KCCA WASTE MONITORING PROJECT

UNIVERSITY OF CALIFORNIA SANTA BARBARA

Phase III Midline Training Manual

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The KCCA Waste Monitoring Project

Background

The KCCA Waste Monitoring Project is part of a research study called "*Harnessing the Crowd to Improve the Delivery of Public Services.*" The broader goal of the study is to investigate whether citizen monitoring can improve the delivery of public services.

The specific public service the study is using to investigate this is Solid Waste Management. In simple terms, Solid Waste Management is basically collecting and disposing off garbage (rubbish or "kasasiro"). The study area is Kampala.

Since within Kampala, KCCA (Kampala Capital City Authority) is responsible for solid waste management, the project is being carried out in partnership with KCCA. The KCCA is interested in setting up a citizen monitoring program for its solid waste management department.

The project is helping KCCA by investigating the best way to recruit, incent and motivate citizen monitors to provide accurate, timely and helpful information. In this respect, the project has been conducted in different phases.

Phase 1 (Oct – Nov 2015): The major goal of this phase was to answer the question: "what is the best way to recruit citizen monitors?" During this phase, 2 recruitment methods were tested i.e. random recruitment & nomination.

Phase 2 (July – Sept 2016): The goal of this phase was to answer two questions: (1) what is the best way to recruit citizen monitors (2) does responding to citizen monitors have any effect on frequency, consistency and quality of their responses?

Phase 3 (Nov 2016 – May 2017) The goal of this phase is to answer the question "does citizen monitoring have an impact on the quality of public services?" In this phase, we are investigating whether citizen monitoring has any impact on the quality of solid waste management services in Kampala.

Phase 3 has four major activities – some of which have been carried out, and others which will be carried out. These are:

a) The Baseline.
   This was carried out from 15th to 30th November, 2016. During the baseline, subjects were recruited from 100 zones in Kampala. On top of that, up to 4 waste pile locations were identified and audited from 200 zones in Kampala.

b) The Treatment.
   This has been running from January 2017 and will continue up to May 2017. During the treatment, subjects are sent SMS inquiring about different aspects of waste management in their zones.

c) The Midline and Endline

These will be carried out mid-way through the Treatment period and again at the end of the treatment period. During these activities, the waste pile locations recorded in the Baseline will be revisited and waste pile audits carried out.

Phase 3 Midline Survey

In this phase, we will be conducting audits on the waste piles (locations) in the zones that we visited during phase III baseline. Remember, in this phase, the respondents (Residents) were asked about waste pile locations and we took recordings of critical information about them. The idea was that these audits would be essential for evaluating the performance of service providers.

This time, we will be following the descriptive information recorded on the **GeoTracker** location maps like the reference points and recorded paths. These are the maps that you recorded during phase 3 baseline. We shall follow those pathways to locate the waste piles and further conduct audits.

The basic components to guide us in conducting waste pile audits shall include:

a) The name of the waste pile that corresponds to the name of the map of the waste pile location map on GeoTracker
b) The type of the waste pile. You will be required to select the type which accurately describes the solid waste pile
c) The dimensions. You will be required to estimate the length and width in metres
d) A photo. You will be required to take a photograph of the solid waste pile. This photo should show as much of the solid waste pile as possible.
e) GPS. You will be required to capture the GPS location of the waste pile.

The Task & Targets

During the Midline survey phase, the target is for each enumerator to: **1. Visit 2 (two) zones in a day, 2. Identify all the waste pile locations in those zones, 3. Conduct waste pile audits**. Here is a summary of the targets:

No.	Activity	Target
1.	Visiting zones	Two (2) zones in a day
2.	Identifying the Waste Piles that we have in our records	About four (4) in each zone
3.	Conduct Waste Pile Audits	About 4 in each zone

During field work, you (enumerator) will be sent **alone** to conduct Wastes Piles audits in two zones. The Waste Piles may range from Two to Four (2 to 4) in each zone.

Field Work

What is key in tracing the waste pile location is the **Starting Point** in the "**General Description section" of the Waste Pile Location Tracker.**

So, what happens when you arrive in a zone? Well, you go to work. Here's a basic breakdown of the different tasks which you will accomplish in the field.

