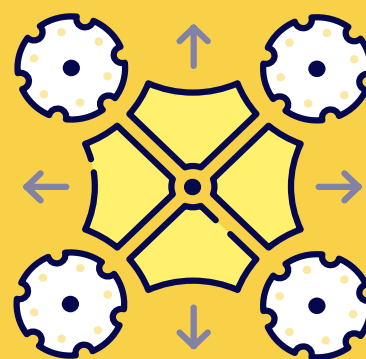




**Creating a
Plan for Growth**

Step 2A

Preliminary mapping

STEP 1

Writing a Charter for Growth



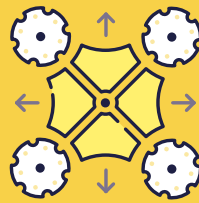
1A Making the case for the 'Rapid Plan'

1B The Charter workshop

1C Consulting the public on the Charter

STEP 2

Creating a Plan for Growth



2A Preliminary mapping

2B Creating a Rapid Growth Plan

2C Structuring the growth areas

STEP 3

Implementing the Plan



3A Identifying landowners & occupants

3B Finalising the plan

3C Demarcating the plan on the ground

STEP 4

Building the Neighbourhoods



4A Preparing for the workshops

4B Neighbourhood workshop

4C Concept designs workshop

STEP 2

Creating a Plan for Growth



Through a series of workshops involving mapping exercises, Step 2 will help you to create a Rapid Growth Plan, identifying where growth can take place and guiding future development to meet the requirements set out in Charter.

At the end of Step 2 you will have a **Rapid Growth Plan** that identifies potential growth areas around your city, and a **Key Fixes Plan** to develop one growth area in Step 3

2A Preliminary Mapping

- Create a coordinated series of maps that will provide a detailed picture of your city's assets and constraints.

2B WORKSHOP Creating a Rapid Growth Plan

- Map constraints with the support of key city stakeholders,
- Identify potential areas for expansion of your city, ensuring enough land is allocated to meet the projected population growth.

2C WORKSHOP Structuring the growth areas

- Focus on one growth area surrounding a local centre, and bring together key local stakeholders,
- Undertake a site visit and briefing with workshop participants to understand local constraints and issues,
- Structure the growth area into neighbourhoods centred around a local centre.

Step 2A

Preliminary mapping

Introduction & Aims

Understanding the context of your city is critical to inform the suitability of any new development. Step 2A will involve an in-depth study of the way your city works which will help in ensuring that any new settlements implemented as a result of the Toolkit process strengthen existing communities, protect local assets and create distinctive places which reinforce the local identity.

In Step 2A, you will begin to identify and map these contextual elements of your city in preparation for

creating a Rapid Growth Plan in Step 2B. Step 2A guides you through the process of obtaining and preparing the maps that you will use in the workshop.

Step 2A involves 2 activities and a total of 5 tasks. Completing Step 2A will prepare you for the drawing activities in the Step 2B Rapid Growth Plan workshop.

Workbook Contents

Activity i

05... Activity i: Obtain a base map

06... Task 1: Obtain a base map

Activity ii

09... Activity ii: Map city features

10... Task 1: Map natural features

12... Task 2: Map transport networks and community assets

16... Task 3: Map main utilities

18... Task 4: Map key administrative boundaries, land ownership and land use



Review

20... Review of Outputs

20... Looking Forward

Step 2 - Creating a Plan for Growth

2A Preliminary mapping

i Obtain a base map

ii Map city features

2B Creating a Rapid Growth Plan

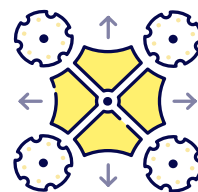
i Prepare for the planning workshop

ii Hold the planning workshop

2C Structuring the growth areas

i Prepare for the design workshop

ii Hold the design workshop



On completing Step 2, you will have created a plan for growth.

2A Preliminary mapping

i Obtain a base map

1 - 2 Days Core Team Activity

- Task 1: Obtain a base map

ii Map city features

1 Day Core Team Activity

- Task 1: Map natural features
- Task 2: Map transport networks and community assets
- Task 3: Map main utilities
- Task 4: Map key administrative boundaries, land ownership and land use

2B Creating a Rapid Growth Plan

Step 2A

Activity i

Activity i

Obtain a base map

The first task is to obtain and prepare a map in order to start the mapping exercise in Activity ii.

This activity will help you to:

- Understand where you can locate a map of your city,
- Print or prepare a map of your city at an appropriate scale.

Activity i involves 1 task:

