

QUARRY VISITS FOR SCHOOLS

A Different Style

Introduction

Undertaking quarry visits and field trips is important for schools, universities, industry in general and the quarry industry in particular. It is important that as many people as possible, citizens and future decision makers, have at least a cursory understanding of the role and social importance of the industrial minerals industry. It is vital that members of the public are able to take a balanced view of the industry and proposals that it may make, and make informed decisions based on a factual background. Field trips are unlikely to convert visitors overnight into staunch supporters of the construction materials industry but at the very least they should help towards a balanced view based on accurate and well presented genuine information.

Traditional quarry visits involve taking visitors around an operational site, some of which have a visitor centre on site, and into the heart of the operation. Such visits though are now more difficult to organise due to demanding safety procedures and they take up quite a lot of management and staff time in escorting and driving duties. It is not possible to host as many school visits as many companies would wish.

Valuable though visits inside operational quarries are they do run the risk of offering a relatively limited perspective and the distraction of big yellow machinery.

The style of field trip described here was developed 5 or 6 years ago between the author and a secondary school and takes place entirely outside a quarry. It is suggested that this style in fact offers a better perspective on the role of the minerals industry, takes up much less management time, and is very safe.

The school report that since adopting this annual geography field trip there has been a tangible improvement in the quality of student's school work in relation to the subject matter.

Field Trip

The pupil's output for this element of the geography syllabus is a written project debating the matter of establishing an (imaginary) new cement works in a National Park. There is evidence that they previously tended to get received wisdom at school with timeworn and incorrect assumptions as to the impacts of quarrying - the usual noisy dusty polluting environmentally damaging process that some people (and most journalists) assume.

Quarries used in this example extend along the broad Limestone ridge to the southeast of Buxton in the Peak District National Park but could equally well apply in many other locations. It is however of interest that here the National Park boundary when determined was carefully drawn round the line of four operational quarries, perhaps reflecting a wisdom of allowing them to operate in the normal planning environment of the day because of their social and economic importance. The landscape generally in the area offers quiet rural countryside to the north and the south.

The pupils are given time in the quiet rural environment to take in their surroundings in a valley from which the quarries are not at all obvious and traditional farming is the main activity. Then a short walk on public footpaths takes the group uphill to the rim of the quarries which are come across suddenly and offer a dramatic contrast.

Looking across 2 of the large quarries the pupils are asked to write down their thoughts on what they see and are given 10 or 15 minutes to do this. After a short while the author arrives along the

track carrying a small rucksack and is asked by the teacher to speak to the pupils about the quarrying activity.

The author starts by asking the pupils what they think and there is predictably a generally negative and noisy response. So the author states that he is proud of the industry, and of the quarry, and of the people who work in them.

Questions are put to the pupils:

- Who lives in a house? - pull out a lump of concrete from the rucksack.
- Who has paint on their walls? - pull out a can of paint.
- Who brushes teeth every day? - show toothpaste.
- Who wears makeup? - show face powder.
- Who ever takes a painkiller? - show pharmaceutical tablets.
- Who eats bread? - a loaf with whiteners and Calcium additives.

Then show:

- Electrical cable - list fillers in the insulation and Flue Gas Desulphurisation for energy supply.
- Glass jar - speak of the limestone, soda, and sand mineral constituents of glass.
- Water - the use of minerals for purification.
- Plastic bottle - fillers.
- Paper - detail fillers and kaolin surface treatment.
- Small piece of steel - fluxes and chemical buffers.

If it can't be grown it has to be mined.

Having established that everyone, but everyone, in virtually any society uses mined products the author moves on to a brief description and background of the minerals industry, roughly what volumes of material are used in the UK each year, and how the quarries sit with the National Park. At this location it is possible to see on the ground how the Peak District National Park boundary was drawn to exclude the 4 quarries and thus let them operate under a normal planning regime.

From a vantage point on the rim of the quarry it is possible to see modern working methods in action - sometimes including showing how quiet a quarry blast actually is - and see the application of site restoration by landform replication, pasture creation, and dry stone wall building. Modern, landscape sensitive quarry design, quarry development and restoration practices can be illustrated on the ground.

Pupils are interested to hear how important quarry jobs are in the rural and National Park environment with both directly employed people and indirect related services such as haulage, catering, mechanical services, office services and materials supply. A large operation will support perhaps 40 or 50 full time permanent long term jobs over the full skills range from unskilled to Master's degree level. Then there are all the professional and support jobs in company offices.

It is explained that in many rural areas the minerals, mining or quarrying industry is often the largest employer and that the cash contribution to local economies typically runs into millions of pounds each year.

Benefits of style of field trip

There are numerous benefits to this style of field trip. There is no call on the quarry management's time - in fact in many locations from public rights of way it is possible to run such a trip without any involvement of the quarry operator at all, although a knowledgeable commentator preferably from the industry is needed.

A larger party can be taken than is sometimes possible inside a quarry. The trip is easier to organise and safer, and can be less time consuming.

The pupils gain a bigger perspective in both the literal and the intellectual sense of the relevance and role of the minerals industry operations, contribution to society's needs and contribution to local and national economies.

Downsides are few although the pupils don't get to see the drama of big machinery close up or of large rocks being crushed with ease, or speak to real people working in the operations.

Results

On the field trips run in this manner there is a tangible change in attitude in just half an hour or so. We may not win many instant converts but all pupils at least start to accept that there is a vital and legitimate role for this industry.

Meeting pupils 2 or 3 years later has shown that the field trip was memorable.

The school have seen an improvement in the academic aspects of this part of the geography syllabus. The project work regarding the establishment of an imaginary new cement works in the National Park has shown a distinct improvement in the balance and quality of arguments debated.

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