- **Locating A Solid Waste Pile**

Our target is to find those problematic solid waste locations (or site) in each of zones that we visited during Phase 3 Baseline.

Before setting off to the field, each enumerator shall be provided with forms that have descriptions with detailed information on the directions to the waste pile. This is the information you will use in locating the Waste Pile.

This information will guide you in making your own waste pile location description. The information contains general guidelines that help in identifying and locating waste piles.

Description

In the description form (section), you will have the summary of the directions to the waste pile. This is the information you will also enter in the "General Description" section of the Waste Pile Location Tracker.

Phase 3 Midline Protocol

Our goal is to find each of the waste pile locations recorded during the Phase 3 baseline and perform the **waste pile audit** on it. Each workday, you will be assigned two zones each of which will contain a maximum of 4 waste pile locations.

Your task will be to find each of the waste pile locations in the zone and perform the waste pile audit. To guide you in finding the location, you will be supplied with two things:

i) The Waste Pile Location Tracker – a document which details the steps of how to reach the waste pile location
ii) A GeoTracker map recording of the path to the location

Finding the Waste Pile Location

The following are the steps which you will use to find the waste pile location. This assumes that you have reached the zone, introduced yourself to the local authorities and obtained the relevant permissions to work in the zone.

Step 1: Travel to the Starting Point

Each waste pile location description has a Starting Point. This is basically the point at which the walk to the solid waste pile begins.

Your first task is to find this Starting Point. You will be given the sheet which contains directions to the waste pile (i.e. *The Waste Pile Location Tracker*). This sheet will contain the Starting Point. Use the directions in the sheet to find this point.

Please note that you don't have to find the exact Starting Point. You simply need to get within the vicinity. Geo Tracker will help you to find the exact location.

Step 2: Start Geo Tracker

Start the Geo Tracker app on your tablet.

Step 3: Load The Map

The tablet you're given will contain a map to the waste pile location. So, once you turn on Geo Tracker, you need to load the map. You do this in three steps.

1. Understand how the maps are named

For this project, we shall be naming the maps according to the location of the waste pile, using the following format:

Zone-Parish-Division-Section

For example, if you are following location information:

Village: **Aggrey**

Parish: **Ndeeba**

Division: **Rubaga**

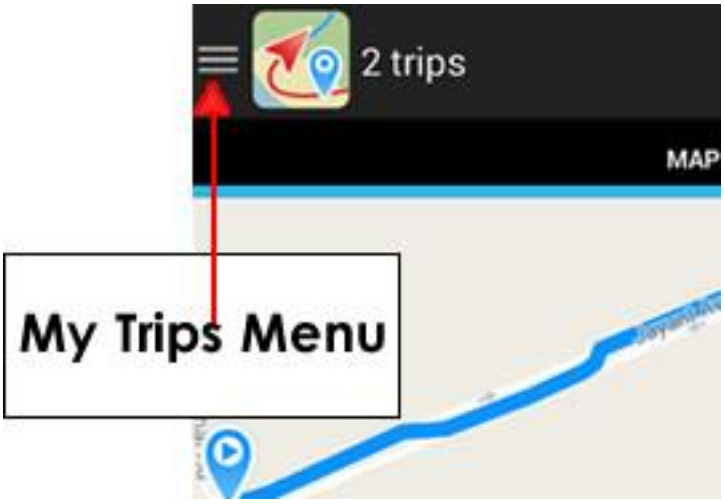
Section: **D**

The name of the map will be **Agrrey-Ndeeba-Rubaga-D**.

