

Past Present Future: What Where When?

This school pack is based around the discussions relating to whether a quarry should be extended and is linked to the National Curriculum: Key Stage 3 Unit 21 Citizenship: People and the Environment. It also links with the Leading, Learning and Thinking Initiative.

Premise: Economic development always comes at a cost. Sometimes the benefits outweigh the costs. Pupils will have to participate in discussion and come to a joint decision on a planning issue. In this instance, there is no correct answer to this conundrum. The value in the exercise lies in the lessons learnt through debate.

The project supports...

- An understanding of how local environment issues affect our community.
- Map work.
- Language work, involving discussion and debate; reflecting and orally reporting; role-play and drama.
- Analysing a range of sources of information.

These resources are provided...

- Press release
- Maps of the area affected by the quarry expansion. (On CD and in hard copy)
- Photographs of flora and fauna and significant features
- Replica archaeological finds
- Pupil cards

The project includes...

- Structured activities to involve pupils in the debate
- Map work based around maps of the area.

Information for teachers

These notes contain essential information about the project and associated materials.

Information in this pack

You should have: -

- Information for teachers (these notes)
- Lesson plans
- Evidence pack including map and photographic evidence
- Copies of the press release
- Pupil sheets for the following groups
 1. Quarry Company Managers
 2. Quarry Workers and locals in favour of the quarry
 3. Councillors and Planners
 4. Environmentalists
 5. Locals against
 6. Historic Environment

The Groups and Roles

Quarry Company

Managing Director

Quarry Manager

Planning and Environmental
Consultant

Press officer*

Archaeological Consultant *

Councillors and Planners

Councillor One

Councillor Two

Highway Department

Planner

Heritage Environment

Local Historian

Chesford Hall Owner

Archaeologist *

Tourist Board

Quarry workers and locals in favour

Customer

Worker

Union Representative

Unemployed person (age 18-21)

Locals against

Guest House Owner

Cafe Owner *

Farmer *

Mother with Asthmatic Son (age 12)

Environmentalists

Environmental Activist

Extreme Activist

English Nature *

County Wildlife Trust

** These roles can have more than one pupil*

Past Present Future: What Where When?

At the start of the lesson

The class should be divided into the six groups.

Some of the roles can be doubled for classes larger than 24.

Each pupil should be allocated a role from the appropriate list of occupations.

In Lesson 1 each pupil will

- Read the press release
- Read the basic guidelines for each occupation
- Study the maps and photographic evidence provided
- Have time to study their individual role
- Prepare a presentation with their group (the Councillors and Planners group will use this time to prepare questions for the other groups)

In Lesson 2 each pupil will

- Remind themselves of their role
- Remind themselves of the group presentation (Councillors and Planners will use this time to remind themselves of the questions they wish to ask the other groups)
- Present to the Councillors and Planners and answer any subsequent questions
- Have a free vote at the end of the presentations

Large clear labels could be prepared for the pupils to wear during the presentation.

Note on map work

It would be helpful if children had experience of working with a 1:50,000 map and interpreting it using the key and scale.

Teacher notes for introduction to Lesson 1

A quarry company wants to continue to extend gravel extraction in the area. The quarry has been in existence for 20 years.

The company already employs 30 people on the site and more jobs may be created.

If the quarry is not extended, available mineral deposits for extraction will become exhausted, the quarry will close and jobs will be lost. The quarry plays a significant role in supplying construction materials within the county, and there is a continuing requirement to maintain supplies within the area.

The planned extension is in the direction of an important archaeological site, this site might be damaged.

There is a small but thriving tourist industry in the nearby town and villages generated by a theme park 30 miles away. A fear exists that if the quarry is extended the tourist trade may be adversely affected.

Should the company be allowed to extend their quarry?

At the end of lesson 2 pupils should be given a free vote on whether they are *for* or *against* the quarry expanding.

Quarry Company

Managing Director

Objective

Your company needs to extend the quarry as nearly all of the sand and gravel from the existing quarry has been removed. If you cannot extend you will not make any money and will be forced to close the quarry. Expanding the quarry is necessary to make sure that jobs are kept and new ones are created.

You need to keep your shareholders and your workers happy.

If local people are not happy your job becomes more difficult. Their support is very important.

Information

The quarry extracts sand and gravel. These materials are used for building roads, houses and schools. They are also used to make concrete, bricks, blocks, and tarmac.

Quarrying will take a little over 5 years. The area will be restored once quarrying is completed. Restoration work will be completed one year after the quarry closes. When this is finished the land will be used for leisure and for nature conservation.

