# Virtual GCSE Geography fieldwork
Andy Owen

Investigating urban change

UK towns and cities are changing all the time. Some changes happen on a daily basis, such as:

- Flows of traffic, with peak flows in the early morning and late afternoon when commuters are going to or coming from work

- Flows of pedestrians around shopping areas. The graph below shows the number of people shopping at Tesco Extra in Newcastle-under-Lyme on 23/04/20 (sourced from Google). Notice how the number of shoppers normally increases during the afternoon to a peak between 6pm and 7pm.
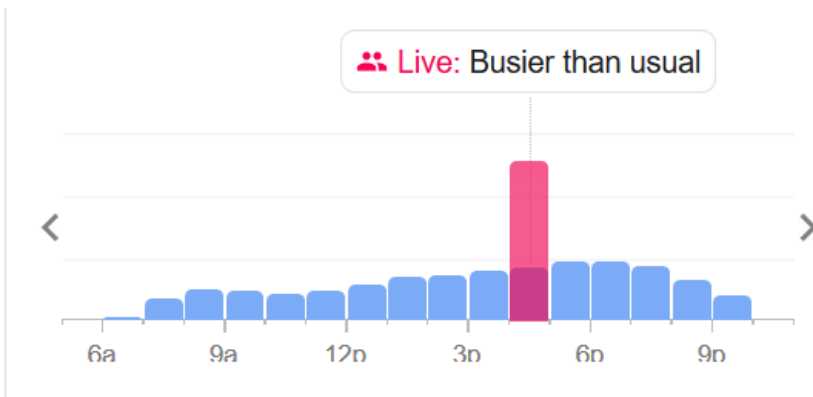
Towns and cities change over longer periods of time too. If you could go back in a time machine and compare your town now to how it looked 10 or 20 years ago you might see some big changes. For example:

- Some shops and offices will have closed and been replaced by new ones

- Planners may have introduced traffic calming strategies such as speed bumps or one way systems

- Old run-down areas of the city centre could have been redeveloped to create new jobs and new homes

- Shopping streets might have been pedestrianised or had benches, flowerbeds and trees introduced to make them friendlier, more sustainable places.

You can't go back in a time machine but you can investigate all of these changes using geography fieldwork.

Using fieldwork to investigate urban change

We can use fieldwork techniques to investigate urban change – we can even do it safely during the current Vovid-19 lockdown.

We can investigate how urban areas have changed over longer periods of time using images (such as old photos or postcards) to see what places were like in the past and comparing them to the same places today. Evidence that has been collected by someone else (like old photos) is known as **secondary evidence**. For the first activity we are going to use some photos I took in Cardiff in 2012. Later on, you can find photos of your own local town on the internet to see how it has changed.

Normally we would visit a local town on a fieldtrip to see what the place looks like today but we can't do that during lockdown. So, in this investigation, we are going to use Google Street View and What3Words to investigate instead. You will be doing 'virtual fieldwork'.

Like all good geography fieldwork, before we start we will need:

1. An aim – we usually do this by posing a question

2. A sampling strategy – a way to organise how much data is collected and when/where it is collected. In this example, I collected the photos in 2012 using an **opportunistic sampling** strategy – I just wandered through a shopping street taking photos of the businesses that I found interesting.

3. A data collection sheet – you will need to design one.

Once you have collected your data you will need to:

4. Choose a method of analysis that will allow you to make sense of the data

5. Maybe draw a graph to represent what you have found

6. Evaluate the strengths and limitations of this fieldwork

Choose an aim / design a data collection sheet

Before you start a fieldwork investigation you need an aim. We usually do this by posing a question. For example:

1. How many shops and businesses have changed in the last 10 years? Have some types of business changed more than others?
2. How have flows of traffic changed in the last 30 years? Has my local town become safer?
3. How has the shopping environment changed in the last 30 years? Is my local town centre now a more sustainable environment?

