

MOORS FOR THE FUTURE GRINDLEFORD GEOLOGY AUDIO TRAIL

“The Ghost Of A River and the Soul Of A Stone”

1) Time And Chance

location – outside the Station Café (Totley Tunnel)

Bill Bevan:

The Totley Tunnel is a nineteenth century railway tunnel on the Sheffield to Manchester railway line, built by hand by large gangs of ‘navvies’ working for the engineering company who won the contract to build the railway line. The gritstone changes depending on the bedding, sometimes it’s very hard, sometimes it’s not too hard. It’s not a very difficult rock to work as far as I’m aware, I think the way they made the tunnel would be to plug the rock face with explosives, drill holes, put the explosives in, stand well back, blow the rock face off, then basically you had to use shovels, picks, to clear that rock out the way. It’s a heavy labouring job, in effect.

John Woolf:

The Peak Park was, 250 million years ago, in the beginning of the Carboniferous period, a warm shallow sea. Sediments that eroded were brought south by rivers running off that eroding landmass. Tremendous thicknesses, thousands of metres thick, of gritstone then built up and were in turn buried under more, younger layers, such that they were all crushed and consolidated into hard rock. Sometime shortly after they were formed, this part of the country, that we now call the ‘Derbyshire Dome’, the area round Castleton, was pushed up from below, and the younger limestones that had been formed at the bottom of the tropical sea are now exposed, like having had the top of an egg removed.

This tunnel mouth has tales to tell
Dug by hand from living rock
Blasted by the fires of hell
By men who juggled dynamite

Yet the railway’s but a fly in May
For written on the blasted face
Are stories of a billion days
And secrets now exposed to light

Born from force and circumstance
A landscape made of time and chance

The engineers who made such plans
Could not conceive of nature’s clock
And saw the world as theirs to span
To measure, and to regulate

But earth and sea have turned around
And turned again, each restless place
Gives ground to something newer found
And leaves the fossils to their fate

Born from force and circumstance
A landscape made of time and chance

2) The Incline

location – by the wheel foundations

Bill Bevan:

The Incline is a fantastic example of what we might think of as intermediate, low energy technology. It had two sets of railway lines, it had two large carriages, both of them were connected to each other by a very thick bit of rope, which went through a winding winch at the very top of the incline, and you always had one carriage at the top and one carriage at the bottom, and you filled the carriage at the top. When that was filled, it just used the weight of the stone to descend down the incline, but the winding gear meant it was a controlled descent – it didn't just career down. As it went down it obviously lifted up the empty carriage to the top of the incline next to the quarry, so that could be then filled.

Youth club members:

It looks like a wall

It looks like it could have been a huge sort of shed – a stone shed

Difficult, cold, quite scary, working with big rocks and things, might fall on you

Just looks like ruins

It does look quite colourful though – yeah – it's got like weathering

Parents:

Even using tools it would still just be endless and monotonous, knocking away at pieces of stone – I couldn't imagine what it was like

The heavy machinery, and to lift all this stone – you know, there's just little bits of metal left here, there must have been pulleys and cranks. It just must have been a really hard life, all year round as well. Really cold and hard and harsh.

3 "The Soul Of A Stone"

Location – Bolehill Quarry

Bill Bevan:

Bolehill Quarry where we're standing now almost didn't happen, and this landscape that's been created, it's almost been created by chance. The stone from Bolehill Quarry was taken to build the Derwent and Howden Dams in the Upper Derwent by the Derwent Valley Waterboard, and it really had to meet a number of criteria, basically it had to be good gritstone beds, it had to be owned by somebody who was willing to sell them the land, or sell them the rights, and it had to be near a transport route. The Quarry opened in 1901, which was when the two dams started to be constructed, and it was in operation till 1910. The workforce that worked on the Quarry and on the dams, all employed by the Derwent Valley Waterboard, came from three main geographical areas, that was Wales, South West England and the North Midlands/Lancashire area, but at this time, when there was a large construction job like this people would turn up on spec to find work as well, and this is where we get the word 'Tramp' from, because tramp was actually what a navigator would do, they would tramp across Britain from one job to another looking for work.