1. Obtain a base map.

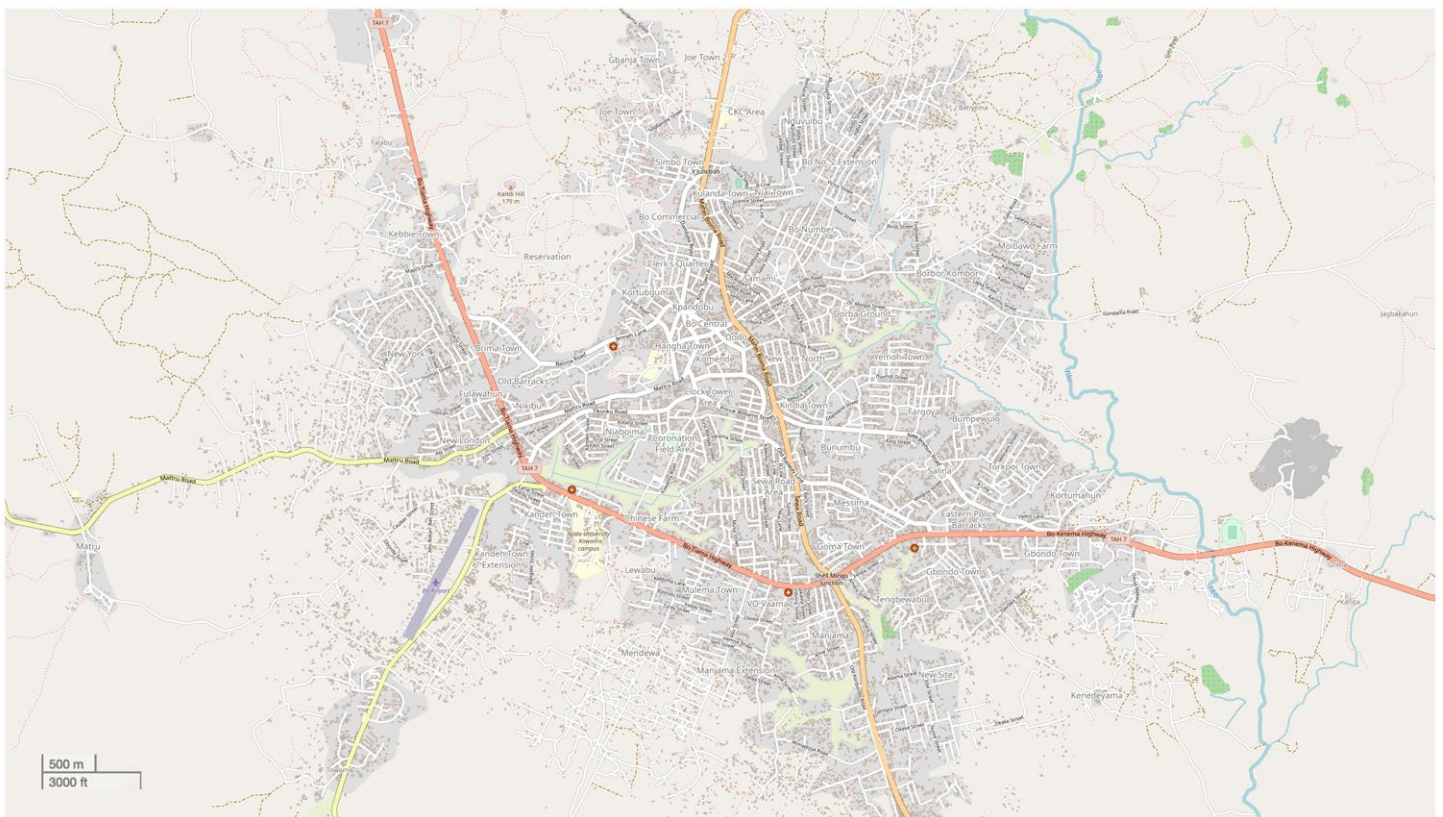
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Step 2A - Activity i - **Task 1**

Obtain a base map

To begin with, you will need to obtain a scaled map of your city - this will be your base map. Later on, you will use this to map important 'layers' such as movement networks, community assets, and natural or geographic features. You will also use this map to locate potential growth areas for your city.



Where to find a map

If you are not able to obtain a map through your local authority or Mayor's office, you may be able to obtain one on the internet. See [Key Concepts Section 1: The Basics of Mapping, Part 3: Where and how to obtain information.](#)

Maps can be downloaded from [Open Street Map](#) ([openstreetmap.org](#)) or aerial maps such as Google Maps / Google Earth, as well as other freely available sources. If using Google maps or similar, you may need to use Satellite View in order to be able to identify sufficient details.

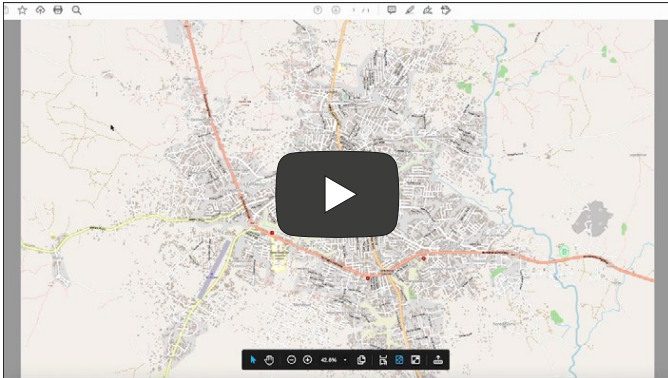
Preparing the map

In order to show the entire city at an appropriate scale to conduct the mapping exercises in Step 2B, your map may need to be printed in a large page format, such as A1 or A0.

If you do not have the resources to print in a large format, you can either;

- Print the map across multiple pages and tape together,
- Project an image of the map onto a flat surface or blank wall, using a projector.

Watch this video for further guidance.



Video link: vimeo.com/728911900/e135079799

Task

1. Obtain a map of your city that you can use as a base to complete the mapping tasks in Step 2.

Your map needs to fulfil the following requirements:

- Show the main or central urban area, the urban extents and the immediate surroundings of your city,
- Include a scale reference or scale bar,
- As far as possible, show an up-to-date reflection of your city,
- Show roads, rivers and waterways, major land features such as mountains, steep terrain and areas of greenery.

If your city is very large, it may be easier to focus on a district or area.

More information on understanding scale, reading maps and obtaining map information can be found in Key Concepts Section 1: The Basics of Mapping.

