

Chatsworth Moor Geocross V22

Words and photos for Facebook

Chatsworths enduring relationship with Water

The Chatsworth Estate has always had a very close relationship with water.

The site for the house was chosen by Bess of Hardwick in the 16th century. She selected a site near the River Derwent and began building the first house in 1553.

High above the River Derwent, Chatsworth has East Moor, about 6 hectare of heather moor drained by a tributary stream into the Bar Brook, all of which eventually enters the River Derwent as it flows through Chatsworth Park.

The River Derwent creates the setting for Chatsworth House.

Chatsworth makes many demands on its water. Before it reaches the River Derwent it has always had to work hard to meet the Dukes' requirements.

Delight and Impress visitors

Garden fountains and waterfalls

Setting for the Bridges

River Derwent Cascades and Lakes

Functional

Water for the House, Stables and Glasshouses

Produce electrical energy

Emergency fire service

Swiss Lake and The Great Cascade

Swiss Lake was the first artificial lake. It was originally called the Great Pond and was built between 1710 – 1717 to provide water for the Great Cascade, one of the main attractions of Chatsworth Gardens. It was renamed after 1842 when the Swiss Cottage was completed during Joseph Paxtons time as Head Gardener.

The Great Cascade was built much earlier by John Dillman who was Head Gardener from 1710 until 1750s. This was 47 years before Capability Brown began work on a major redesign of the grounds

In their time at Chatsworth neither Capability Brown (1757 – 1765) nor Joseph Paxton (1826 - 1858) changed the way the Great Cascade operated.

Swiss Lake took its water from the Umberley Brook by a gravity leat, a man-made channel which begins at Umberley Well.

The major players in getting the water to work for the Duke were John Dillman, Capability Brown and Joseph Paxton.

Capability Brown undertook a major redesign of the landscape of Chatsworth House between 1757 and 1765. He was commissioned by the 4th Duke of Devonshire. This was early in his career as a pre-eminent Landscape Architect.

It was to be a truly Grand Design.

It endures today, 250 years after completion.

Joseph Paxton was Head Gardener at Chatsworth from 1826 to 1858 and masterminded an extensive redesign of the waterworks. He wasn't a visionary landscape architect but he was a truly great landscape engineer. His engineering skills were used to build The Great Glasshouse at Chatsworth and later Crystal Palace for the Great Exhibition in London in 1851.

The Emperor Fountain

The Emperor Fountain is the Jewel in the Crown of Chatsworth Gardens.

In 1843 Tsar Nicholas I of Russia informed the Duke that he wished to visit Chatsworth the following year.

In anticipation of this visit, William Cavendish, 6th Duke of Devonshire, decided to construct the world's highest fountain and in 1843 he set Joseph Paxton to work on building it.

This was to be Joseph Paxton's greatest work.

Paxton had been working at Chatsworth for 17 years and had the skills and self-confidence to do this. It had never been done before but the Duke had limitless resources.

It required a large volume of stored water high above the gardens that could be released by opening a valve. Paxton decided he needed a new lake.

The Emperor Stream was dug to divert water from Umberley Brook into the man-made Emperor Lake.

The Emperor Lake is a 3.2 hectare lake (eight-acre) lake dug on the moors 350 feet (110 m) above the house to supply the natural water pressure. It is a simple earth dam construction.

The work was finished in just six months, early in 1844, and the resulting water pressure could reach a fountain height of 296 feet (90 m).

However the Tsar did not visit in 1844 as planned. He died in 1855 and never saw the fountain.

The Emperor Fountain was seen by Prince Wilhelm of Prussia, who visited the park on Thursday 22 August 1844.

The fountain is at the north end of the Canal Pond, which had already been built by Capability Brown in 1703. The metal jet of the Emperor Fountain is surrounded by irregularly placed boulders. To the north are two sandstone sculptures of reclining figures. The Canal Pond was renamed the Emperor Lake.

