

**Monday 25 June 2012 – Morning**

**GCSE GEOGRAPHY A**

**A674/01/02/RB** Issues in our Fast Changing World (Foundation and Higher Tier)

**RESOURCE BOOKLET**

This Resource Booklet can be opened from Monday 2nd April 2012.

This Resource Booklet is to be taken into the examination and must **not** be annotated in any way.



**INFORMATION FOR CANDIDATES**

- Use this Resource Booklet as part of your preparation for the examination. You may be asked to use some of the resources in the examination.
- You must **not** annotate the Resource Booklet with your own comments or notes in any way.
- This document consists of **18** pages. Any blank pages are indicated.

**INSTRUCTION TO EXAMS OFFICER / INVIGILATOR**

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### **A guide to using the Resource Booklet during the Study Period**

You should study these materials in preparation for the examination. You may also undertake some relevant work in class. You may spend some of the study time working on your own, but it would be best if some of the activities listed below could be carried out as part of a group. There is no reason why the group should not share the search for other materials. In total, around six hours of study time is suggested to explore these materials.

Remember, as you use these resources, that some are taken from the internet. They come from many different sources and are often written for a particular purpose, such as advertising. You should:

- begin by reading through all of the materials so that you have a good idea of what each is about
- list all geographical terms used – make sure you understand their meaning.

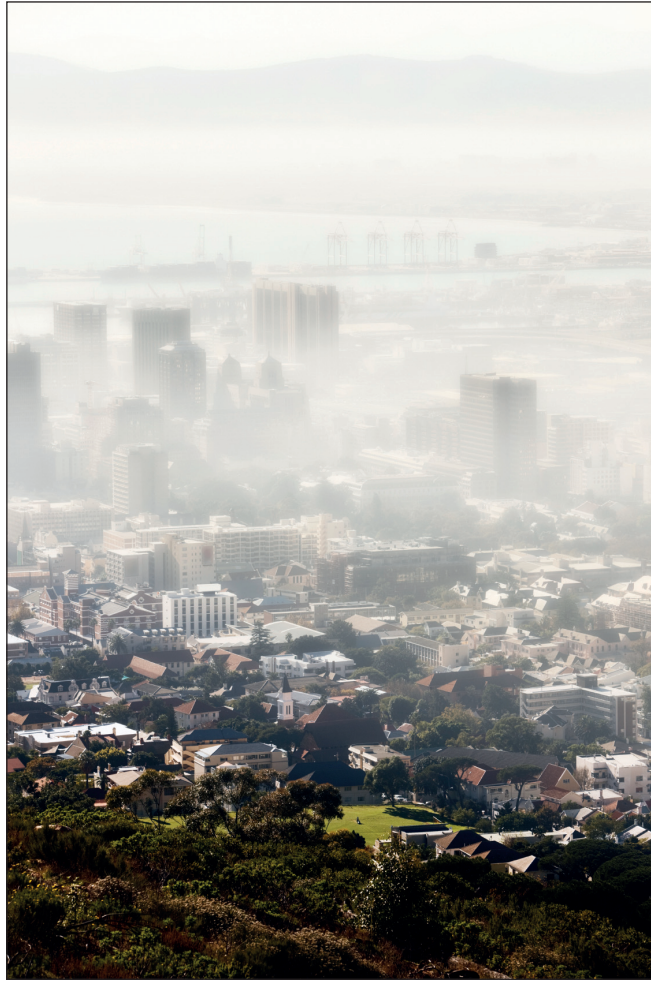
Your teacher is allowed to help you if you have any difficulty understanding these resources.

- Why is sustainability an important part of planning for the future?
- How might climate change affect cities in the future?
- How can large sporting events be sustainably planned?
- Investigate and evaluate your school's energy use.
- Investigate your school's travel plan.

## Contents

Resource 1 – Contrasting city images .....	4
Resource 2 – London 2012 Olympic Games .....	5
Resource 3 – Impacts of climate change on cities .....	6
Resource 4 – Urban growth in the UK .....	7
Resource 5 – Newcastle, an example of a sustainable city .....	8
Resource 6 – The sustainability of the 2012 Olympic Games .....	9
Resource 7 – Different opinions on the 2012 Olympic Games .....	10
Resource 8 – Before and after the 2012 Olympic Games .....	11
Resource 9 – Sustainable development and schools .....	14
Resource 10 – School journeys .....	15
Resource 11 – Year 9 low carbon day poster .....	16

## Resource 1 – Contrasting city images



Many cities suffer from smog and haze.