In the first activity we are going to focus on idea one - the way that a particular shopping street in Cardiff has changed since 2012. How many shops and businesses have changed? Have some types of shop changed more than others?

What you need to do

1. Pose one or two research questions about how the street has changed. These can be quite simple – like the questions in red opposite. For example, your question or questions could focus on:

   a. Whether some types of business/shop (such as cafes and take-aways) have changed more than others

   b. Whether there has been more change in independent shops or chain stores.

2. Design a data collection sheet. You will need to design a sheet that is useful for the data you think is important. You will need to record what businesses can be seen in the 2012 photos and what can be seen in the same places today. In addition you need to decide whether you want to record:

   a. The name of the business

   b. The type of business eg food shop, take-away, estate agent

   c. Whether the business is part of a chain or an independent business.

# Investigating retail change in Cardiff

In the first activity, you are going to use 8 photos taken in a shopping district in Cardiff called Cowbridge Road East. They were taken in 2012. The photos are our **secondary evidence**. Remember that, when I took the photos, I used opportunistic sampling. I could have used systematic sampling, for example, photographing every other shop/business but I didn't. I just photographed places I found interesting.

You will need to log on to a mapping website called What3Words. What makes it special is the way the site uses combinations of 3 words to identify very specific locations. So, for example, the location of this photo can be found by searching the What3Words website with: fetch.pram.brain.

When you are on the What3Words website:

1. Find the location of each of the 8 photos that follow using their unique combination of 3 words

2. For each photo, drop the symbol of the yellow person onto the map so you can see what the street looks like 'now'.

3. Use your data collection sheet to record the businesses you can see in the photo and now in the same place.
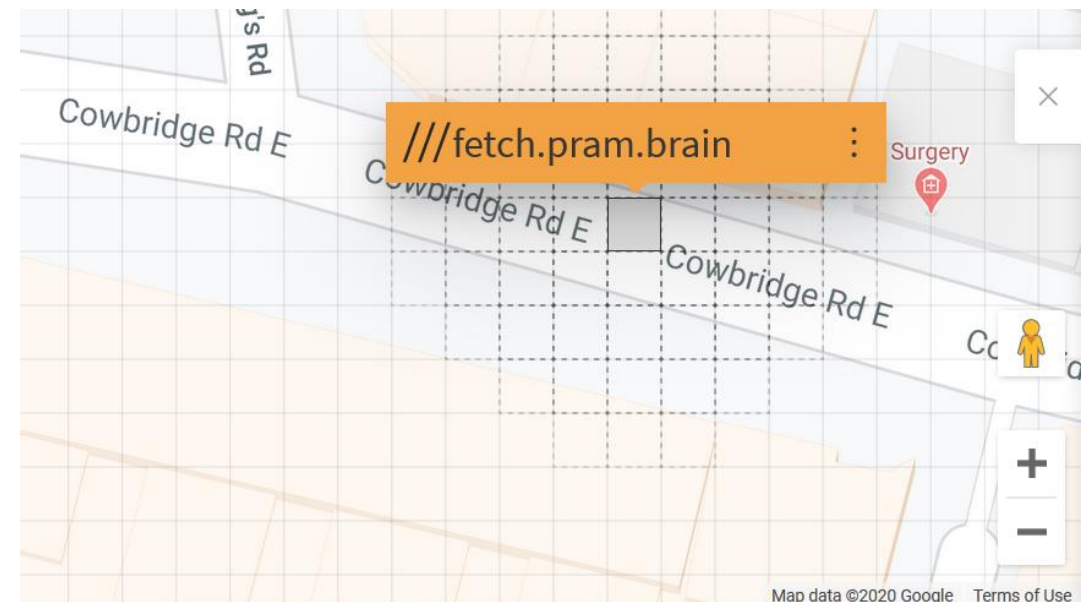
Location 1. Cowbridge Road East (south side)
What3words: fetch.pram.brain
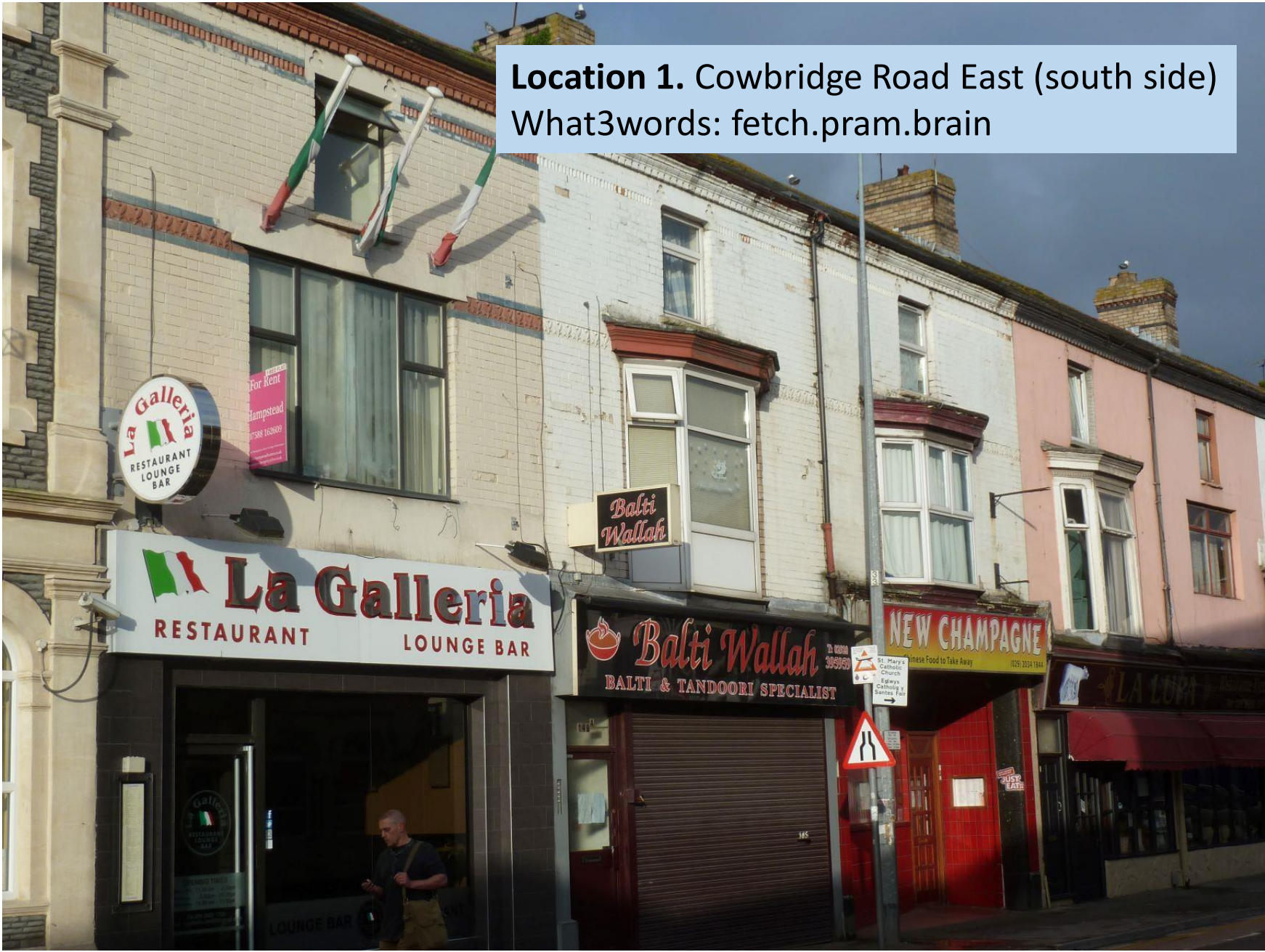
You should be able to identify **three** businesses in this photo.
When you are using the street view on What3words, look out for the bay windows on the first floor to find the same building.