If the quarry is able to extend the operating hours would remain as they are now, between 7am and 7pm during the weekdays with some Saturday morning working.

Building soil banks to screen the quarry will hide the quarry from being seen by people in the surrounding area and reduce the amount of noise heard from the quarry working.

Quarry Company

Quarry Manager

Objective

The expansion of the quarry is important to make sure that all the jobs in the quarry including your own are kept safe.

You must keep costs to a minimum and it is important that the expansion keeps within budget.

You know that your job would be easier if the local residents supported the quarry extension.

Information

Having archaeologists on site slows down work and the quarry company will have to pay the archaeologists.

Building new roads will increase costs.

Some money has been put in to screen the site from the public but if more screening is needed it is going to cost more money.

If the quarry can work on a Saturday it will mean that more sand and gravel can be extracted.

If the products are sold to local concrete manufacturing companies it will cut down the cost of transporting the sand and gravel.

The operation of the quarry would mean more jobs will be created and the local economy will be supported.

Quarry Company

Planning & Environmental Consultant

Objective

You need to explain to people that you are a planning and environmental consultant and you have been working closely with the quarry company. You have looked at the possible threats to the local environment and made suggestions about how to minimise them. You believe that sand and gravel will be able to be extracted with only a minimum amount of disturbance to the environment.

You have also been thinking about what will happen to the quarry once all of the sand and gravel has been extracted. You have started to think about the restoration work and intend to create a landscape suitable for local wildlife to live in safely. People will also be able to use the area (picnics, bike rides, walking, seeing the wildlife).

Information

Large banks will be built to screen the site on the north and northeast sides. This will reduce the noise and hide the quarry from view. Trees and other vegetation will help to provide a screen as well.

The site is located entirely within the floodplain of the nearby river. Regular flooding will be reduced by building banks around the areas of the gravel. None of these banks or any of the quarrying will obstruct the natural flow of floodwater.

Quarry Company

Press Officer

Objective

You need to show locals, shareholders and planning offices that this expansion is a good move. It is up to you to put a positive spin on the quarry expansion. You need to tell people that the quarry company is aware of the potential effects of extending the quarry. You need to explain that experts are being employed to help reduce these effects e.g. archaeologists and ecologists.

You will also remind people that extending the quarry will mean that the quarry workers will keep their jobs and new jobs could be created.

You should explain that when quarrying is finished the area will be a wonderful place to visit.

You need to make sure that people know that the quarry company will be just as careful as it has been in the last 20 years.

Information

There is a footpath and a bridleway for horses across the site. The bridge that once linked the footpaths on each side of the river collapsed a long time ago. The quarry company will rebuild this bridge about 400m upstream so people can enjoy walking along the footpath again.

The whole quarry site will be restored as a nature conservation site (with some leisure use). The soil removed from the site would be used to create a wetland wildlife habitat. It will also include large areas of conservation woodland.

Quarry Company
Archaeological Consultant

Objective

You must give evidence that you have researched the history of the area and are aware of the archaeology, which has been found in and around the site. It is up to you to say that during quarrying a qualified archaeologist will be present on site and will record any archaeology that is discovered. As you represent the quarry company you should demonstrate that the company has a good track record in caring for archaeology.

Information

Archaeological features have been found within 1km of the proposed site, these include: (see map 3).

- Chesford Hall – a manor house built during the medieval period and added to in the 18th Century
- A gold torc – a type of necklace dating from the Roman period (43AD to 410AD)
- Deer park – linked to Chesford Hall and used to keep deer for hunting during the medieval period
- Flint tools and pottery – these were found in the prehistoric site that is situated within the extension area

Archaeological fieldwork will be carried out as follows:-

An archaeologist will observe diggers moving topsoil. If any archaeology is found the digger will stop and the archaeologist will record what they can see.

The excavation and recording of a site will involve archaeologists

- Exposing the archaeology by digging.
- Drawing and photographing any archaeological features.
- Removing any archaeological finds for further investigation

Quarry worker and locals in favour

Worker

Objective

You work at the quarry and do not want to lose your job. If the quarry is not allowed to extend you will be unemployed. You do not want to have to move away from Chesford in search of work.

Information

You want to know how this new quarry might affect you personally. You are interested in finding out about the working conditions in the new quarry, and what sort of jobs might be available. You are also interested in how long the quarrying might last. You live locally so would like to also know if some quarry workers might be kept on to help with the restoration of the area.

Quarry worker and locals in favour

Union Representative

Objective

You must support the workers to ensure that

- They have no change in their pay,
- They maintain good working hours,
- Working conditions do not change because of the expansion to the site.

