Forty Minute Fieldwork: Space use and sustainability

Key topic areas	Equipment and resources required
• Settlement • Regeneration • Sense of place • Sustainability	Goad (outline) map of the local area

Context

Geographers frequently record land use - how each parcel of land is intended to be used. Land use categories represent a traditional and possibly outdated view that particular buildings can only serve one purpose, and that settlements tend to exhibit distinct land use zones such as separate retail, residential and industrial areas. Today's settlements are less standardised: land use tends to be more mixed and fluid with some buildings being repurposed or specifically built and designed to be spaces of flexible and multiple use.

Though the land may have a planned and intended use, how people choose to use the space may differ from this. It is not uncommon, for example, for retail spaces to become sociable areas where friends meet (with no intention of buying anything). In some ways this may enhance the space and alternative space uses might be encouraged. In other circumstances the way the space is used may be subversive or undesirable. It may be costly to a space economically, socially or environmentally. Understanding how people use a space and the impact it can have is a key element of studies into the sustainability of settlements. A fully sustainable settlement will be one where there is provision for the economic, social and environmental needs of the people and landscape there.

Classroom set up

Students can be introduced to the different land use categories they might come across through a series of photos, with students practising matching categories to images. The RICEPOTS categorisation can be discussed and critiqued with older students. More challenging images can then be introduced such as homes that serve as places of worship or Parkland where campervans are semi-permanently parked. This can open up a discussion about how land use is more complex than simple categorisation.

Teachers can then introduce or remind students of the three elements that geographers use to define sustainability (economic, social and environmental). In pairs, students can think about behaviours that might take place in a High Street that would be socially sustainable (such as meeting friends) or socially unsustainable (such as anti-social behaviour). This introduces students to the idea that land use and space use are quite different things and that the latter can define how sustainable a place might be.

R	Residential
I	Industrial
C	Commercial
E	Entertainment
P	Public building
O	Open space
T	Transport
S	Services

In the field

Mapped areas can be divided between groups of students depending on the nature of the local area being surveyed. Armed with a goad/outline map, students should note how each building is being used according to the RICEPOTS categories, noting the letter code directly onto the map.

Students should then choose to survey locations on their map, and where possible these should be of contrasting land uses. At each of these locations students should carry out a space use survey, observing how people are using the area and the kind of impact this might have economically, socially and environmentally using a bipolar scale from -2 (strong negative impact) to +2 (strong positive impact). 0 represents the space use as having no impact.

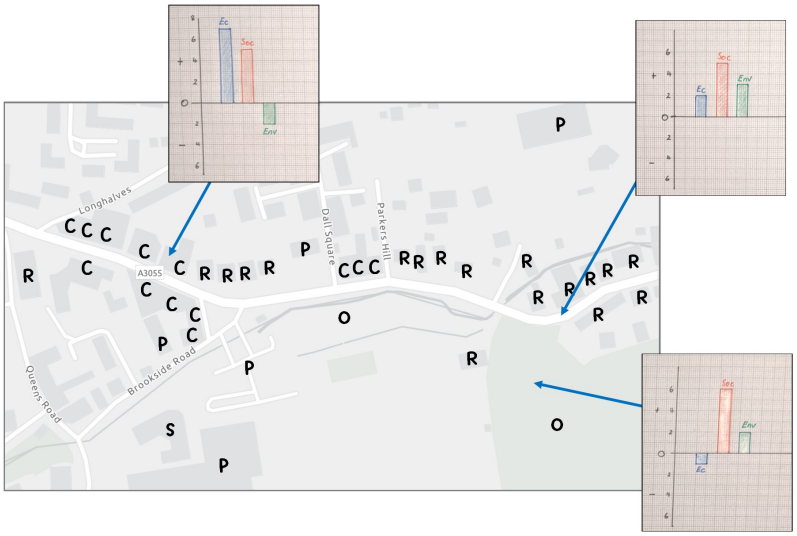
Observed behaviour / space use	Economic impact					Social impact					Environmental impact				
	-2	-1	0	+1	+2	-2	-1	0	+1	+2	-2	-1	0	+1	+2
Dog walking			✓							✓		✓			
…															
…															
Total															

At each survey location students calculate the total economic, social and environmental scores by adding the values in each column together.

Suggested data presentation

A complete land use map can be easily produced by students combining their data with that of their peers. At each space use survey location, students can produce a bipolar bar chart showing the total scores there with three different colour bars representing each of the economic, social and environmental scores.

Depending on the scale of the map, it may be possible to place these directly onto locations where the space use surveys took place. Otherwise these can be placed around the map with arrows pointing them to the survey locations.



Key questions for reflection and analysis

- Which survey location shows the most sustainable space use?
- Which survey location may need management in order to improve the social / economic / environmental aspect of their sustainability?
- Which survey locations had surprising sustainability values and why?
- Is there any relationship between land use and sustainability?
- In what ways does the observed space use contradict the expected space use (based on land use)?
- How might our results have been different if we had surveyed at a different time of day?
- Did we survey enough points to make valid conclusions?
- What improvements could there be to recording land use in the field?

Taking it further

Following the inquiry, students could design A management plan for the area to make it more sustainable, targeting aspects of space use that have produced negative scores economically, socially or environmentally.

Students might also like to look at how land use has changed over time by accessing old photographs, maps or reports on the area and gauge whether their local area has become more or less sustainable over time.