Location 2. Cowbridge Road East (south side)
What3words: think.issue.crate

You should be able to identify **three** businesses in this photo.
When you are using the street view on What3words, look out for the bus stop and lamppost so you can identify this group of buildings.

Location 3. Cowbridge Road East (south side)
What3words: define.rocket.minute

You should be able to identify **four** businesses in this photo.

Location 4. Cowbridge Road East (south side)
What3words: awards.horses.curvy

You should be able to identify **three** businesses in this photo.
When you are using the street view on What3words, look out for the big gable in the roof line that you can see in this photo above the beauty salon.

Location 5. Cowbridge Road East (south side)
What3words: shares.cards.overnight

You should be able to identify **four** businesses in this photo, probably you will recognise a fifth business on the extreme right of the photo.
When you are using the street view on What3words, look out for the pedestrian crossing.

Location 6. Cowbridge Road East (north side)
What3words: agents.runs.reef

You should be able to identify at least **three** businesses in this photo if you look past the awning that says Falafel Wales carefully. You may have to enlarge the image.

Location 7. Cowbridge Road East (north side)
What3words: rises.shift.frames

You should be able to identify **four** businesses in this photo if you look carefully.

Location 8. Wyndham Crescent (east)
What3words:firm.noises.window

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You should be able to identify **three** businesses in this photo.

Analysing and evaluating the investigation

Now you have collected your data you can:

1. Analyse the data so you can make sense of it

2. Draw a graph to represent what you have found

3. Evaluate the strengths and limitations of this fieldwork.

Analysing the data

Analysis means being like a detective – carefully pulling the data apart so that you can understand the patterns/trends and answer your research questions.

There are at least 28 businesses that can be identified in these images. A good way to analyse the data is to calculate percentages. For example:

- What percentage of businesses are unchanged?

- What percentage of all businesses were independent in 2012 and what percentage are independent now?

- Of all the businesses, what percentage were restaurants or take-aways in 2012. Has this percentage changed?

To calculate a percentage, divide the number of businesses by the total. For example, if in 2012, 14 businesses were independent:

- 14 divided by 28 = 0.5

- Multiply by 100 to get a percentage, so 0.5 x 100 = 50%

Graphing the data

You have collected data on categories of shops and businesses so the data is categorical or discrete. What two types of data presentation would be most suitable from this list: bar charts, pie graphs, line graphs?

Draw the graphs and explain why you chose them – why are these the best ways to present this particular data?

Evaluating the investigation

This fieldwork investigation relied very heavily on the photos I took in 2012. This was secondary data. Write a 100 word evaluation of this secondary data. Think about strengths and weaknesses. Make sure you consider my sampling strategy when I took the photos.

Extending the investigation

You could use old photos of a town or city and compare them with current images to investigate other types of change. For example, how have planners designed the street to make it:

- A more pleasant environment for shoppers?

- A safer environment for pedestrians?

- A more sustainable environment for local residents and businesses?

To conduct this type of investigation you would need to:

1. Find some old images of your town/city. There are lots of places you can look for these online. For example:

- Images of old postcards on eBay

- https://m.geograph.org.uk/ has loads of photos of each grid square of Britain

- Local newspapers may have collections of old photos online.

2. Design an Environmental Quality Index (EQI) survey. To do this you need to write a set of statements that describe the quality of the urban environment. You should think about features such as:

- Whether the street has any trees or green spaces

- Whether the pavements are wide enough

- Whether the street has traffic calming or safe places to cross.

There is an example of an EQI below. Think about what can be seen in a photo. You probably won't be able to see litter in the photos, but you will be able to see other details such as pavements, trees, street signs, traffic and public benches. You could write EQI statements (or criteria) for each of these features using the example below to give you ideas.