Artist's impression of planned improvements to Hackney Wick, East London, after the 2012 Olympics.

## Resource 2 – London 2012 Olympic Games

The tables show how planning for the London 2012 Olympic Games reflected many of the key principles of sustainability.

### Key principle – lower carbon emissions

#### Transport

When spectators buy a ticket they will be provided with an individual travel plan showing them how to get to the Games.

Cheap fares will encourage spectators to use public transport to get to the Games.

#### Energy

Local renewable energy sources will be used in sports venues and new homes.

The athletes' village will be energy efficient.

### Key principle – stop waste

#### Construction

Building materials will be made from reclaimed and recycled products.

#### Recycling

Water will be recycled and used for watering the grounds.

Waste food will be composted.

No waste from the Games will be sent to landfill sites.

### Key principle – improve people's lives

#### During the Games

Ticketing will be affordable.

Fair Trade products will be used.

#### After the Games

A programme will be put in place to promote healthy benefits of sport and exercise.

Facilities will be provided for local sports and fitness activities.



## Resource 3 – Impacts of climate change on cities



**The Thames Flood Barrier, Greenwich, London**

### Climate change and temperature

Increased temperatures, made worse by the urban heat island effect, may lead to:

- an increase in the number of air conditioning units being used
- greater demand for electricity in the summer months.

### Thames Water and climate change



#### WATER SUPPLY

The impact of climate change will be to make summers hotter and drier and winters warmer and wetter. In addition there may be an increase in storms. These changes affect the collection of water stored naturally underground for distribution to homes and industries. In periods of drought, river levels fall and the water table drops. Water resources therefore have to be carefully managed.