Information

Your job is to protect the rights of the quarry workers. You want to know what hours people will be expected to work and whether new jobs will be created. Will there be opportunities for promotion within the company?

Quarry worker and locals in favour

Customer

Objective

Your company is supplied with sand and gravel from the quarry. If the quarry closed it would mean that you had to get sand and gravel from another quarry further away. You would have to either make less profit or put your prices up. You may have to close your company if this happens.

You support the quarry extension.

Information

You are anxious to know whether the quarry will be allowed to extend. If it is not you know your business will be affected.

If the quarry is allowed to extend you will want to know if the quarry company intends to put up the price of sand and gravel. Will more sand and gravel be available for you to sell?

Quarry worker and locals in favour

Unemployed person (aged 18-21)

Objective

You are keen to find work in the area. The expansion of the quarry will mean more jobs and you have a good chance of getting a job there. You are an apprentice geologist and this would mean a good first step into your career.

Information

You want to know all about the different jobs that might be available in the quarry. You are looking for work immediately so are interested to know when any jobs might be advertised.

Councillors and Planners

Councillor 1

Objective

You are happy that the quarry is being developed, as it will mean that jobs will be safe and the local area will remain prosperous.

Information

You are interested in the following factors

- The employment situation in the area
- The creation of new jobs for local people
- The economic development of the area and the possibility of more money coming into the area

Councillors and Planners

Councillor 2

Objective

You are against the proposal because of the impact that the site will have on the local environment. You are particularly concerned that the public footpath network will be affected by the extension. You feel the site will be noisy, messy and a blot on the landscape.

Information

You are interested in the following factors

- The noise levels in the quarry and the surrounding area
- The effect on the public footpath and the bridleway
- What is going to happen about the bridge across the river (you know moving the bridge means a change to the footpath)

Councillors and Planners

Highway department

Objective

You are very worried about traffic on the nearby A-road. Traffic levels have grown generally over time, and the amount of noise, vibration diesel fumes, and other pollution generated by those vehicles is seen as damaging the local area.

Local residents have already complained about the amount of traffic using the roads around the quarry.

You must think about how suitable the roads are to take more traffic and how much it would cost to upgrade any unsuitable roads.

Information

You are interested in the following factors

- Proposals to ensure the local A road will be able to cope with the increased traffic from the site
- Possible complaints from local residents regarding the use of Benfield Lane which leads to the quarry's private access road
- The cost of the upgrade to the public roads, which are going to be used almost exclusively by the quarry traffic

Councillors and Planners

Planning Officer

Objective

You work for the County Council and are responsible for deciding whether the quarry should be allowed to extend.

Information

When making your decision you should consider the comments made by advisors and the local people. It is up to you to decide whether the quarry company is doing everything it can to reduce the negative effects of quarrying.

You need to consider

- Has the quarry company minimised the amount of noise and dust which will be caused by quarrying?
- What will the affect be to local wildlife?
- Will known archaeological features be affected? Has the quarry company considered what they will do if unknown archaeology is found?
- What will the impact be on the surrounding farmland?
- What will the site look like when quarrying is completed?
- Are local people in favour of the quarry or strongly against it?

Historic Environment

Tourist board

Objective

You are against the proposal because the nearby towns and villages are used by visitors to the nearby theme park. The industrial nature of the quarry may drive the tourist business away and you are concerned about extra traffic on the A-road, which feeds into the theme park. Walkers and ramblers in the area could also be affected by the expansion.

Information

You are worried about how the quarry extension might affect the local tourist trade. You know that many people come to walk around the area and that if the footpaths change this might affect them. You are concerned that the quarry will spoil the lovely views from the nearby cycle way.

Historic Environment

Archaeologist

Objective

You are concerned because of there are a number of archaeological features within 1km of the proposed site, for example: Chesford hall, a gold torc, deer park, flint tools, pottery. You would like further archaeological work to be done in the area of the proposed extension to ensure that no significant archaeological remains are destroyed. You insist that the company work with a qualified archaeological organisation or you will have to object to the proposal.

Information

You are very concerned about quarrying taking place on a site when there have been several finds of great local significance found in the area. You want the quarry company to

- Work with a qualified archaeological organisation
- Allow archaeologists to record and identify any archaeological features that are found.
- Donate any archaeological objects to the local museum

Historic Environment

Local Historian

Objective

You have an interest in the potentially important prehistoric site, which is located in the area of the proposed extension. You would like to know if any archaeological sites or finds have been found in the area. You wish to ensure the site is properly recorded.