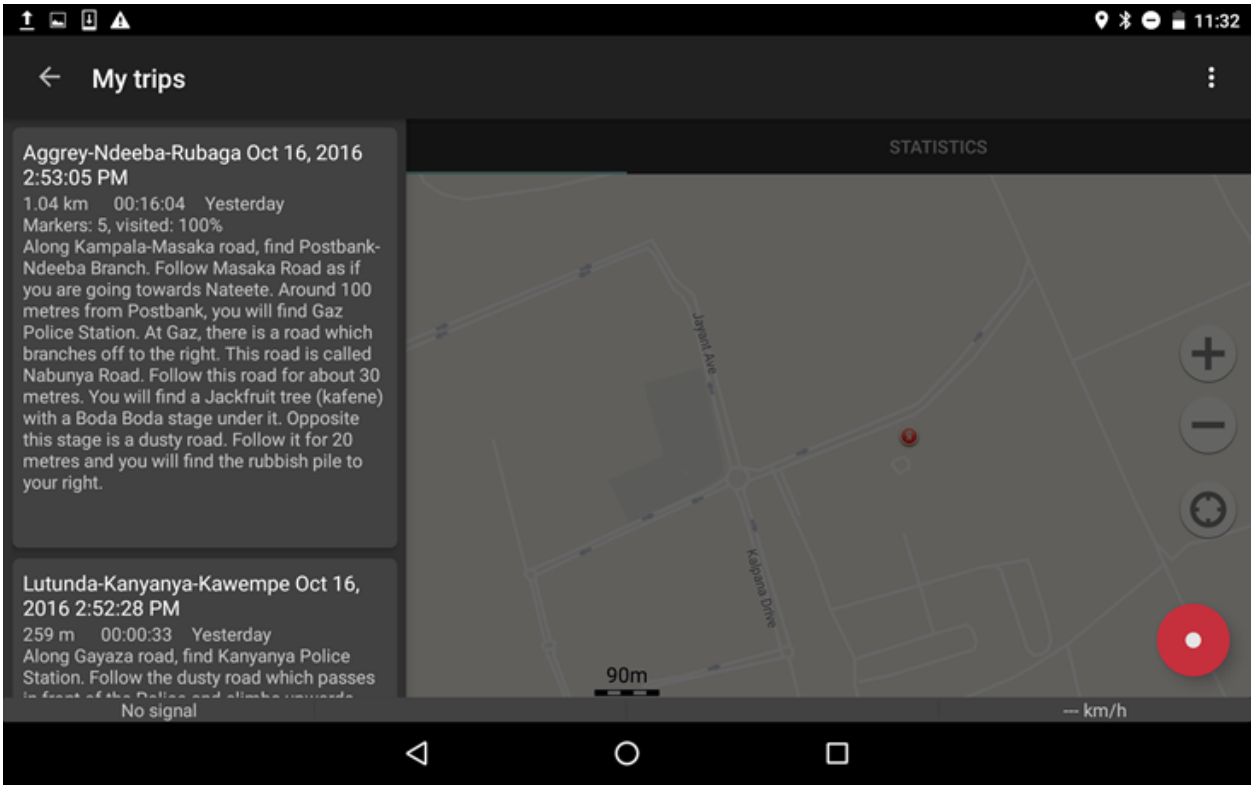
2. Select the trip associated with the map

Geo Tracker stores maps as "trips". The trip is stored under My Trips. Therefore to select a trip, you have to take two steps:

First of all, use the My Trips Menu to display the saved trips. The My Trips Menu are those three lines on the top-left hand corner of the Geo Tracker interface – immediately to the left of the app's logo.

