



## Introduction

As the world's population increases and more people live in urban areas, there are some real challenges ahead for city planners and architects. The Director of the United Nations has said that "managing urban areas has become one of the most important development challenges of the 21st century". If we fail to build cities that are sustainable all of our futures are at risk.

### Key facts

- Over 7.3 billion people live on Earth, with the population due to increase to a whopping 9.8 billion by 2050 ([worldpopdata.org](http://worldpopdata.org)).
- Currently over 79 % of the UK's population live in cities. By 2050 this number increases to 92% of the UK population who will be calling a city their home ([prb.org](http://prb.org))
- Land will be become increasingly expensive and limited in cities due to the increase in population.
- Many people are working towards trying to make cities more sustainable. A sustainable city uses resources to offer a good quality of life to the people that currently live there whilst ensuring that there are enough resources are available for future generations.

## How can you build a sustainable city?

Your sustainable city must include plans to produce **energy**, provide inhabitants with **food**, handle **waste** efficiently, **transport** people and produce around the city, whilst ensuring that **nature** is welcomed and supported in your city.



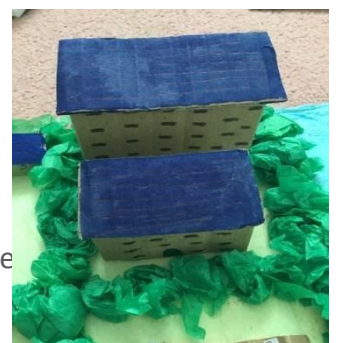
### 1. Energy

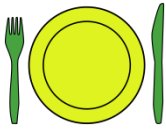
People expect higher standards of living and the latest devices gobble up energy. We still use a lot of fossil fuels, like oil coal and gas. In the past 200 years we have used over two thirds of the world's resources already and need to use more renewable energy.

### How will you power your city?

To power my city we use renewable power sources only. Every house/ building has a solar panel roof to power that building. People are encouraged to use as least power as possible to maintain their personal electrical use. These provide more than enough power for all the city.

A picture of a solar panel roof from my city





## 2) food

We all need to eat but in a world with more and more people, where will it all come from? Transporting food from far away is expensive and pollutes the environment. We also waste a lot of food; in the UK alone about 30 % of all food gets thrown in the bin!

How and where will you grow enough food for your inhabitants? **How can you make sure you use as much of the food as possible without any waste?**

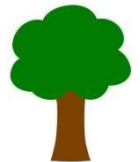
In my city I have made a farm that provides for all humans and animals. It has many food patches so it can self sustain. Even though it can provide enough they also have food shipped there by boat from other places so very little pollution is made.



A picture from the farm in my City

## 3. Nature

We need to remember that humans are not the only living things on the planet and we need plants and animals to be able to survive. As you plan your city remember to include green areas in your city, and help wildlife move around your city on 'wildlife corridors'. Wildlife Corridors are areas of planting that help the green areas in your city link up for wildlife. It may be some plants on the edge of a road, or even people's gardens. Flowering plants help encourage pollinators in to your city; these will help your vegetables grow and increase your crop of food. It has also been proven that if people can see nature every day, and not just buildings, they are much happier and healthier. Try and think of why you might need different plants and animals, this will help you make sure you have it in your city. **How will you**



**make sure nature is encouraged into your city?**

In my city I have a specific wildlife area where animals can live happily. It is a restricted human area so it can encourage wildlife. It has safe drinking water and fresh grass for animals food and is right by a lake for them to chill in. It also is a sectioned off area to keep humans from damaging wildlife.

A picture from the wildlife area in



my city.



#### 4. Transport

The way your population moves around the city is crucial for city living. Movement in a place where so many people live and work is tricky so this needs to be carefully designed. Cars, buses, trains and trams, boats on rivers as well as walkways for pedestrians and lanes for cyclists, you need to make sure facilities are in place for the perfect balance of each. Some of the largest cities in the world have even moved their transport out of the way using underground trains and elevated monorail systems e.g. Las Vegas has motorways underneath it's buildings.

Try to think of new ways that you could help with the infrastructure in your city. In many cities around the world the streets can become as famous as some of the buildings.

#### How will you help your inhabitants move around?

In my city I have 2 different transportation methods both with no pollution- bikes and boats. There are bike racks around the city to hold your bikes so no pollution is made with cars and vehicles. And there is a river to carry boats in and out the city. Row boats are mainly used because they are eco friendly. For bigger travels bigger boats are used that have engines but they cause minimal pollution and only ever used if necessary.



A picture of the river and bike rack in my city.

#### 5) waste

Throughout the world we dump over 2 billion tonnes of waste every year. A lot of this rubbish doesn't rot away and finding somewhere to put all is a serious problem. We actually waste more energy by not recycling. For example: cans of drink are made from aluminium, 95% more energy is needed to make a new aluminium can compared to one made from recycling other cans.

**How will you encourage people from your city to recycle more and reduce their waste?**

There's a large communal recycling point in my city that provides space for all to use freely. Any food waste is put in the farm and turned to compost for the self sustain farm they have anything which is neither recyclable or composted (general waste) is taken away monthly to suitable eco friendly sites they combust and reuse all waste. Shops are advised to use as much recyclable materials as possible and any non recycling is kept to a minimum.



A picture of the recycling bin in my city