cutting

Since the Zongo community is located over a mile away from where the ceremony took place, we decided to do the ribbon cutting over one of the water collection containers given to the houses. We took a series of photographs and then followed the rest of the parade around to the different sites where a ribbon was cut for each project. The ceremony ended at the last intervention site, the traditional chief's palace, where there were gifts and an elaborate feast awaiting us.

Before heading home this evening, I stopped quickly at Hammad's shop to deliver a beautiful photograph Brian had taken of the Chief Zongo and to plan tomorrow's day. This was the first time I had seen the shop in the dark. Sample bulbs of all sizes and shapes punctuated the kiosk in glowing shades of green, blue, and violet. Since the mosquitoes were out, I didn't stay long. Hammad waved his arm around showing me, "Emily, the terrorists are out. You better get a car quick." 🇳🇬

## **27 June [Arba'aa/Wednesday] FAMILY PORTRAITS, CONSTRUCTION SURVEY AND NEXT STEPS**

Since Hammad needed to go teach at the school this morning, Brian and I met Saied at his shop to take us around to the different houses. The purpose was to both take photographs of the families and inspect the roofing and gutters to make sure all of the work was complete. With the exception of one house whose roof had still not been replaced and another whose gutter had been installed backwards, all of the families had completed construction and were already collecting water from the new gutters and storing it in their new 50 gallon storage containers. Unfortunately, many of the families were not prepared for formal portraits. Saied translated to us that they needed more time to put on their traditional wear. Brian shot the few photographs he could and we planned to save the rest for tomorrow.

Once we had completed the inspection of all the houses, we convinced Saied, who had been nervous about being interviewed, that we would love to hear what he thought about the project. He chuckled at first and pushed me away laughing, "Nah, it's okay. You don't need me. The others have all said everything." I said, "Saied, we would really like your perspective. You have helped us so much throughout this project." He grinned widely, and cackled. He pointed to himself and said, "Me? You want me to say something? Okay. I'm ready." He put on a stern face and provided us with a very informative interview in which he talked about the process and how I had helped facilitate the process. At one point, I laughed when he insisted, "Even though

Emily is a woman, it was amazing what she could accomplish. She walks very fast and gets things done." We spent time briefly interviewing other community members and then Brian left and I met Hammad in Madrasa



family portrait

The rest of the afternoon was spent cleaning up from the presentation the day before and beginning planning for departure. Hammad and I talked extensively about next steps in the project and what he would be able to accomplish while I was away. "This project should not be on hold until I come back next year", I explained. "We need to work together to figure out small, inexpensive projects that the community (led by you and the Water Conservation Committee) will be able to undertake and even substantially complete before I return next year. This component is crucial for funders to see." Hammad nodded his head firmly in agreement and responded, "Yes, I understand. We will do all we can. The community wants to support this project as much as we can."

We talked more about potential projects and I drew a picture of a small plot of land enclosed by low concrete walls filled with topsoil transplanted from the top of the hill with 3 banana trees growing in it. I showed it to Hammad and suggested that this might be a small, inexpensive project that the

community could take on using materials already existing on site. Immediately, he had two concerns: goats and land ownership. "Emily, I wish you could see our animals in action. They are destructive and will climb or use their heads to knock walls down. Here animals are a problem. They are not contained. I think high bamboo fencing will work better." he explained. I agreed that it didn't seem feasible to contain all of the animals right away and that building strong fencing that the goats couldn't penetrate would work much better. Hammad continued, "The other problem is the land. Where will we build this first garden if there is no public space?" I pondered for a minute and then suggested that perhaps he could begin with his own backyard and that others would see it and then want to build their own. Hammad nodded, "Yes, this might really work." We continued the conversation into the late afternoon over tilapia, spicy pepper sauce, and banku (a ball of dough made of maize and cassava) that you would use to scoop up the fish and sauce. Later that evening, I was lucky enough to actually get picked up by our van that happened to pass by just as I was saying goodnight to Hammad. And, before I knew it, the last day in Cape Coast was upon me. 🇳🇬

## **28 June [Khamis/Thursday] A VISIT TO Hammad'S HOUSE, LAST FAMILY PORTRAITS, AND GOODBYE**

It was difficult to believe that today would be my last day in Cape Coast. Luckily, most of my obligations to the community were complete and only a small amount of documentation was left. I began the day though with an invitation to Hammad's house located in a small village outside of Abura. He had wanted me to come earlier in the week but tasks relative to the project

had pushed our visit back until today.

After two group taxis connected me from the guesthouse to Abura, I arrived at Hammad's compound where he had moved after marrying Binta just a few months before. They both welcomed me warmly into their living room flanked with velvety black couches above which hung large colorful photographs from their wedding. At one end of the room was a large refrigerator and at the other a TV with large antennae. I sat down next to Hammad and Binta brought me cream crackers and a box of mango juice that they had clearly bought just for the occasion. We talked for a while about the plans for their home, their wedding ceremony, and Ghana TV channels. I pointed to the refrigerator at one point. "Your refrigerator is twice as big as mine in the United States!" I said smiling. I didn't get the response I was expecting. He replied, "Here in Ghana if you have a refrigerator, it means you are have a lower income. If you have enough money, you don't need to save any food. It is all prepared for you on the same day.". He hadn't taken offense, but was just stating the facts.

It was time for gifts. I gave them some medicine, a pair of sunglasses for Binta and a small voice recorder for Hammad. (He had mentioned to me earlier in the trip how he records all of his speeches at the mosque with his phone but that the device wasn't very reliable.) They thanked me graciously and Hammad was especially in awe of the recorder. "Wow," he exclaimed. "As for this one (the recorder), I will make very good use of this. It will belong not to me, but to the community. We all appreciate it very much and will think of you when we use it."