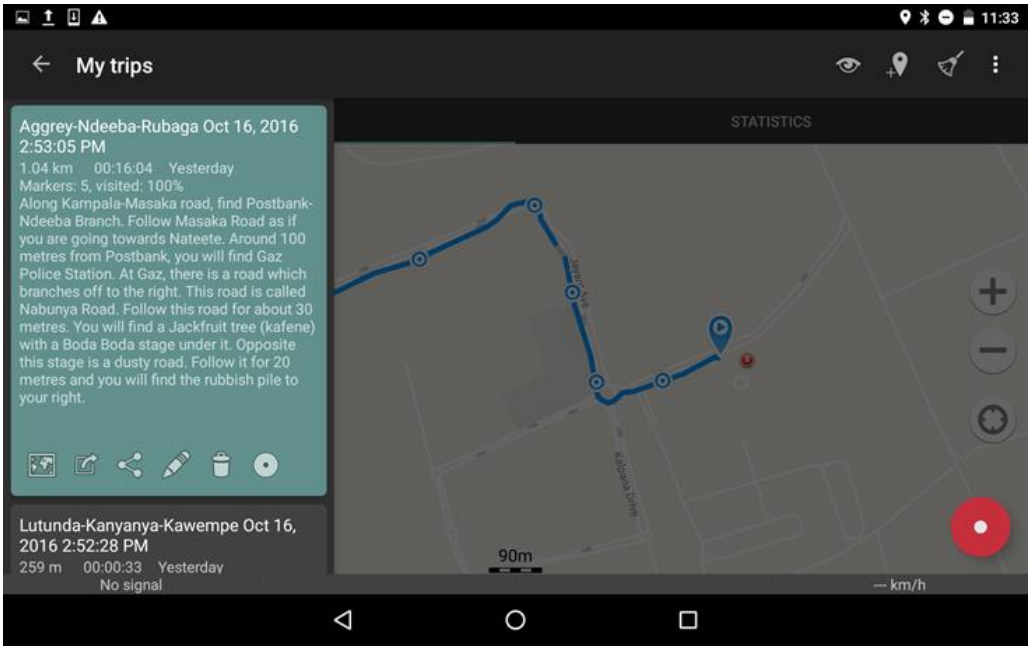


To display the saved trips, simply click on the My Trips menu. This will reveal a submenu whose items are the currently recorded trips. The submenu looks something like this:



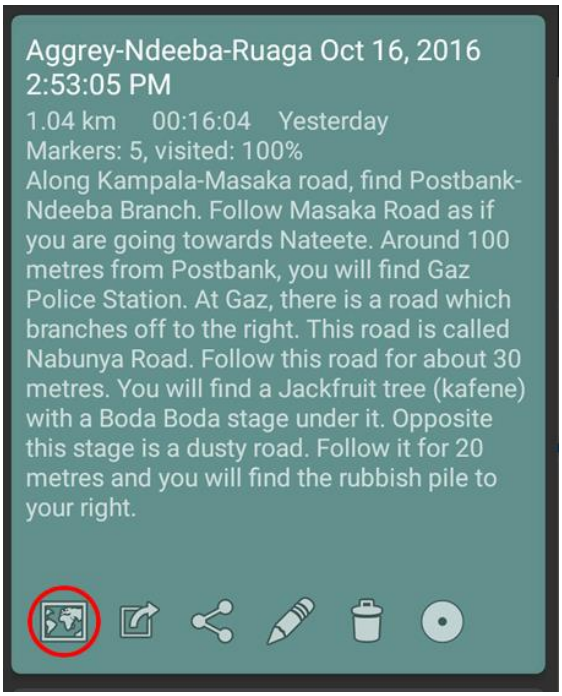
Second, select the trip you want. Simply tap the box which contains the name, date and description of the trip. If the trip isn't visible, you can scroll up and down the list of trips by swiping upwards or downwards.

For instance, if you select **Aggrey-Ndeeba-Rubaga** from the above list, it will become highlighted as follows:

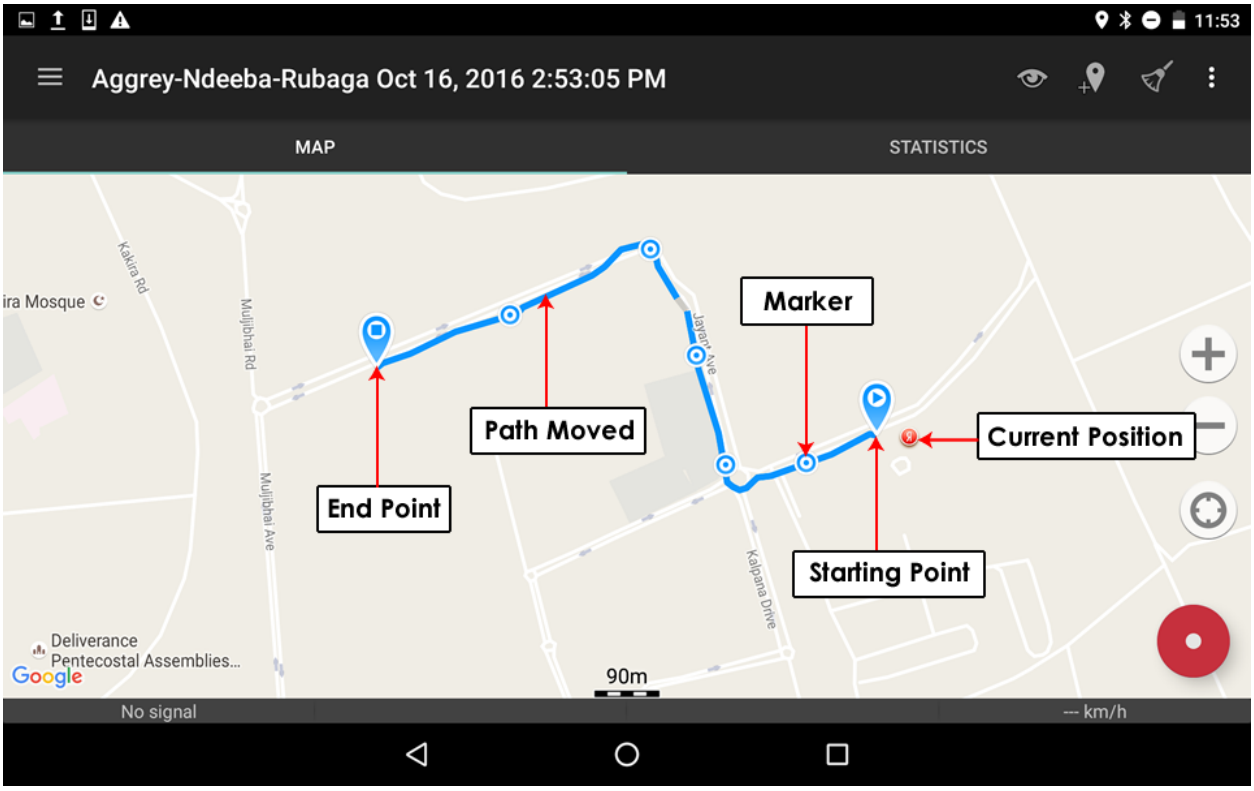


3. Display the Map

Once you've selected the trip, you can now display its map. You do this by using the Show Map icon which is on the bottom-left of the trip's information box. Here's the Show Map icon, encircled in red:



This will cause the My Trips menu to disappear, revealing the map. The map will look something like this:



Here are is a brief explanation of the different things you see on the map:

Starting Point

The starting point of the map is indicated by the following icon.

This basically shows the point at which the person started recording their movement. To retrace their steps on the map, this is where you need to start from.

End Point

The end point of the map is indicated by the following icon.

This basically shows the point at which the person stopped recording their movement. In the context of our research, the End Point will indicate the actual location of the solid waste pile.

Path Moved

The light-blue line which connects the Start and End Points shows the path moved. When locating the solid waste pile, you will move along this line.

Marker

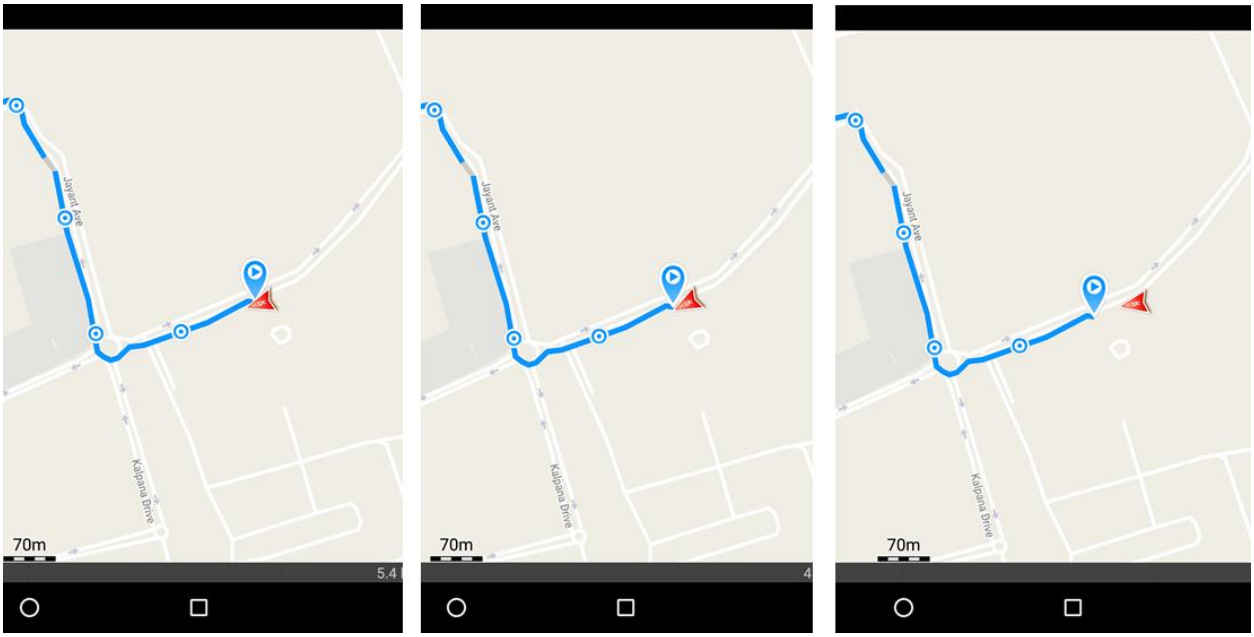
This indicates different points on a map. These points are either Action Points or Reference Points. When you tap on any marker, you see a description. These markers will be your guide posts as you locate the solid waste pile.