You are also concerned that quarrying in the area may damage Chesford Hall, which is a significant building and close to the site. You would be happy to see the quarry company restore Chesford Hall and the buildings adjacent to it.

Information

The archaeology found within the area is of great interest to local people. You want to know how local people will find out information about the archaeological finds. You also are worried about Chesford Hall. You know it is a listed building and are concerned about the effect that the vibrations from the quarry might have. You have been told that there might be restoration work on the hall but want to make sure that this work would be carried out without disturbing the visitors to the hall.

Heritage Environment

Chesford Hall owner

Objective

You are concerned that quarrying will cause vibrations, which will damage the Hall. You are worried that you will be able to see the quarry from the Hall and that wildlife in the surrounding areas will be affected.

However, you are also aware that Chesford Hall needs a lot of repair work and this will cost a lot of money. If the quarry company could offer you some help with the repairs you would be very happy.

Information

You want to know what effect the quarry will have on the hall. Throughout the year many people visit and you want to make sure these visits are not spoilt.

Will the quarry company try to minimise the visual and environmental impact to the Hall and its surrounding areas?

You are also interested to know whether the quarry company could help you repair the hall once quarrying is completed.

Environmentalists

English Nature

Objective

You are desperate to protect the area surrounding the existing quarry. You believe that allowing the quarry to extend will affect the local ecology, including hedgerows, a nearby pond and woodland areas. There are also some rare animal species in the areas surrounding the quarry such as bats, otters, crayfish and amphibians. You are concerned that either the animals or their habitats will be affected by the quarry extension.

Although you may not be able to stop the quarry extension you should try to keep the expansion and any impact to a minimum.

Information

You want to know what the quarry company intends to do about the hedgerows? These contain a large variety of plants and are important to local wildlife. You want to know how the rare species are going to be protected. You are also interested in finding out more about the restoration of the area and what that might involve.

Environmentalists

County Wildlife Trust

Objective

You are worried that during the extension of the quarry industrial waste may find its way into the river.

You are keen to see the land between the canal and the river restored for nature conservation purposes.

Information

You are concerned about possible pollution and its effects on the river and the wildlife living in and around it. You need to find out more information about what measures have been put in place to make sure the river does not get polluted. You would be very happy to see the land between the river and canals improved but are concerned about who will be looking after and managing the land once it is restored

Environmentalists

Environmental Activist

Objective

You have noticed over the years that banks at the existing quarry have developed patches of interesting wild flowers and insect life particularly butterflies. You hope that the quarry company listens to your concerns and protect the local wildlife, which are threatened by the quarry.

Information

You have several worries about the quarry expansion. You want to make sure that the wildlife in the quarry are protected and left undisturbed. You hope that when being designed, the restoration work will consider the needs of the local wildlife and their habitats.

Environmentalists

Extreme Activist

Objective

You are against any form of industrial expansion. You will protest strongly against anything that affects the natural environment. You will even strongly argue that the current quarry site needs to be closed and immediately restored and wildlife reintroduced.

Information

You know that the quarry is located within the Green Belt and want to make sure other people realise this. You are not sure that the quarry needs to expand. If it is allowed to expand you think it will have drastic consequences on the environment.

You are also aware that there are a number of important animal habitats (e.g. otters, bats) in the surrounding areas. These animals are protected by law.

Locals against the quarry

Guest house owner

Objective

You are worried that if the quarry extends tourists will not stay at your guesthouse and you will lose money. You are interested to know whether the new quarry workers will be looking for somewhere to stay. If so, this may increase the number of guests staying for long periods, which will improve your business.

You are also concerned that if the quarry extends the roads will get busier.

Questions

Where are your workers going to live?

Your business depends on people wanting to visit the area. If the quarry extends you are concerned that that people will go somewhere else. Will the area become too noisy for the walkers who normally stay with you? Once the quarry closes will people want to return to Chesford?

Locals against the quarry

Café owner

Objective

At the moment your customers are all tourists visiting the area. These people arrive throughout the day and generally order cakes and tea. If tourists stop visiting the area you will have no customers. Could you tempt the quarry workers to eat in your café at lunchtime? Would you need to alter your menus?

You should also remember that you live above your café and it is along the main road.

Information

You are interested in the proposal but also rather worried about what it will mean to you and your café. You want to find out whether the traffic will increase on the A road and what affect this will have on your business. Your main customers are currently tourists and you are concerned that they will stop visiting the area. Will the quarry company be providing a café at the quarry for their staff or can you expect quarry workers in your café?