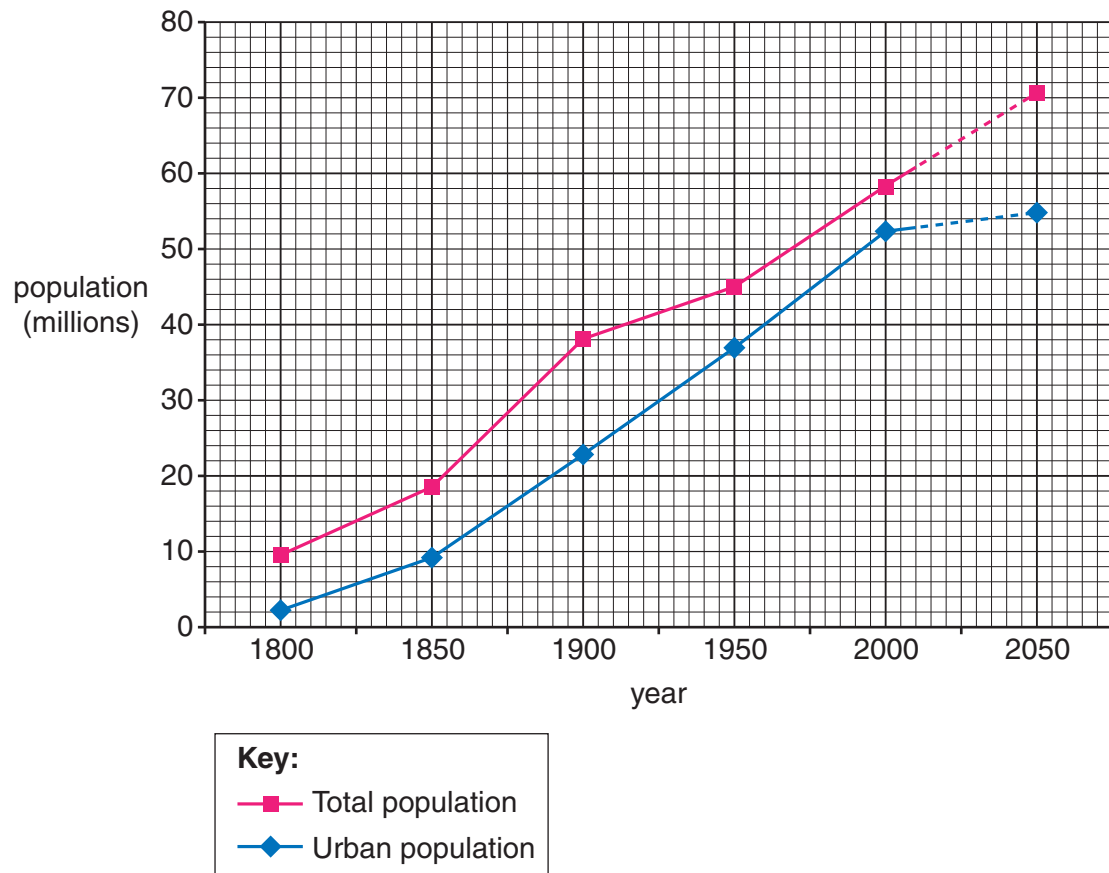
#### WATER QUALITY

In cities, sewers are designed to carry both rainwater and sewage water to local treatment works. If very heavy rainfall leads to too much rainwater entering the sewer systems, a mixture of sewage and rainwater is discharged into local rivers to avoid it flooding the streets and people's homes.

### Climate change and health

- 1 Heat-related deaths could increase to over 2800 cases per year in the UK, many of these deaths being in cities.
- 2 The personal and economic loss and stress experienced by victims of flooding can lead to mental health problems.



**Resource 4 – Urban growth in the UK****UK actual and projected population growth, total and urban**

### Resource 5 – Newcastle, an example of a sustainable city

In 2009 it was announced by 'Forum for the Future' that Newcastle was the most sustainable city in the UK based on the following three measures:

- **Environmental impact** – the city's impact in terms of resource use and pollution
- **Quality of life** – what the city is like for people to live in
- **Future-proofing** – how well the city is preparing for a sustainable future.

Some activities the council has been involved in include:

- **1989** the setting up of a working group involving local organisations
- **1990** the analysing and drawing up of an energy efficiency strategy for the city (The Strategy for Energy and the Urban Environment)
- **1992** the publication and introduction of the 'Energy Action Plan'
- **2001** the introduction of a 'Charter for the Environment'.

The authority quickly became aware of the damaging consequences of global warming:

- more frequent flooding
- damage caused by high winds
- upsetting of farming practices
- effects on tourism and local companies.

Newcastle was one of the first cities in the UK to have looked at the importance of energy consumption **and** energy management in creating a sustainable future.

REGENERATION	PEOPLE AND COMMUNITIES
When old housing is improved, new energy-efficient central heating systems and monitors for electricity use are installed.	The council works with residents to improve their local areas and to support groups in projects such as community gardens.
ENVIRONMENT	TRANSPORT
The environment is at the heart of everything the council does. Recycle Newcastle encourages residents and businesses to recycle as much waste as possible. Warm Zone provides advice on energy efficiency to local residents and businesses.	The council works closely with local travel companies to ensure public transport is cheap and efficient. Electric buses have been introduced on some routes and battery charging stations set up around the city to encourage the use of electric cars. A dedicated website has been developed to encourage more people to cycle to work.



**Resource 6 – The sustainability of the 2012 Olympic Games**

12 000 new permanent jobs will be created.

The Olympic Games will create a legacy for sport, the environment and the local and global community.

The main sustainable element of the Games will be the redevelopment of the site, bringing green space into the area and improving the waterways.

£17 billion will be spent on transport improvements.

52 electricity pylons have been removed and replaced with underground cables.

After the Games the Olympic Village will be converted into 9000 new homes, many of which will be offered to key workers such as nurses and teachers.

During construction the aim was to produce zero waste, minimise carbon emissions and promote environmental awareness.

The River Lea, which runs through the site, will be cleaned and a wetland created which will help with flood management and attract birds and other wildlife.

After the Games, the Olympic media centre will be used to attract new offices and businesses to Hackney.

## Resource 7 – Different opinions on the 2012 Olympic Games



Hotel owner

"My hotel has been fully booked for the Olympics since the end of 2010 and I have employed extra staff to work in the hotel bars and restaurant during the Games."



Local carpet retailer

"My business will not benefit at all from the Olympics."



Local resident

"The journey to school for my children became quite dangerous during the construction of the Olympic Village."



Local museum manager

"We are expecting more visitors during the Olympics."



Former local resident

"My home used to be where the media centre is now. Although I received some compensation it wasn't enough to move to a location of my choice. Now I live further away from where I work."