Feature	Criteria				
	5	4	3	2	1
Vegetation	Plenty of trees. 1+ tree per 20m.	Some trees. 1 tree per 20-39m	Few trees. 1 tree per 40-79m	Sporadic trees. 1 tree per 80-100m.	No trees or greenery.
	5	4	3	2	1
Litter	Occasional litter. One item every 50m+.	Hardly any litter. One item every 11-50m.	Some litter. One item every 6-10m.	Lots of litter. One item every 1-5m.	Abundant litter. More than one item per metre.

Investigating change in Newcastle-under-Lyme

1. Pose a research question for the town centre shown in this pair of photos.

2. Write a simple set of EQI statements to assess the quality of the environment in these images.

3. Now compare these images with what the same places look like today.

4. Find some old images of your town/city and conduct an EQI investigation of how your town/city has changed.
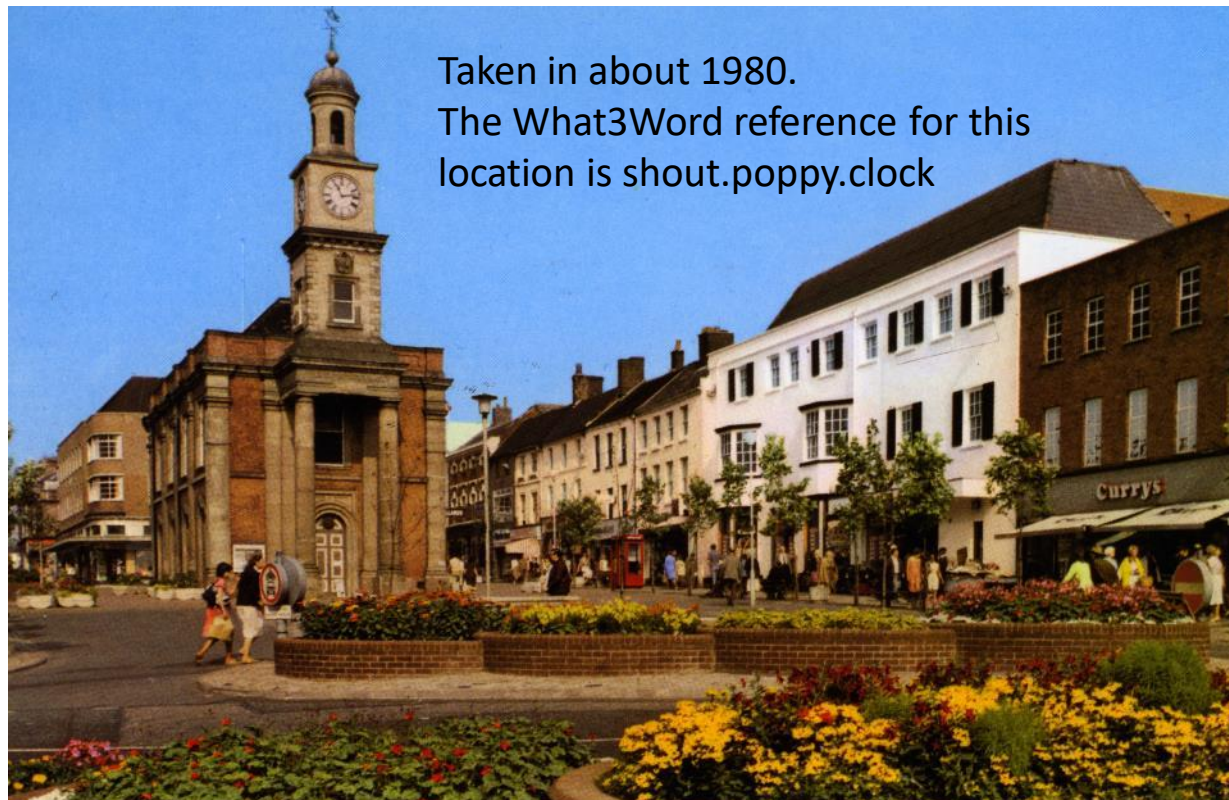
Taken in about 1980.
The What3Word reference for this location is shout.poppy.clock