Locals against the quarry

Mother with asthmatic son (aged 12)

Objective

You are worried that extending the quarry will mean more dust. You must insist that dust controls are adequate. Can the company make sure that they will be using water hoses to control the dust? Will they put sheet coverings over the lorries as they transport the gravel?

Information

As you have an asthmatic son you are very worried about the dust levels and what the quarry company will be doing to make sure that these are carefully monitored and controlled. You want to know how they are going to make sure that the dust does not affect the surrounding area.

You are also worried about the number of new lorries that might be on the road and how this increased traffic will affect the village and the nearby school.

Locals against the quarry

Farmer

Objective

The majority of the land that is proposed for the expansion is classed as "Good Quality Versatile Land" and this type of land is good for growing crops. You would not like this land to be lost.

With the current quarry you have had cause to complain about the noise and the damage to your farm from the vibrations of the drilling.

The lorries will pass near to your farm, possibly causing pollution damage to your crops.

Information

You are very interested to know how the proposed quarry might affect your farmland. You know what the effects of the current quarry have been and you are looking for reassurance that the new quarry will not damage your land.

You are worried that the quarry company will make a lot of noise and vibration, which will affect you and your family. You are also concerned about the company polluting the surrounding land and water. How will the quarry company prevent this?

If the quarry is going to directly affect your land you want to know if there is going to be some compensation.

The Daily News



ENGLISH HERITAGE

It's confirmed! Chesford Hall Quarry is set to get bigger!



Have your say!
Come to the public meeting and help the Councillors and Planners make their decision.