Ice cream salesman

"I have ordered extra stock to cope with the increase in demand."



Tour guide

"I think the crowds, extra security and congestion will put some tourists off."



Stratford resident

"My journey to work will be much quicker after the Olympics, with the improvements to the underground and light railway."

Resource 8 – Before and after the 2012 Olympic Games



① BEFORE

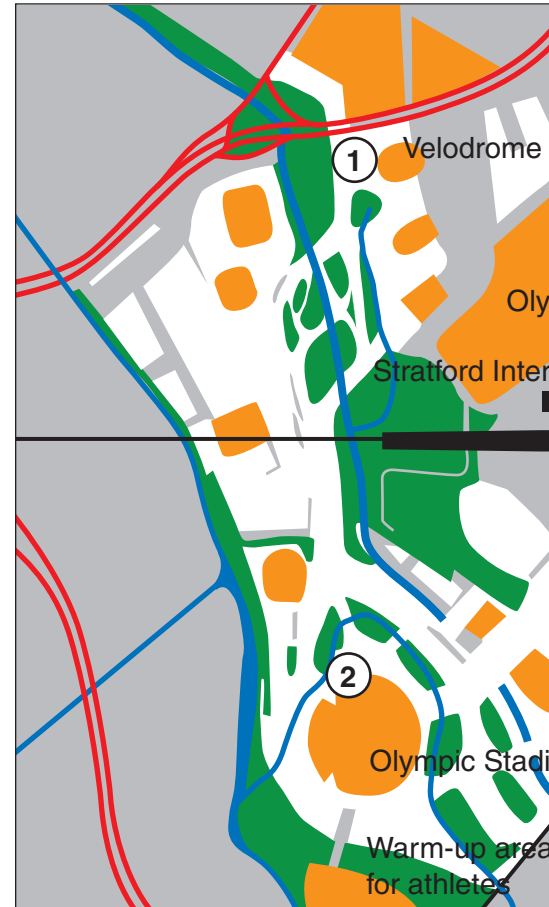
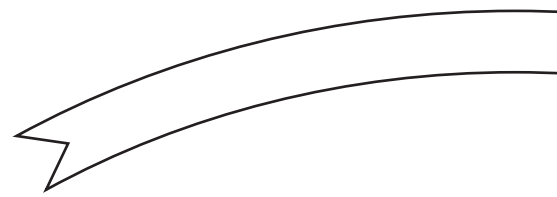
Community Centre



Clays Lane house

② BEFORE

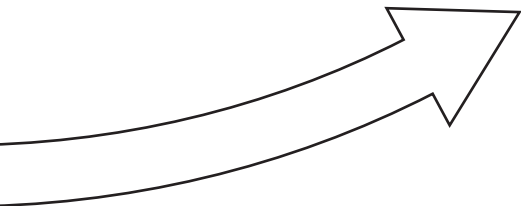
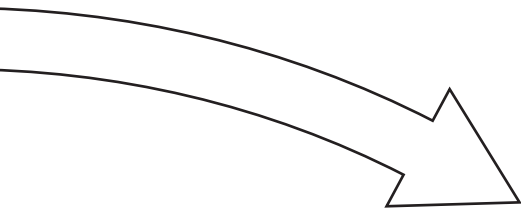
Marshgate Lane Industrial Park



Part of the Olympic site at Stratford, East London







0 500 m  
approx

**Key:**

- = railway
- = main road
- = river
- = key buildings
- = green space
- = open space