High Street and Guildhall, Newcastle Under Lyme   N.015002L
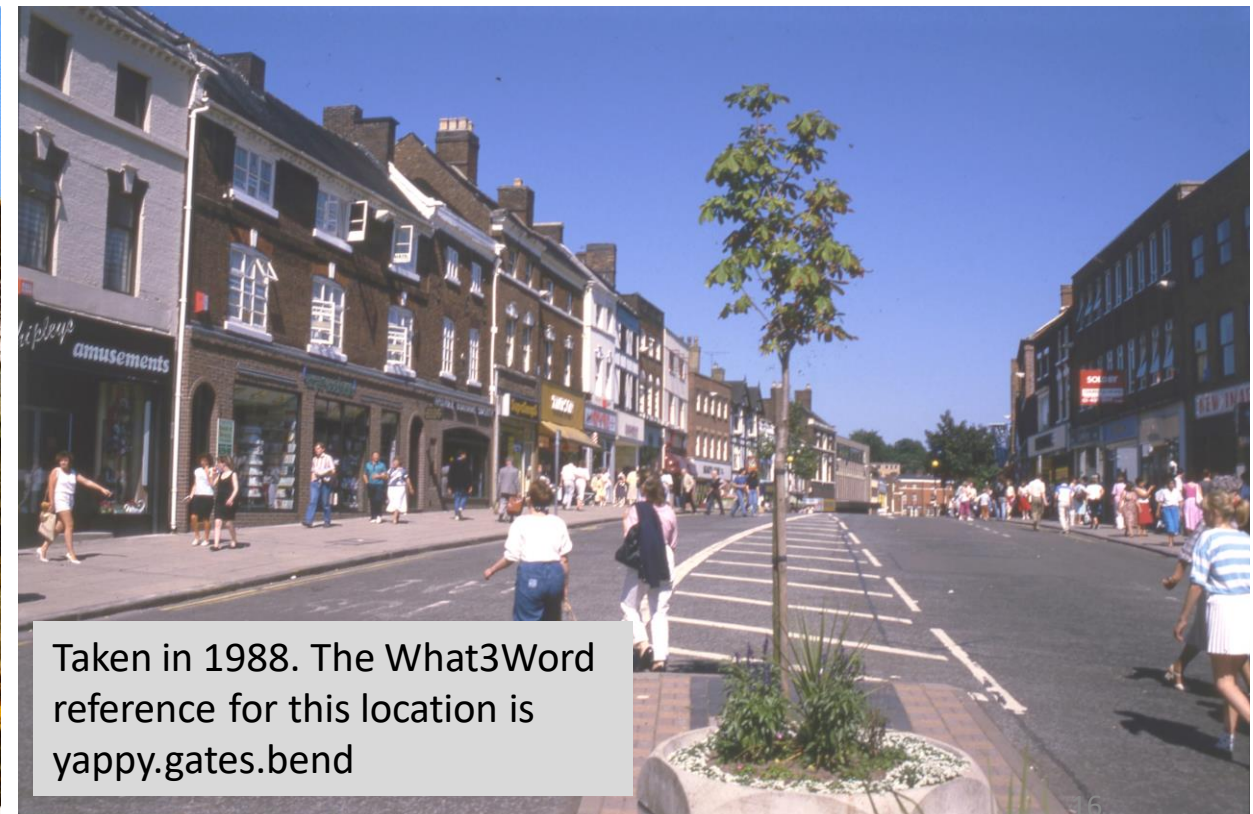
Taken in 1988. The What3Word reference for this location is yappy.gates.bend