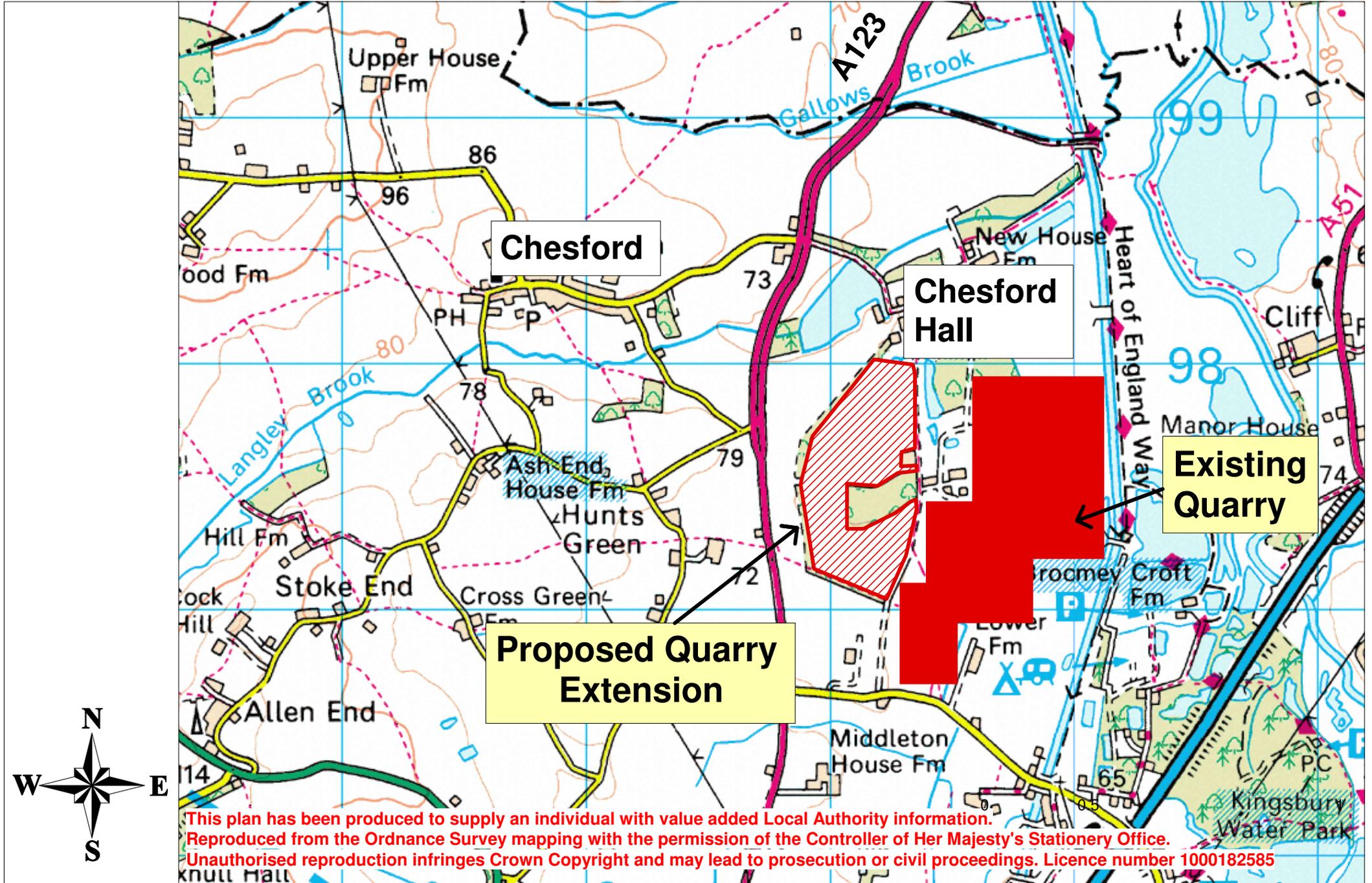


Quarry or Not?

A spokesperson for the company, that employs 30 people on the site, has confirmed the plans to extend Chesford Hall Quarry. 'We need to extend this quarry to keep it open and create new jobs. The extension will provide the gravel that this area urgently needs for buildings and roads'

The story does not stop there; the planned extension is on an important historic site. There are also environmental concerns about the impact an extension would have on the plants and animals that currently live in the area. The local tourist industry is concerned that if the extension goes ahead, tourists may stay away.