Well I tramped from Wales for a job to find
I pray the engineer will keep my soul in mind
There's stone to be dug, to hold back a flood
And it's millstone grit makes the soundest plug

I've found lodgings in the new tin town
It's a palace for a man who in hedges laid down
I dig all day till I rest my head
On a gritty pillow from a river bed

Chorus:

The trucks come up empty
As the load goes down
My heart is heavy
As the cold gritstone
My arms are aching
And I'm all alone
It's the flesh of a man
Against the soul of a stone

When the blast whistle goes you'd better cover your head
Or your grave will be covering you instead
There's chains and wheels as'll take a man's arm
That's the price on the soul of the cold gritstone

Now it's near ten years that I've worked on the hill

And the hill keeps standing, it's standing still
Ten long years could turn a heart to stone
But I met my Hannah, made this hill my home

Chorus

River makes rocks and rocks make land
Then the rock holds the river in the valley's span
It took a thousand men to build the Derwent Dam
But the rock will forget all the works of man

Bill Bevan:

It would have been very noisy, very dangerous place to work. The woodlands and the trees and this beautiful birch wood that we see today actually wasn't there at the time, it was a very stark looking, open landscape. The best way really to get an idea of what it would have been like to work there probably would be to look at some of the mines or quarries in developing countries now, like South America, Africa or India.

The Derwent Valley Waterboard, for about half its workforce, actually had a temporary settlement called 'Tintown' next to the Derwent and Howden Dams, but a lot of the other men were set up in lodgings, guest houses, farmers barns, wherever basically somebody had some room, they would rent that out to a navigator. We also know that quite a few of them met women when they were living here and settled in the area and there are still quite a number of Welsh surnames in the Derwent Valley Area.

4) Grindstones

Location – abandoned crushing stones

Bill Bevan:

The name of the edge – ‘Millstone Edge’ - gives it away. That’s not its original name, that name developed because this rock, the type of fine grained millstone grit in this location was really suitable for making millstones. Millstones were made in this area from the medieval period onwards. The quarry face on millstone edge – that was dynamited away to create more useable blocks of stone. Those blocks of stone would then be manoeuvred by hand and by winch into position and then they were turned from lumps of raw millstone rock into these finely crafted crushing stones by hand, by hammer and chisel. Some of them were made in the open air, but some of them were made in sheds. Big sheds were built where the millstone makers worked and we know that the conditions in these sheds were pretty grim, because there’s lots of millstone dust flying around. We’re now in the end of the fifteen hundreds, so about the time of King Henry VIII or Elizabeth I, a millstone maker could make 12 pairs of millstones a year, so that’s effectively one millstone every two weeks. In the medieval period, the fifteen hundreds, you had a flat stone with rounded edges, very different to the ones we see here with the flat edges, that was the bottom stone, and then the stone on top of that was actually a domed stone so it had a slight sort of conical shape to it.

The mason’s hand and the mason’s eye
Carved a future from a river squeezed dry
Pulled a pair of stones from a shape in the head
To pulp a tree or to grind grey bread

One stone stands
Another’s on its side
Said one to the other
“Will you be my bride?
On our wedding day
We’ll grind away”
But the priest never came
So in the bracken they lay

River makes rocks and rocks make land
But the rock will forget all the works of man

Bill Bevan:

What they were used for was to crush timber to make paper pulp, and they were exported to Russia, to Scandinavia, to America and to Canada, from the second half of the nineteenth century up until the 1930’s. In the 1930’s the paper pulping industry in Scandinavia collapsed completely and the paper mills closed, and these stones you see now are the last stones made in this location at millstone

edge – they were abandoned where they were left standing, waiting to be shipped.

5) The Hollow Gate (By Lawrence Field)

location – in and around the Hollow gate path

Bill Bevan:

Lawrence Field derives its name from the settlement which is actually just above Padley Gorge. If you look at the map and you see sort of an oval shaped outline marked off by the Ordnance Survey, with 'settlement' written in the middle of it, this was what we call an 'Assart'. It's basically an agricultural enclosure on open moorland. They would have cleared the moorland of stone, they might have had to clear some woodland, to basically try and set up a new farm and a new livelihood. This really is part of the whole settlement pattern of the area, you would have people settling in different sorts of locations, but the best land's probably been continually occupied since at least the Roman period. So if you need for whatever reason to set up on your own, you're really at the margins of the good pieces of land, and it's a very appealing piece of land, this, for somebody to try and turn into cultivation and prove.