Current Position

This indicates your current position. As you begin moving, this will turn into an arrow-head.

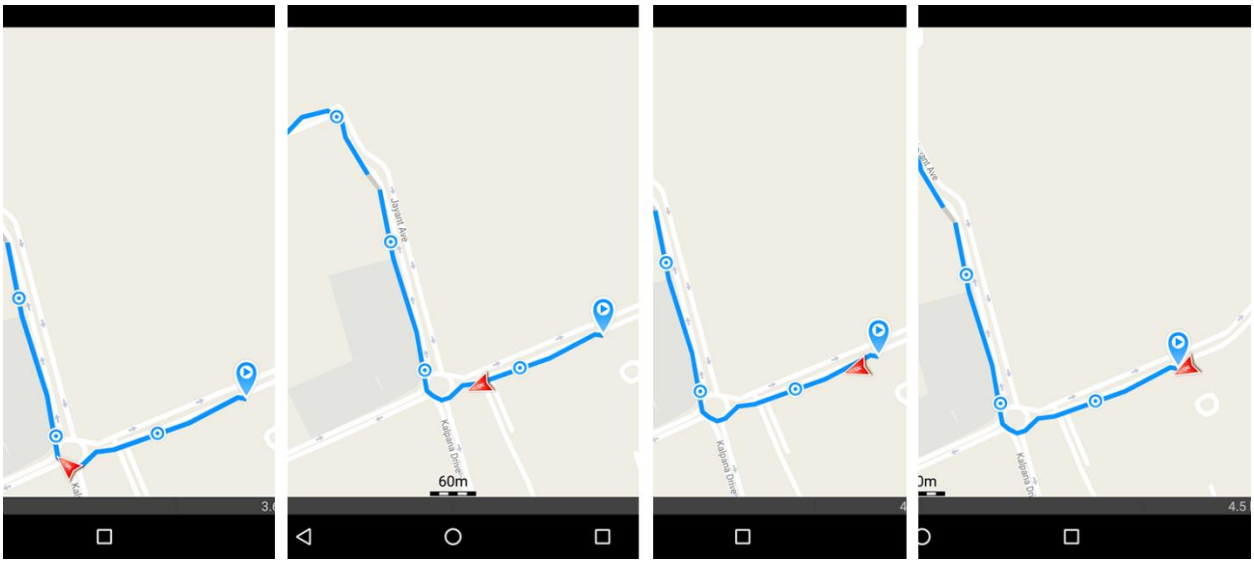
Step 4: Move To The Starting Point

Your first task is to move to the Starting Point on the map. Use your Current Position to help you find the Starting Point. As you move, your Current Position will be shifting. Follow this until you reach the Starting Point.