① **AFTER**  
Velodrome

② **AFTER**  
Olympic Stadium



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FOR RESOURCE 8**

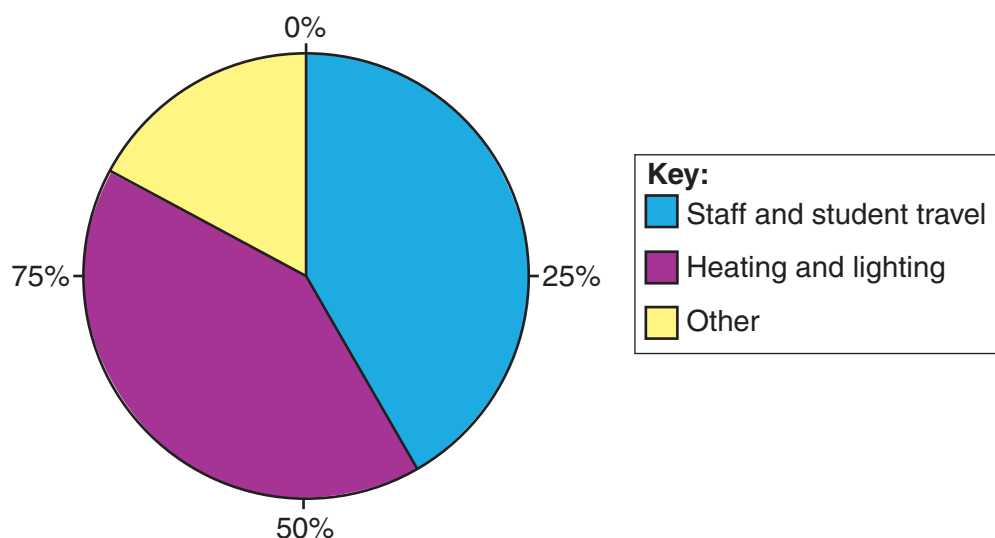
**Resource 9 – Sustainable development and schools**

“Sustainable development is a way of thinking about how we organise our lives and work so that we don’t destroy our most precious resource – the planet”

[www.teachernet.gov.uk](http://www.teachernet.gov.uk)

Just like the Olympic Development Authority, schools have been asked to look at their carbon emissions. Barton Bay High School is a large 11–18 school situated on the edge of a city. Year 9 pupils there have been studying the impacts of climate change. They have been looking at exactly how energy is used in school and how the school can reduce its carbon footprint. Their data is shown below and in Resource 10.

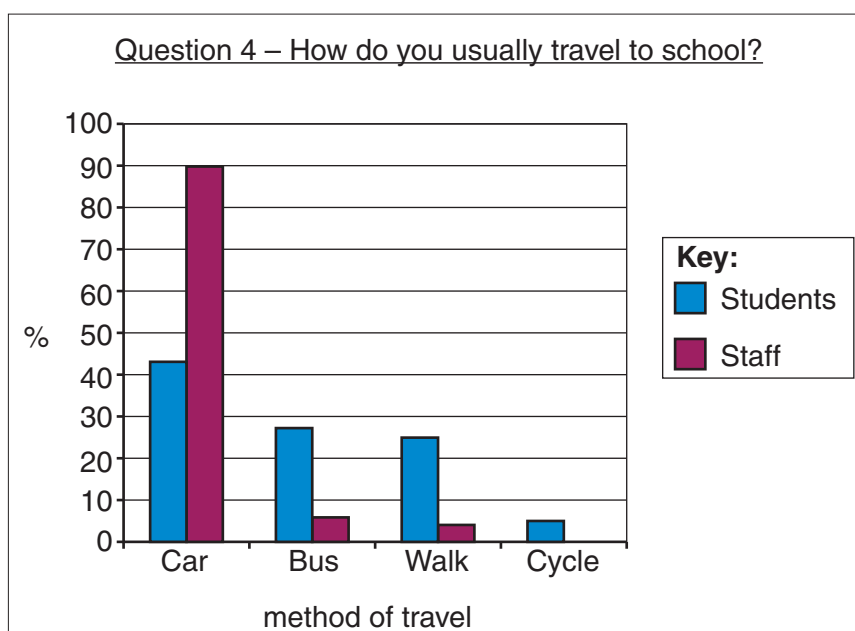
**Source of carbon emissions at Barton Bay High School**





## Resource 10 – School journeys

Extract from a Year 9 survey on 'Travel to School' by Barton Bay High School pupils



A UK road sign showing a car share lane



"My Mum won't let me walk to school on my own until I'm in Year 9."

Year 7 Barton Bay High School pupil



"The entrance to the school is extremely dangerous in the morning – too many parents bring their children by car. Why don't they make them walk?"

Local resident



Barton Bay High School



# Low Carbon Day



16th July 2012



The aims of the day are to:

- 1 Launch our school Eco-code
- 2 Switch off the lights in the school for a whole day to highlight our energy use



## THE ECO-CODE



- 1 Switch off lights and electrical equipment when not in use
- 2 Use the recycling facilities
- 3 Walk or cycle to school



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