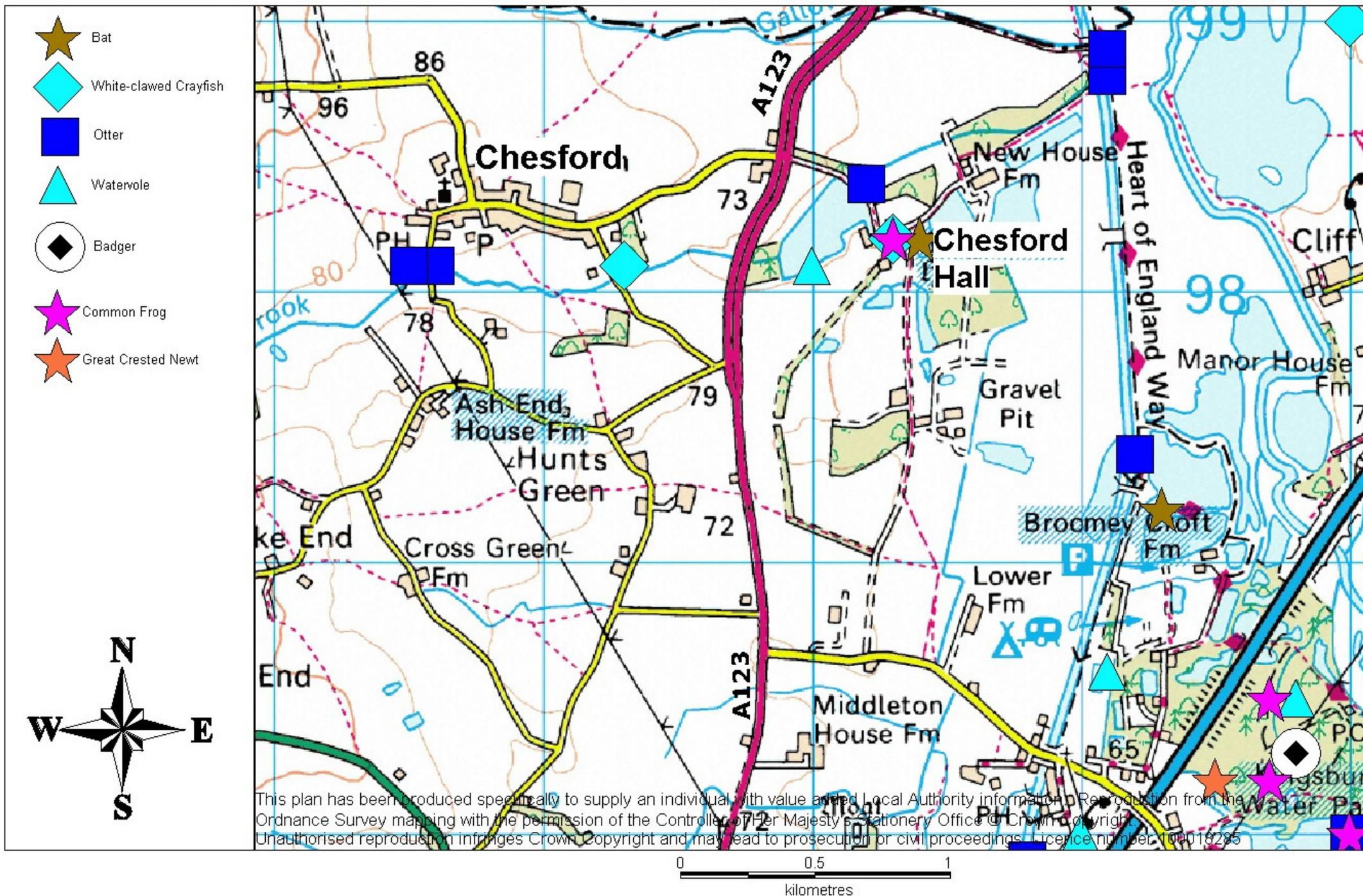
Map 1 Quarry Location



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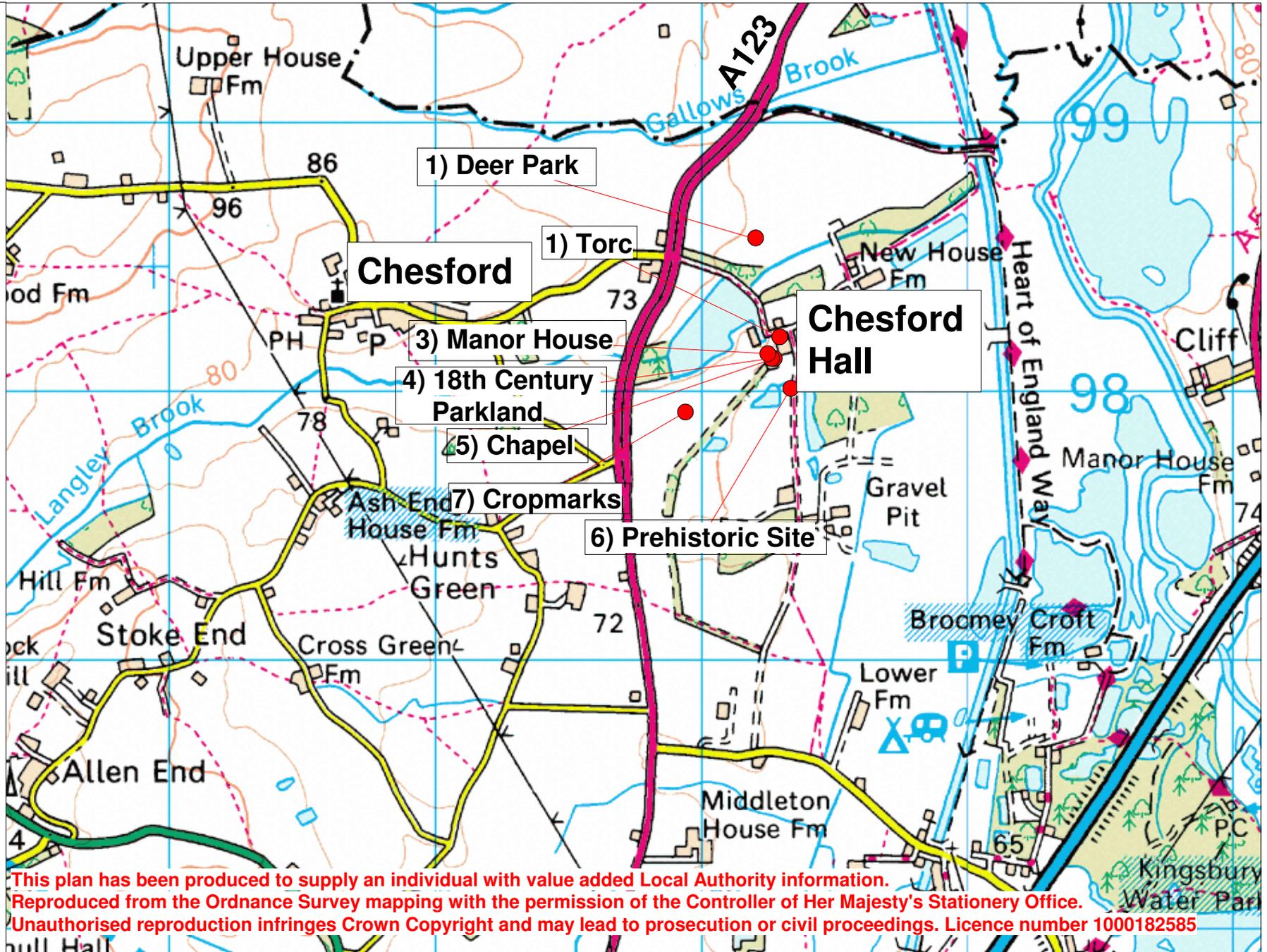
Map 2 Ecology Map