I really wasn't expecting any gifts in return

as Hammad had already temporarily given up his livelihood for the entire month to help me out with the project. To my utter surprise, they presented me with a beautiful 2-piece African gown made from red, pink, and turquoise patterned fabric with elaborate gold stitching. He explained, "We really wanted to do this for you but wanted it to be a surprise so we couldn't get your measurements or you would know. I tried my best to guess.". I held the dress up and assured them it would fit perfectly. I was so touched and couldn't imagine how Hammad had found the time between all of our work in the Zongo.

After finishing my mango juice between bites of cream crackers, I looked at the time and realized we needed to get back to Hammad's shop to meet Brian for the last interview: Hammad's. I thanked them again for inviting me into their home and we made our way down the muddy streets to the closest junction. We hopped in a cab stripped of all its interior fittings and panels. Only the steering wheel and a large sticker of Jesus seemed to be in tact. "This is the closest I've come to riding in a skeleton," I joked. "Yes", Hammad agreed. "This car needs some serious work."

Since I had really stressed that we needed to be on time for the interview, Hammad and I were early enough to even get Ghana's version of "coffee to go" from a bright red Nescafe vending cart. "I don't like coffee", Hammad complained, "But I was so busy this morning that I forgot to take my breakfast." Sipping on our Nescafe in actual "to go" cups, we waited for Brian to arrive. When we saw him crossing the street to the shop, Hammad looked at his watch and noted that Brian was 2 minutes late. I laughed. This was the first time we had actually operated on US time while in Africa.

Once finishing at the shop, we made our way down to the Zongo where we completed the rest of the family portraits. Hammad expressed his irritation with Saied, "He should have made all of the people go change into their clothing for the portraits yesterday. It's a waste of our time to have to come back here. I should have been here.". In any case, the portraits Brian took were exquisite and expressive of each family member.

The last item on the agenda for Brian was to photograph the "completed view" of the blue roofs from the cliff behind the Zongo we had climbed a few weeks ago. The trash and feces-ridden trail to the top was a treacherous one but at least today I came prepared with treads on my shoes. I peered across the rusted roof landscape of the Zongo and although 10 roofs boasted the new blue roofing sheets, there was clearly a lot of work to be done. Instead of getting discouraged by this view, I became that much more determined and felt a responsibility to continue and expand upon this endeavor.

Hammad and I spent the rest of the afternoon shopping for batiks and other gifts for my supporters. It was wonderful to have Hammad's help and it felt especially good to purchase everything from vendors who actually lived in the Zongo. The last item on the list was to purchase a frame for the elegant photograph Brian had taken of the Chief Zongo. Hammad and the other members of the Water Conservation Committee would present this gift to the chief the weekend after I left.

Finally, we made our way back to the shop. Hammad complained, "I am not myself. That coffee is not good for me. I need to

eat.". We ordered tilapia again but after waiting for over 20 minutes, we realized that perhaps the preparation was beginning with catching the fish instead of cooking it and that we should just go back to his shop and wait until it was done. In the meantime, I met Zeyay outside the shop to talk about his future interests in working with children and teaching them about the environment through workshops, music, and theatre. I thought his ideas were very promising and that this new focus would be very relevant to my work in the Zongo. We would stay in touch over the next year and hopefully collaborate on a few workshops next summer.

Finally, Hammad's tilapia arrived. We sat inside the shop and shared the whole fish ravenously picking at it with our fingers. There were just a couple of bites left and no way I could eat any more. Hammad was full too but said he could finish it because "the last part is the most difficult to eat but also provides the most blessings." He licked the bones clean, leaned back in his chair and said, "Now I know what morning feels like!". He explained that his grandfather had always said these words after finishing a really good meal.

I looked at the time and realized I needed to get back to the guesthouse for dinner. It was much more difficult than I had imagined to say goodbye. We shook hands and Hammad said, "I don't even know what to say to you. You have done so much for us", he said shaking his head with a half smile. "You just go." I thanked him again for everything and assured him that I would be in touch soon as there was still a lot of work to do. "Sai Anjuma".

Saying goodbye to Hammad triggered a

conversation we had had earlier on in the trip with the Chief Zongo. We had talked about a saying the residents had called "one in nine". They had explained that too many people had visited the community at one point or another promising that they would come back to help nine times (represented by the nine) and that they would never return (represented by the one). I was more determined than ever at this point that I would not be another "one in nine" and that I needed to work diligently upon returning to the States and stay in close contact with the community over the course of the upcoming year. 🙏



Hammad and Emily



construction in the Zongo during UVA's 2009 J-term

## about obdl

OBDL is a transdisciplinary design team that researches, creates and supports design strategies to improve the quality of life for communities in need and the natural environmental systems of which they are a part.

We are committed to expanding the role of architecture to include not only the tangible natural + built physical environments, but also the less visible and often intangible contexts that support them. By overlaying these equally important political, cultural, ecological, social and economic contexts, OBDL investigates how to strengthen their existing choreographies and how to sponsor new linkages and opportunity among them.

Working with communities, OBDL invents potential short and long-term improvement strategies capable of responding to changing seasons, needs, and desires of the community. The emphasis is on process over formal product and collaborative exchange between community + OBDL over a singular vision. OBDL believes in empowering communities to be able to sustain themselves and in fostering an inclusive environment that provides opportunity for new ways of thinking, learning, making, and hopefully, changing the world.

If you are interested in this project and would like to become more involved, please visit [www.obdl.org](http://www.obdl.org) and/or email Emily Williamson at [emilywilliamson@gmail.com](mailto:emilywilliamson@gmail.com).

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ruwa zongo