The Jagger leads the ponies down the Hollow Gate

A long way now from the half way house

Lights float in twilight

Chained out like fireflies in the wet dusk

Bring the fat of Cheshire farms

To thin, starveling, infant city streets

A storm's coming on

Time to get off the tops

And leave the peat and bracken

To the rain and sky

Pass on by Lawrence Field

Broken circles in stone tell a lie

The assart long gone

The Jagger fancies voices on the wind

Children crying, grandparents telling

Of warmer times and better harvests

While in the valley, sickness sweeps the fields clean

Time to leave the stones

For the finders-keepers of five hundred years

Bad weather's coming in

The seasons no longer answer to each other

Or the farmer

Time to get off the tops

And leave the peat and bracken

To the rain and sky and history

Bill Bevan:

It's a failed settlement, it may have only survived for two, three or four generations, and then possibly because the weather actually got worse in the thirteen hundreds, maybe that just tipped the balance, and over a generation or two people realised they couldn't sustain their livelihood here any more.

As you go towards the river, towards Burbage Brook, you'll notice you're either walking in the middle of it or you're walking just above it, but there's a very deep hollow way that leads down the valley side towards the brook – it's gouged out of the earth. That's a pack horse route, at least medieval in origin. This trackway is called the 'Hollow Gate', and this was created by the trains of packhorses that crossed the Peak District from east to west moving goods. So they were transporting stone products, maybe some of the millstones, salt from Cheshire, dairy produce, anything basically that needed to be transported, that some people wanted on one side and that somebody on the other side was making or selling.

6) The Ghost Of A River

location – the bridge at the top of the brook

AJ:

What do you like about water?

Young people:

It has so many different sounds, like wherever you move the sound changes

And without it we'd all be a bit dead

And it's got sort of calming properties as well as like being very wild – it gives energy doesn't it, with mills

It's so fast in some places, and then in some places it's so slow

And it can shape the landscape

Made it go all dippy and cut a valley, made a valley

I want to go walking by ancient lagoons

Dragonfly dazzles reflect the hot noon

Here was a river, here was a beach

Here were the ferns, waving just out reach

Read the rocks right, the secrets they hold

Each age a fracture, each epoch a fold,

Here was a river as broad as the sky

Till the mountains were humbled and the oceans raised high

Chorus:

Lay me down – rest my bones

Lay me down - make me stone

Lay me down – I want to sleep

With the ghost of a river

The memory of sea

John Woolf:

As these underwater dunes, if you like, or these sandbanks that will have been deposited by the river have built up in size, their own weight and the rocks above them have then compressed the whole such that the sands and gravels have then become solid rock. The top's all been stripped away to expose them as you see them now, and that's why as you look in the rock face you can see the remnants of the old wave currents.

Now a spring mist rises, the brook bubbles up

Who will walk in our footsteps when the sun gutters out?

All of our empires, all that we learn

All washed away when the river returns

Chorus

7) In Padley Gorge

location – near the footbridge across the brook

Moss like coral

Creeps up from the damp of stones

Tracing slow mineral veins

Like quartz growing in the deep heart of the earth

Silicon and oxygen trapping light just so

Milk of the earth

Growing like a reef, like a plant, semi precious

Or common like coarse fused mud in which it lodges

With slow stone time,

The moss speeding by

8) Time and Chance (2)

By the stile on the way out of the Gorge – time for reflection

Bill Bevan:

Geology affects us in many sorts of ways. One direct way it affects us is that it produces the fuel that we heat our central heating systems with. Gas has been produced deep down in the rocks by plant material millions of millions, three hundred million years old, decomposing below the rock, and producing the gas which we've now tapped, and that's where we get our fuel from. It affects us in the walls around us, bricks, breezeblocks, stone cladding, that's all made out of stone, so that's all been made by geology. We drive to work everyday over geology. The foundations of all the roads, motorways, aggregates, they come from limestone or sands and gravels, particular types of geology laid down in particular places. So probably, there's very rarely in your daily life, more than five minutes pass without geology somehow affecting your life.

And now the tale is nearly done
The day walks on into the night
The turning earth speeds round the sun
The seasons dance towards the light

We stand upon a slower dance
In landscapes made by time and chance