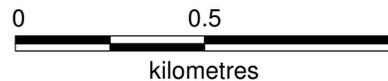
Map 3 Archaeology Map

Key

● Monument



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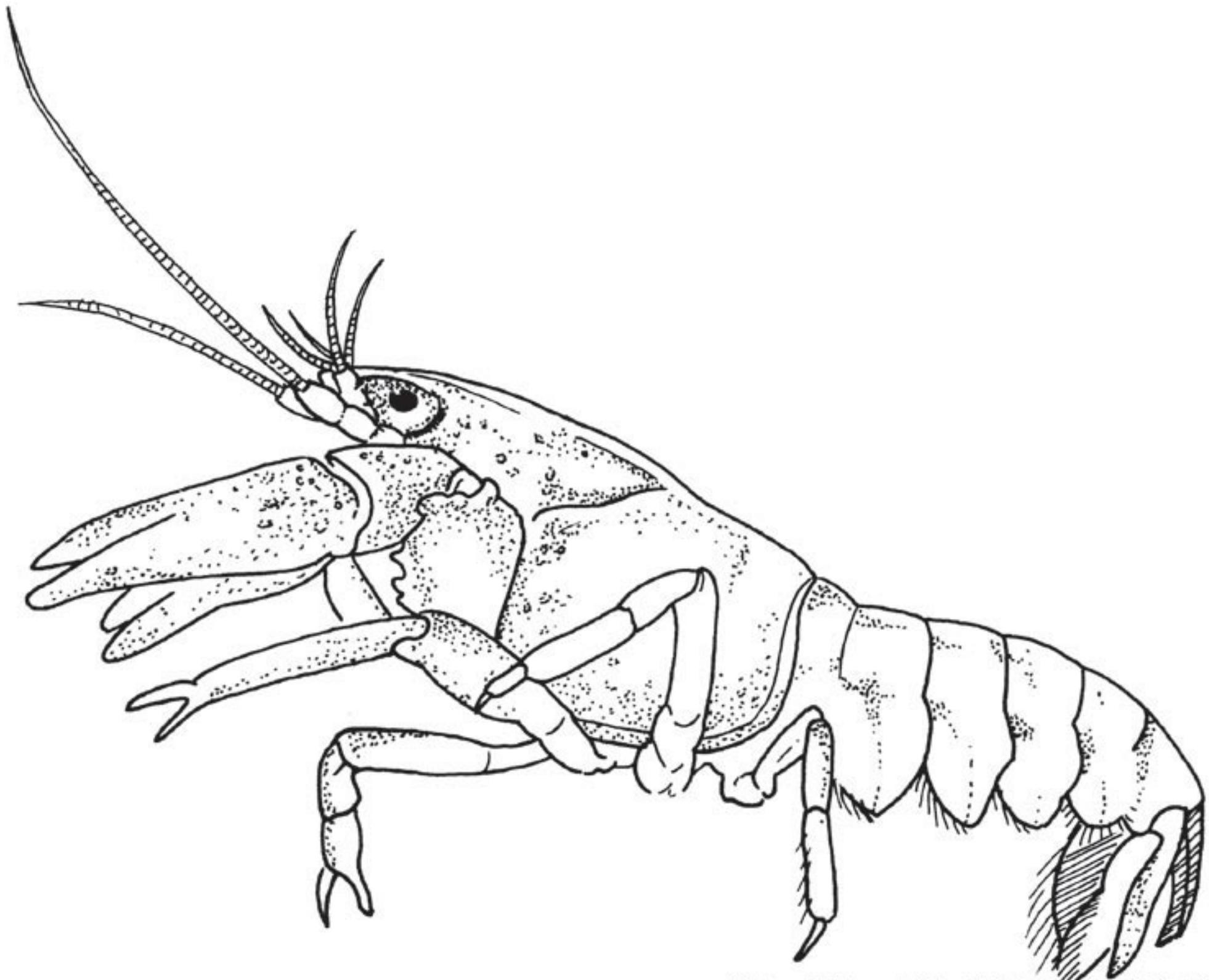














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Photo 2: Garden features (5)



Copyright reserved Cambridge University Collection of Air Photos

Photo 3: Crop marks feature (7)



Copyright National Coal Board (permission sought)

Photo 1: Aerial photograph of Chesford Hall and surrounding area.



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