Step 2 - Creating a Plan for Growth

2A Preliminary mapping

i Obtain a base map

ii Map city features

2B Creating a Rapid Growth Plan

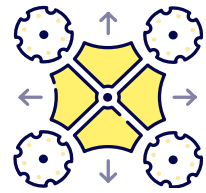
i Prepare for the planning workshop

ii Hold the planning workshop

2C Structuring the growth areas

i Prepare for the design workshop

ii Hold the design workshop



On completing Step 2, you will have created a plan for growth.

2A Preliminary mapping

i Obtain a base map

ii Map city features

1 Day Core Team Activity

- Task 1: Map natural features
- Task 2: Map transport networks and community assets
- Task 3: Map main utilities
- Task 4: Map key administrative boundaries, land ownership and land use

2B Creating a Rapid Growth Plan

Step 2A

Activity ii

Activity ii

Map city features

Having obtained a base map, you can begin the next activity; mapping layers of information to understand important elements of your city.

In this activity, you will prepare a number of maps on tracing paper, or thin overlay paper, placed on top of your printed or projected map. These will be resources for the Rapid Growth Plan Workshop in Step 2B when you will also prepare a number of constraints maps.

You may need to do some research to obtain the information required to produce these maps, and you may wish to complete this activity with a small team who can help you to find and verify this information.

Some of the information may be known to you or other local people, or may be found with your local authority or council. You can also use aerial maps to identify features, and verify these with a site visit. The workshop in Step 2B will provide an opportunity to check and corroborate the maps you have produced, and add any missing information that you are not able to find.

Completing this activity will help you to:

- Understand different layers and aspects of your city,
- Understand how to read and draw maps and distinguish multiple layers on information.

Activity ii will involve four tasks:

1. Map natural features,
2. Map transport networks and community assets,
3. Map main utilities,
4. Map key administrative boundaries, land ownership and use zones land use.

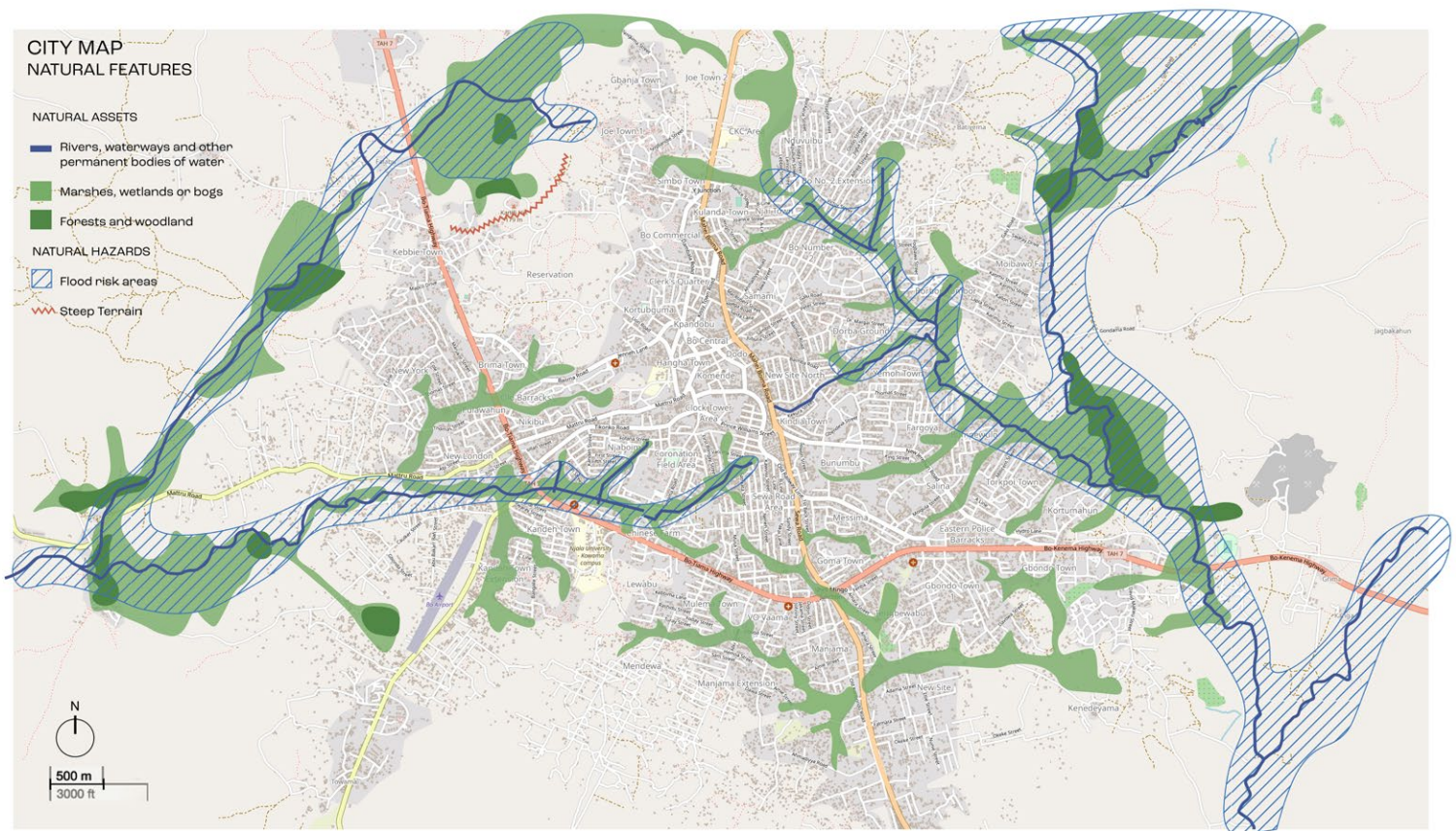
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Step 2A - Activity ii - Task 1

Map natural features

Natural features are important to consider when establishing potential growth areas. You will also map natural hazards, such as areas prone to flooding or landslides, which should not be developed, as well as the ecological or environmental assets that should be protected.