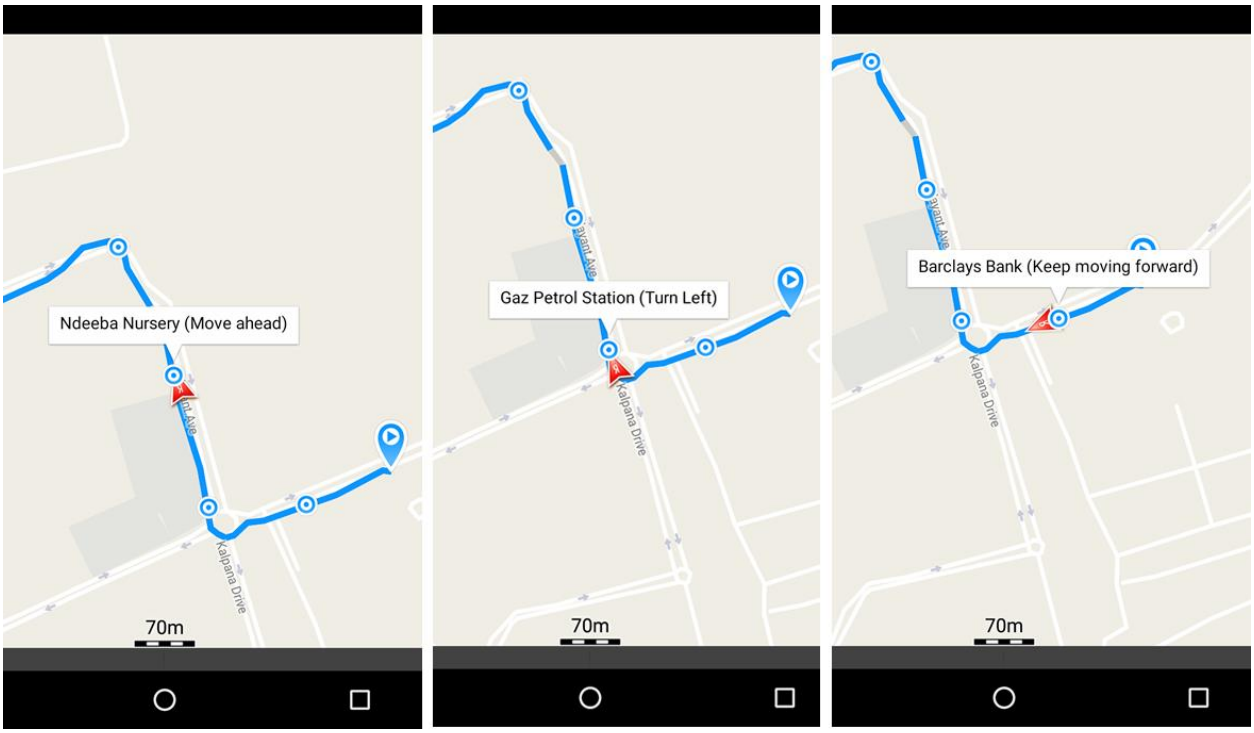
Step 5: Begin Following the Path Moved

Once you reach the Starting Point, begin following the Path Moved. Simply follow the blue line – with your Current Position acting as your guide.



Step 6: View Every Marker You Encounter

As you follow the Path Moved, you will keep encountering markers. Each time you reach a marker, tap on it to view its info. This will bring a dialog-box with information about the marker. Here are examples of markers viewed.

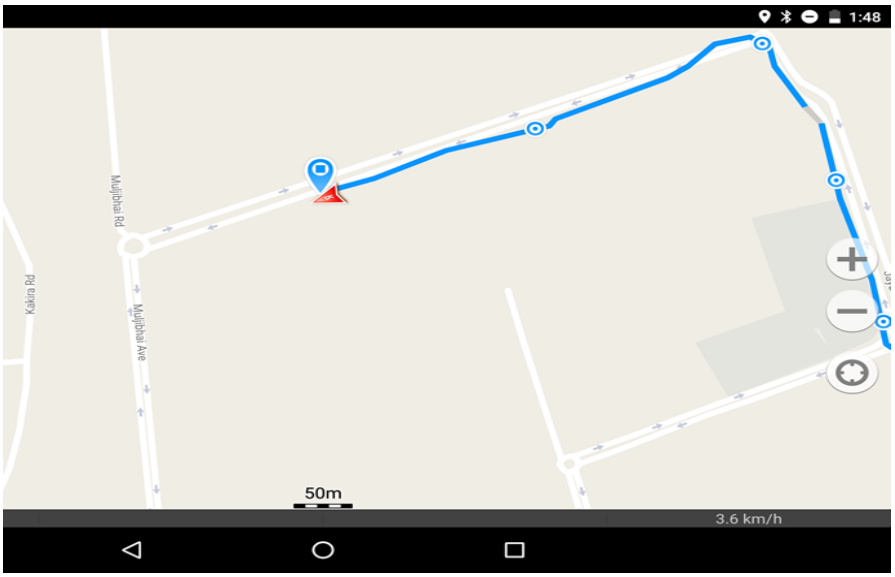


These markers are important guideposts for figuring out where you are, and what action to take. Follow the instructions on each marker. If the marker says "Turn left", then please do that.