Understanding fieldwork investigations and improving your geographical skills

Doing geography fieldwork is tricky during lockdown but you can still work on improving your skills of geographical investigation. GCSE Geography Fieldwork for Eduqas has been written to help you understand all aspects of geography fieldwork. It uses examples of fieldwork to describe how to:

- Set the aims of fieldwork and choose suitable research questions

- Collect data – including how to sample

- Draw a range of graphs and maps and do the kinds of maths you need for the analysis of fieldwork. This section of the book will help with all the geographical skills you need in all of your geography exams, not just in fieldwork
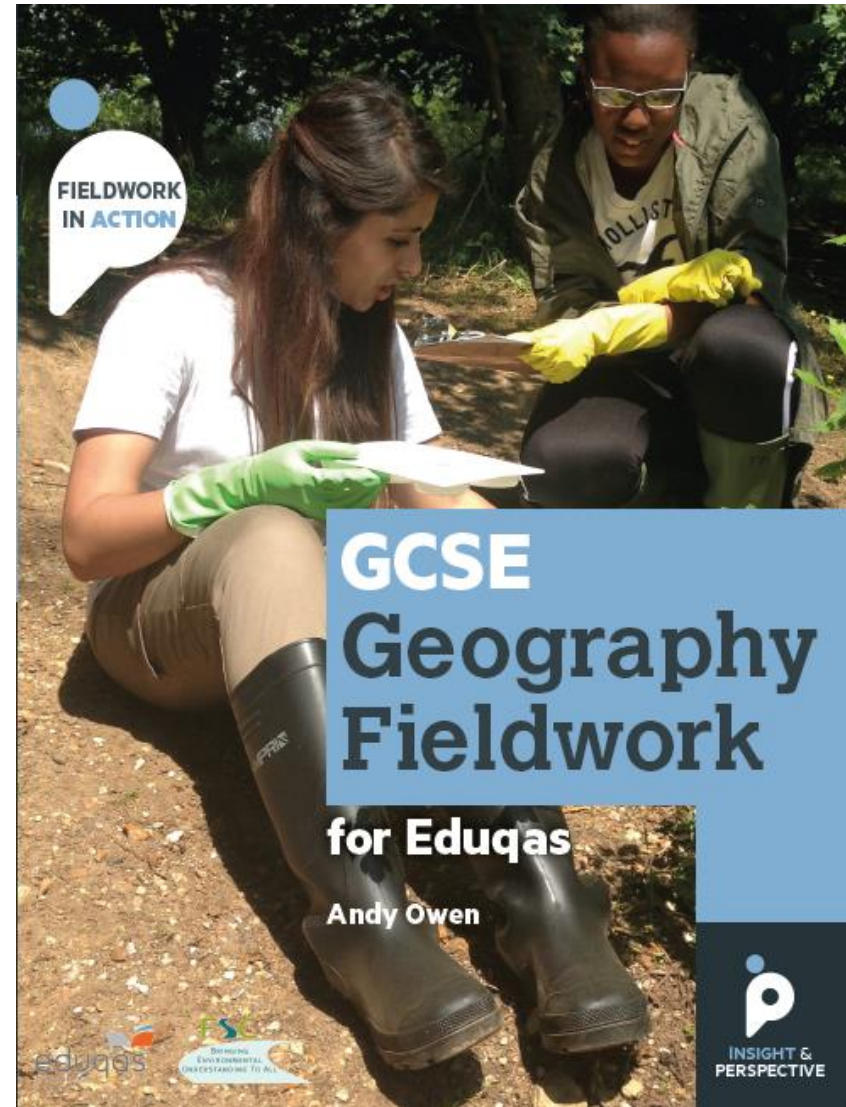
- Reach conclusions and evaluate your fieldwork.

The book also contains lots of support for how to prepare for Paper 3 which is the fieldwork paper. The book is available online from the publisher and also from online retailers.

Andy Owen GCSE Geography Fieldwork for Eduqas.

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