Areas that are prone to natural hazards, such as flooding, coastal erosion, or ground movement are unsafe and could put the lives of people and properties at risk. You should avoid building on natural assets, such as wetlands, forests and natural habitats and ecosystems as these features contribute significantly to the character and quality of the urban environment and their loss will increase the vulnerability to natural hazards and the impact of climate change.

By mapping the natural assets of your city, you can make the most of natural resources, whilst pro-actively mitigating the impact of human settlement on forests and nature reserves.

Your city council or national institutes may already have produced mapping of natural features that you can utilise. If no data is available, then local people and city officials can often pinpoint areas that are prone to disaster or natural assets.

It is important to verify these maps with your stakeholders, in particular to gain consensus around the frequency and severity of natural disasters, climate events and the impact of the environment on their lives. You will be able to do this during the planning workshop in Step 2B.

Creating a Plan for Growth

2A: Preliminary Mapping

Task

1. Prepare to map the natural features of your city.

For this, and the next 3 tasks, you will need:

- Tracing paper or thin overlay paper,
- Masking tape,
- Pens of different colours and thicknesses,
- The base map of your city.

On the base map that you have prepared in Activity i, overlay a thin sheet of paper or tracing paper onto which you will draw the natural features. Secure the paper using masking tape.

2. Draw the natural features of your city, which may include:

Natural assets:

- Rivers, waterways and other permanent bodies of water
- Marshes, wetlands or swamps,
- Forests and woodland,
- Natural environments or habitats for preservation,
- Other natural features or assets.

Natural hazards:

- Flood risk areas,
- Areas at risk of erosion,
- Very steep or mountainous terrain,
- Other natural hazards or constraints.

These features may be identified using Google Maps or other maps and aerials, and local knowledge.

Use a selection of colours, line types and hatches to identify different types of features, and remember to make a key to identify each of these. You can refer to the [Mapping Checklist](#) for guidance.

Watch the how-to video which will guide you on how to produce the maps for this activity.



Video link: vimeo.com/728913058/ca9e5974ea

More information on basic concepts of reading, understanding and drawing maps can be found in [Key Concepts Section 1: The Basics of Mapping](#).

3. Once you have completed each map in this activity, **take a photograph to keep a record of your outputs.**

Reflection questions

- What are the common problems your city faces in dealing with changes in climate and natural elements, and are these becoming more or less frequent?
- What natural environments or spaces do the residents of your city value and use the most?

Templates & Supporting Materials

[Mapping Checklist \(PDF, 500KB\)](#)

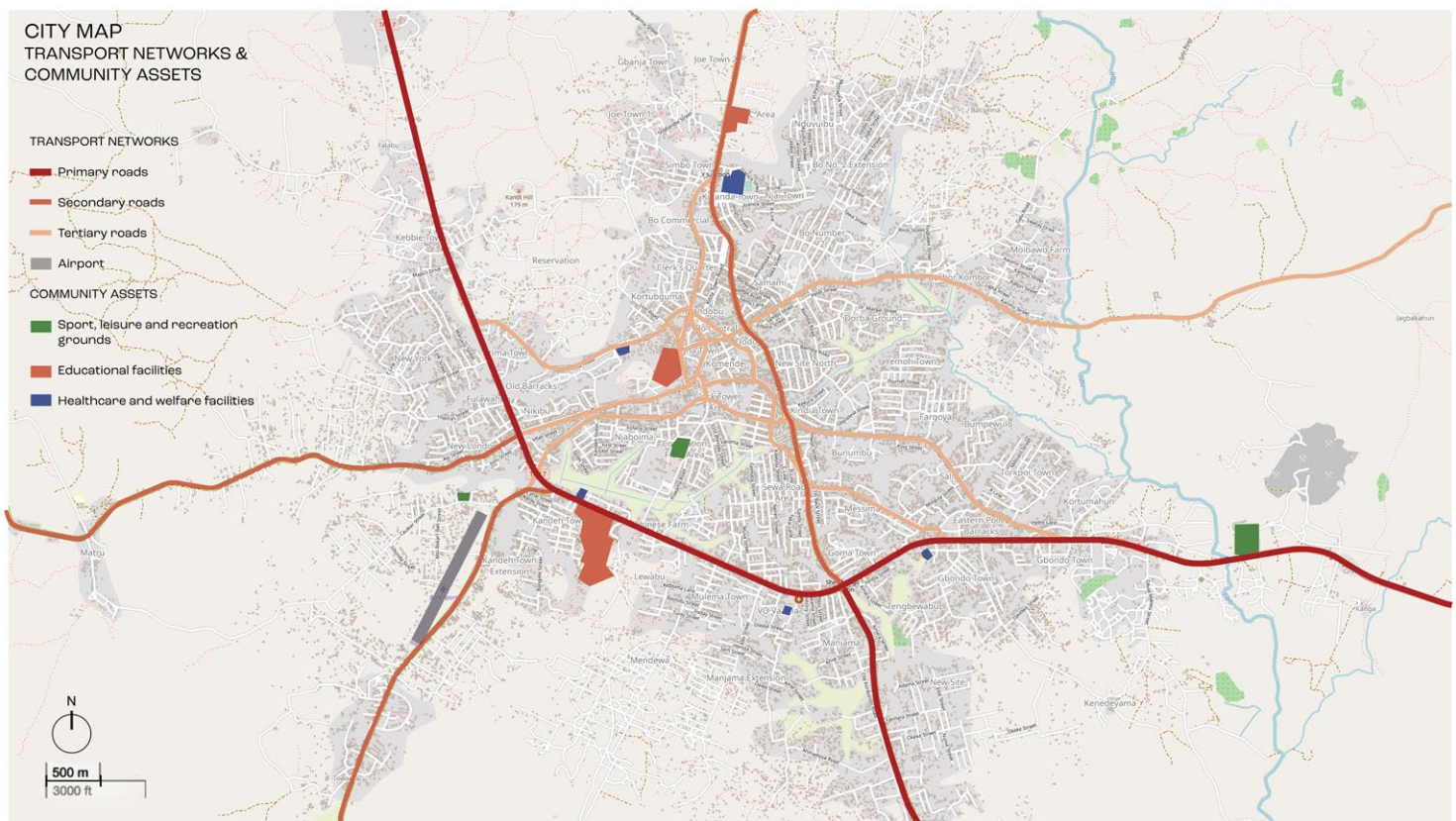
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Step 2A - Activity ii - Task 2