Once you pass a marker, you can remove its dialog box by tapping anywhere on the map.

Step 7: Keep Going Until You Reach the End Point

Keep following the Path Moved until you reach the End Point. Once you reach the End Point, you will see the solid waste pile which you were looking for. You can now proceed to take any measurements or pictures (depending on the protocol).



When You Don't Find A Waste Pile

There could be a situation where you reach a waste pile location and find that there's no waste pile in the location. When this occurs, there are two possible scenarios.

i) You made a mistake in following the map and failed to find the waste pile
ii) The waste pile has been cleared or removed

So, in case you find no waste pile, the first step is to verify that you followed the map correctly. Make sure that you aren't in another location.

If you verify that you are indeed in the right location, then you need to investigate why the waste pile is no longer there. Ask **4 residents living** within the vicinity of the waste pile location. Ask the reason why the waste pile is no longer there. Once you find out the reason, proceed to conduct the waste pile audit.

Conducting the Waste Pile Audit

Once you reach the waste pile location, open KoboCollect, select **KCCA_Phase3_Midline_WastePileAudit** and perform the waste pile audit. Here is what the waste pile audit survey looks like:

KCCA Waste Monitoring Project

Phase III Midline - Waste Pile Audit

Name of Staff Member_____

Name of Zone_____

Name of Division (Select)

A. Central
B. Kawempe
C. Makindye
D. Nakawa
E. Rubaga

1. Name of Waste Pile

(Enter exactly as recorded in GeoTracker)

_____

2. Is there a waste pile in the location?

A. Yes ***(Proceed to Q3)***
B. No ***(Skip to Q11)***

3. Type of Disposal Site

A. Household sack or bin for collection

B. Pile within household for burning
C. Pit within household for burying
D. Small pile outside household
E. Pit latrine
F. Unofficial dumping site (used by many households)
G. Official dumping site or container
H. Littering in public place
I. Other ***(Proceed to Q4)***

4. Name or describe type of disposal site

_____

5. Which of the following best describes the waste pile?

A. more than 10 pieces of non-organic waste
B. less than 10 pieces of non-organic waste
C. large sack(s) or container(s) of rubbish that can easily be transported.

Examples of non-organic waste include plastic and metal items like plastic bags, water bottles, soda cans, candy wrappers and milk bags. Banana peels, leaves, grass clippings are examples of organic waste, which are not considered trash for our purposes.

6. How much of the rubbish is stored in large sacks or containers which can be easily transported?

A. all the rubbish is neatly contained within sacks or other containers
B. most of the rubbish is organized in sacks or other containers
C. very little rubbish is contained within sacks or containers
D. no rubbish is contained in sacks or containers

Organized trash piles typically contain evidence of sweeping around the edges of the trash pile.

7. How well organized is the rubbish pile?

A. All of the rubbish is collected into a single pile
B. Most of the rubbish is organized around a single pile but other rubbish is spread nearby
C. rubbish is spread all around with no evidence of the rubbish being organized.

8. How much evidence is there of rubbish burning?

A. more than half of the area of the rubbish pile contains evidence of burning
B. less than half of the area of the rubbish pile contains evidence of burning
C. no evidence of burning.

Evidence of burning might include ash, partially burnt and/or charred trash.

9. Is the waste pile near a canal or water body?

A. Yes
B. No

10. Measurement of site (L x W)

_____

11. Why is there no waste pile in the location? *(Inquire from residents who live near the site of the waste pile location)*

A. It was cleaned up/removed by KCCA or a private contractor
B. It was cleaned up/removed by an NGO or CBO
C. It was cleaned up/removed during a community clean-up event
D. It was cleaned up/removed by a private citizen within the community
E. Other ***(Proceed to Q12)***

12. What is the other reason why there is no waste pile in the location?

_____

13. Picture of Disposal Site

[TAKE PICTURE FROM TABLET]

14. GPS Location of Disposal Site

[RECORD FROM TABLET]

15. Extra Notes

_____