Map transport networks and community assets

The next mapping task will look at the transport networks and community assets; these are important resources for the existing and future population of the city.



As the city grows, it will need to develop its movement and transport networks, so that it can support additional capacity of a larger population. Considering how residents of new neighbourhoods will get around the city is important to avoid areas becoming gridlocked with traffic. A well-connected city that links new development into existing patterns of movement will reduce pressure on infrastructure and reduce costs to citizens and service providers

Community assets are public services and amenities that support the population of the city, providing places for health, wellbeing, education leisure and

socialising amongst other needs. They help to create a sense of identity for local communities and enhance the experience of citizens, particularly when planned and distributed in a way that helps the city to function.

Task

1. Prepare to map the main transport networks and community assets of your city. Use the same sheet of paper in which you drew the natural features, or if this page is already very full, set up a new layer of paper as done in task 1.

2. Draw the transport and movement network of your city, which may include:

Road Network:

- Primary roads or routes for vehicle movement,
- Secondary roads or routes for vehicle movement,
- Other routes and connections that are used in your city or information such as heavy congestion or restrictions.

Transport Network:

- Bus or tram routes and stops,
- Boat or ferry routes and stops,
- Railway lines and train stations,
- Airports,
- Other existing transport infrastructure in your city.

3. Draw the community assets in your city, which may include:

Road Network:

- Major urban parks and greenspaces,
- Sport, leisure and recreation grounds,
- Major plazas and market squares,
- Other significant public spaces in your city.

Public services:

- Major educational facilities including schools, universities and libraries,
- Major healthcare and welfare facilities including hospitals and medical clinics,
- Major religious buildings and sites that include places of worship,
- Community or cultural buildings that could include important heritage buildings, the town hall or places of community gathering,
- Other types of services in your community.

These features may be identified using Google Maps or other maps and aerials, and local knowledge.

4. Create an inventory of all significant road infrastructure and community assets, in a separate document. You can use the [inventory Template](#) provided.

For transport networks this could include the name, length and condition of the transport networks but also critical features such as number and length of bridges or any restrictions that apply to their use.

For community assets this could include the name, capacity or size of population it serves (for example for a school or hospital) and particular special features.

5. Once you have completed each map in this activity, **take a photograph to keep a record of your outputs.**

Reflection questions

- What are the main forms of transportation that people in your city use to get around?
- Is it easy to access community facilities without the need for a private vehicle?
- Are there any areas of your city that don't have many community facilities nearby?

Templates & Supporting Materials

[Mapping Checklist \(PDF, 500KB\)](#)

[Inventory Template \(Excel, 50KB\)](#)



Download this template

Visit www.rapidplanningtoolkit.org/resources

Mapping Checklist

You can download this list to check that you have mapped all the relevant features of your city. Not all of these features will be relevant, and you may need to add some additional items of your own. You can use this checklist as a key for your maps by marking in the space provided on each line, the line type, colour or hatch used to identify each feature on your map.

Natural Assets & Features

- Rivers, waterways and other permanent bodies of water
- Marshes, wetlands or bogs
- Forests and woodland
- Natural environments or habitats for preservation
-
-
-

Natural Hazards

- Flood risk areas
- Areas at risk of erosion
- Very steep or mountainous terrain
-
-
-

Road Network

- Primary roads or routes
- Secondary roads or routes
- Tertiary roads, tracks or access routes
-
-
-

Transport Network

- Bus or tram routes and stops
- Boat or ferry routes and stops
- Railway lines and train stations
- Airports
-
-
-

Public Spaces

- Urban parks and greenspaces
- Sport, leisure and recreation grounds
- Plazas, market squares etc.
-
-
-

Public services

- Educational facilities
- Healthcare and welfare facilities
- Religious buildings and sites
- Community or cultural buildings
- Emergency services
-
-

Utility Access

- Areas with access to electricity and power
- Areas of street lighting
- Water collection or access
- Areas with access to sewer systems
- Rubbish and recycling collection points
- Areas with access to radio signal
- Areas with access to internet
-
-
-

Utility Infrastructure

- Electrical sub-stations and generators
- Water collection and storage
- Waste water treatment infrastructure
- Incinerators, landfill or recycling centres
- Communications infrastructure
-
-

Administrative Boundaries

- Your city boundary
- District boundaries or neighbourhoods
- Designated parks and natural spaces
- Economic development zones
-
-

Land Ownership

- Public or state owned land
- Areas of private land
- Areas of informal development
- Communal land
-
-

Land Use

- Shops, retail and commercial
- Offices, business & light industry
- Heavy industry & manufacturing
- Farming and agriculture
-
-
-



Download this template

Visit www.rapidplanningtoolkit.org/resources

Inventory Template

Download this template to help you create an inventory of your city's transport infrastructure, community assets, utilities and land ownership.

TRANSPORT INFRASTRUCTURE INVENTORY

City:	
Date:	

Type	Name	Capacity	Condition	Notes

COMMUNITY ASSETS INVENTORY

City:	
Date:	

Type	Name	Capacity	Condition	Notes

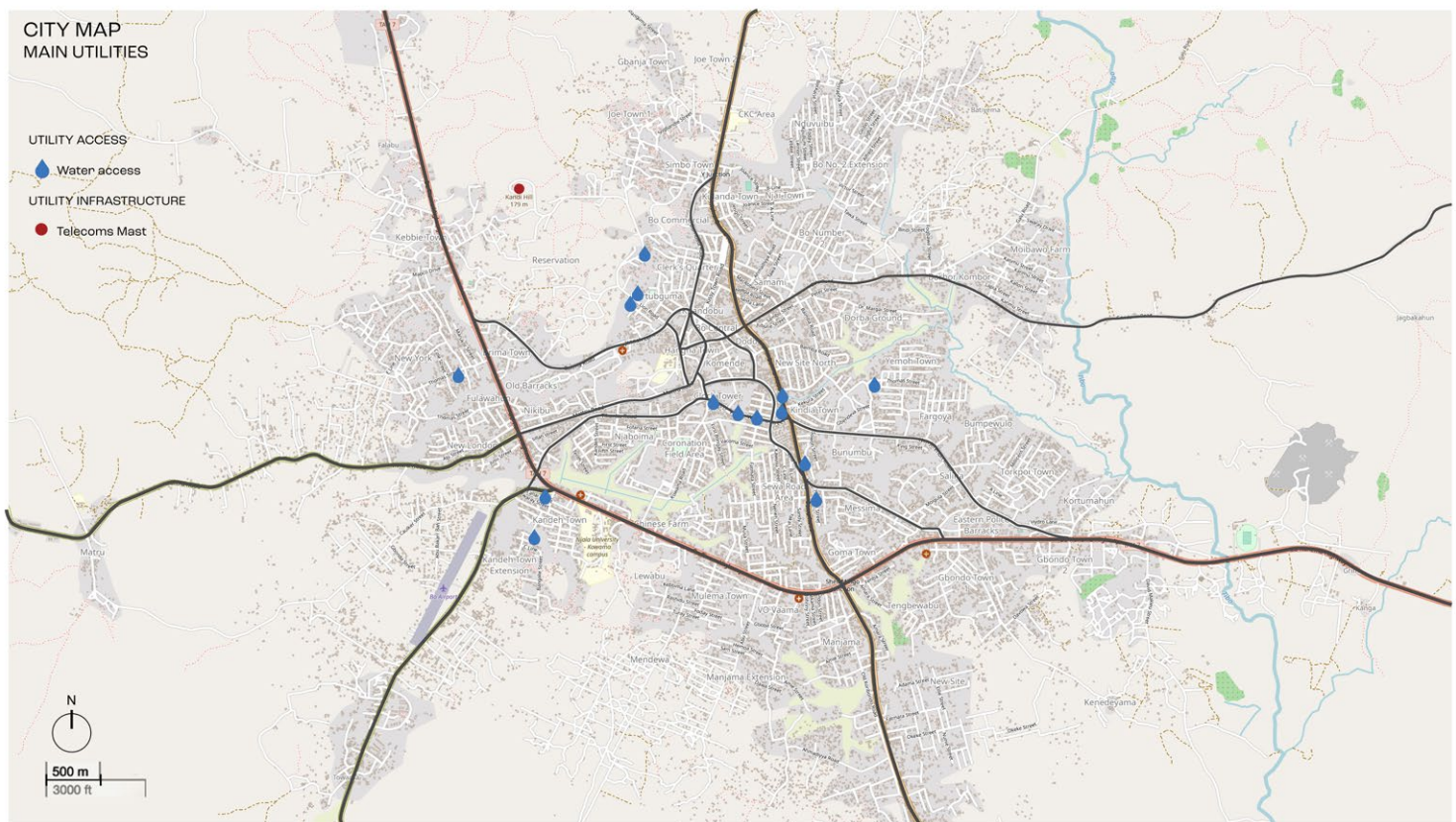
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Step 2A - Activity ii - Task 3

Map main utilities

Rapidly growing cities put pressure on utilities that are essential to its citizens. Mapping existing facilities and identifying gaps in provision is necessary to understand where there may be existing capacity for new development.



This task will require you to create a map of existing utility infrastructure. This map is particularly important if your city's infrastructure is incomplete and unevenly distributed. If your city has a good provision of infrastructure throughout, you may not need to map these elements as thoroughly, so consider which are relevant for your case.

Task

1. Prepare to map the utility networks of your city.

Use the same sheet of paper or set up a new layer of paper over the base map as done in task 1.

2. Draw the utility networks in your city, which may include:

Utility Access:

- Areas with access to electricity and power,
- Areas of street lighting,
- Water collection or access,
- Areas with access to sewer systems,
- Rubbish and recycling collection points,
- Areas with access to radio signal,
- Areas with access to internet.

Utility Infrastructure:

- Electrical sub-stations and generators,
- Water collection and storage,
- Waste water treatment infrastructure,
- Incinerators, landfill or recycling centres,
- Communications infrastructure,
- Other existing transport infrastructure in your city.

Your city council may already have produced mapping which you can utilise.

If no data is available then local people and city officials can often identify locations of existing facilities and services or areas that have access to existing facilities and services.

3. Create an inventory of all utilities and the areas they cover, in a separate document. This could include the name, capacity and condition of facilities such as rubbish collection points, electrical sub-stations etc. You can use the [Inventory Template](#) provided.

4. Once you have completed each map in this activity, **take a photograph to keep a record of your outputs.**

Reflection questions

- Which utilities are well provided for in your community and which are not?
- Are there particular areas of your city that lack utility infrastructure?

Templates & Supporting Materials

[Mapping Checklist \(PDF, 500KB\)](#)

[Inventory Template \(Excel, 50KB\)](#)

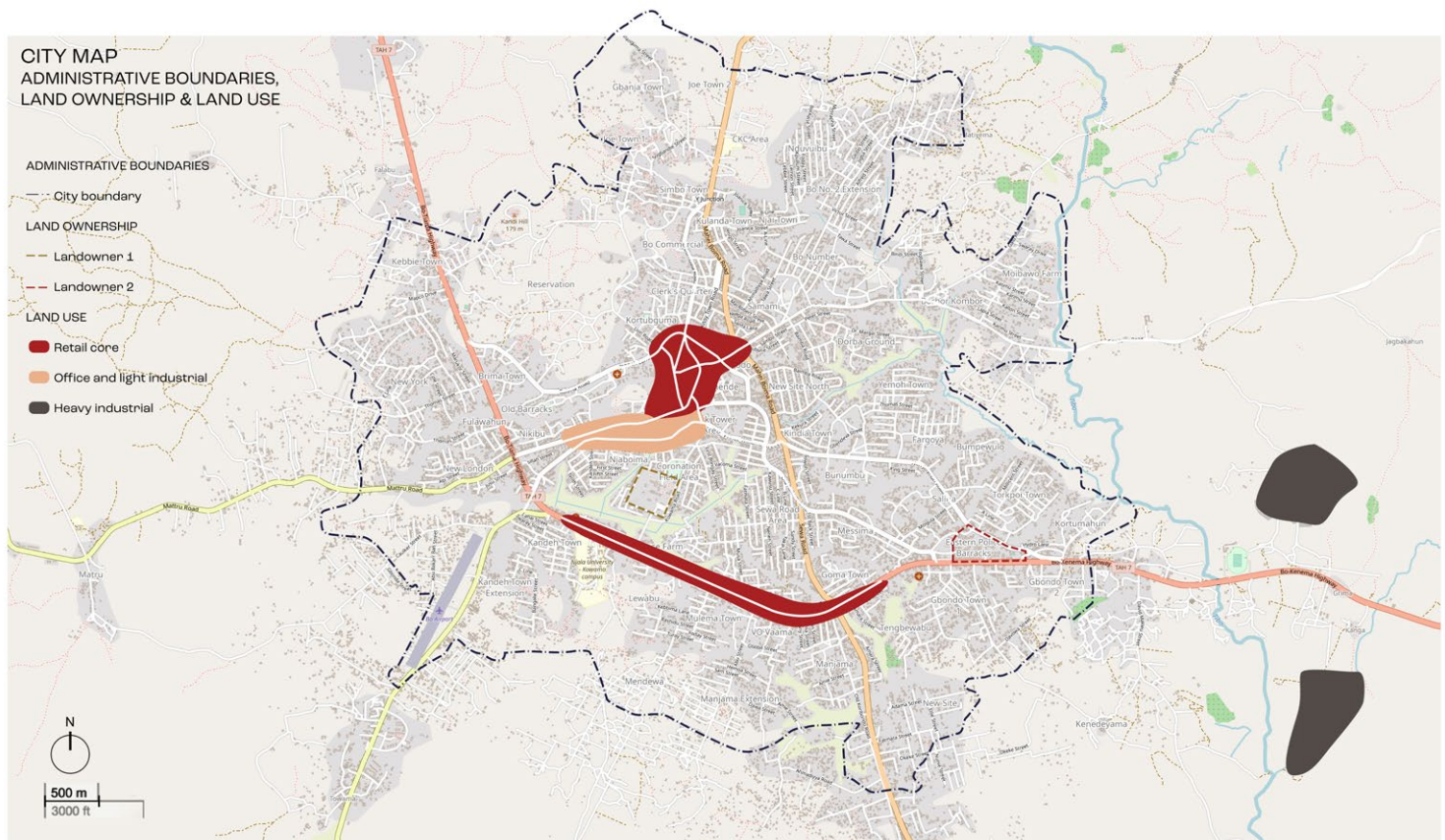
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for Urban Expansion

Step 2A - Activity ii - Task 4

Map key administrative boundaries, land ownership and land use

In the final mapping task in this activity, you will look at administrative boundaries, land ownerships and land use.



Administrative boundaries are important to acknowledge as they often relate to issues of funding, legislation, service provision and taxation. However, with rapid urban growth, you may find that your city's urban extent will soon be extending into other administrative regions and jurisdictions. In this case, you will need to ensure that the relevant authorities are engaged, consulted and represented as you progress with the Toolkit process.

In addition, you will need to identify any major landowners or significant land parcels. These may include public land, as well as significant private or institutional land holdings, particularly on the edges of the city's urban extent where growth may already be starting to take place.

Finally, you will also identify any land uses or land use zones. Your city may have been planned with zoning strategies in place, dictating what kind of uses are permitted in certain areas. This may highlight areas of heavy industry, resource extraction or manufacturing; which may not be compatible with residential growth areas. On the other hand, areas with a large degree of commercial, retail or employment uses may benefit from the growth of the nearby local population.

Task

1. Prepare to map these final elements. Use the same sheet of paper or set up a new layer of paper over the base map as done in task 1.

2. Draw the administrative boundaries of your city, as determined by local and regional frameworks, which may include:

- Your city boundary,
- Designated national parks and natural spaces,
- Economic development zones,
- Other administrative designations that may impact development in or around your city.

3. Draw the land ownership boundaries of your city, which may include:

- Public or state-owned land,
- Large land parcels owned by a single landowner or entity,
- Community-owned land,
- Other types of land holdings.

4. Create an inventory of land ownership, logging any significant land parcels, and details of their ownership. You can use the [Inventory Template](#) provided.

5. Draw the land uses of your city, which may include:

- Concentrated shops, retail and commercial activities,
- Offices, business districts or areas of light industry (not heavily-polluting, non-disruptive),
- Heavy industry, mineral extraction and manufacturing (heavily polluting, disruptive),
- Farming, agriculture and land cultivated for food supply.

6. Once you have completed each map in this activity, **take a photograph to keep a record of your outputs, and store your maps in a safe place** so that you can reference them later.

Reflection questions

- Who are the individuals and institutions that own significant areas of land in your city? Will this represent an opportunity or constraint for your Growth Plan?
- What may be the implications of growth exceeding the administrative boundaries of your city?

Templates & Supporting Materials

[Mapping Checklist \(PDF, 500KB\)](#)

[Inventory Template \(Excel, 50KB\)](#)

Step 2A

Review

Step 2A

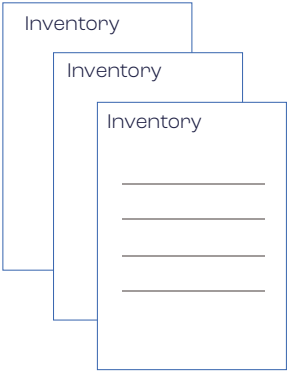
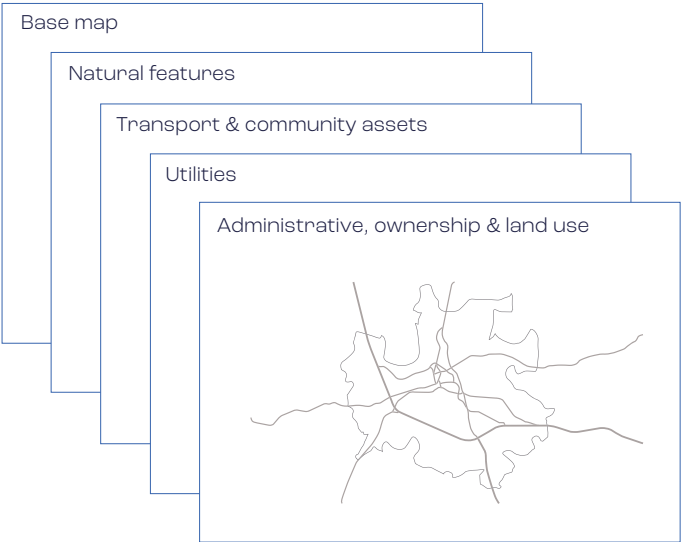
Review of Outputs

This concludes Step 2A ‘Preliminary Mapping’. By completing Step 2A you will have:

- ☐ Obtained a base map,
- ☐ Produced a map of natural features,
- ☐ Produced a map of transport networks and community assets,
- ☐ Produced a map of main utilities,
- ☐ Produced a map of administrative boundaries, land ownership and land use zones
- ☐ Produced an inventory of transport networks and community assets,
- ☐ Produced an inventory of utilities
- ☐ Produced an inventory of land ownership

Looking Forward

Now that you have obtained a base map and mapped existing features and areas of the city, you will use these maps in Step 2B to identify areas for new growth. Move on to Step 2B to create a Rapid Growth Plan.



Step 2 - Creating a Plan for Growth

2A Preliminary mapping

i Obtain a base map

ii Map city features

2B Creating a Rapid Growth Plan

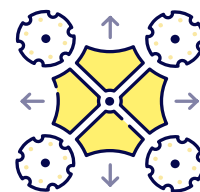
i Prepare for the planning workshop

ii Hold the planning workshop

2C Structuring the growth areas

i Prepare for the design workshop

ii Hold the design workshop



On completing Step 2, you will have created a plan for growth.

2B Creating a Rapid Growth Plan

i

Prepare for the planning workshop

3 - 4 Weeks Core Team Activity

- Task 1: Identify and invite participants
- Task 2: Arrange a venue
- Task 3: Source equipment
- Task 4: Collate Step 1 data

ii

Hold the planning workshop

1 - 2 Days Workshop Activity

- Task 1: Prepare a physical constraints map
- Task 2: Prepare a human constraints map
- Task 3: Prepare a community assets plan
- Task 4: Locate potential growth areas
- Task 5: Check growth areas against land required
- Task 6: Prioritise growth areas

2C

Structuring the growth areas

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