Because of the limited supply of water, today the fountain usually runs on partial power and only reaches half its full height, but occasionally it is switched to maximum flow.

The water power of the Emperor Lake was later recognised as a practical means of generating Chatsworth's electricity from 1893.

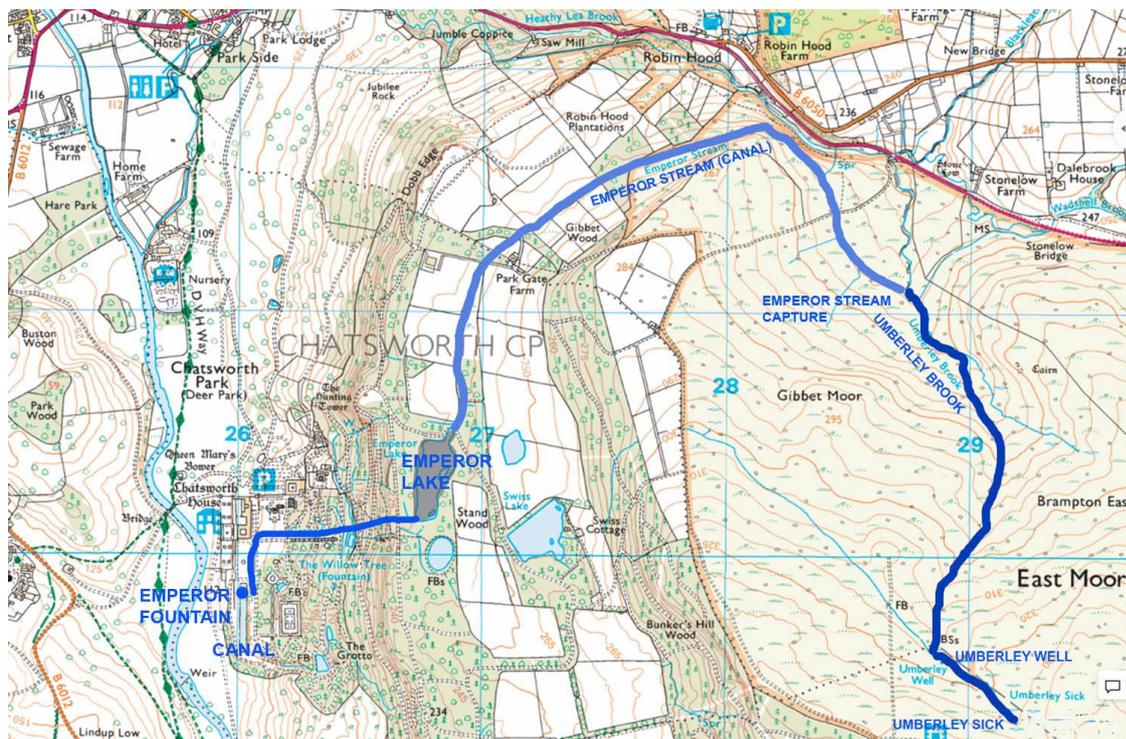
Three vortex turbines, where water passes vertically down through the turbine rotor, and a generator were installed in an underground chamber, approximately 120 m (400 feet) down the hill from the Emperor Lake.

In 1936 the house was connected to the electricity mains supply.

In 1988 a new turbine was installed, and the Emperor Lake now produces about a third of the electricity Chatsworth House needs.

Paxton also organised reservoirs and streams on the moor above Chatsworth Park, plumbing the water into the house, and into other fountains and waterfalls to delight visitors within the gardens. They still deliver delight today, 200 years after Paxton was appointed Head Gardener.

The **Emperor Fountain** and pairs of surrounding sculptures has been designated by English Heritage as a Grade II listed building.



Chatsworth Estate - something for everyone

It has history, a magnificent landscape setting, and activities for everyone.

There are pleasant parkland walks, rock climbing, mountain biking and moorland walks in 750 hectares of grounds.

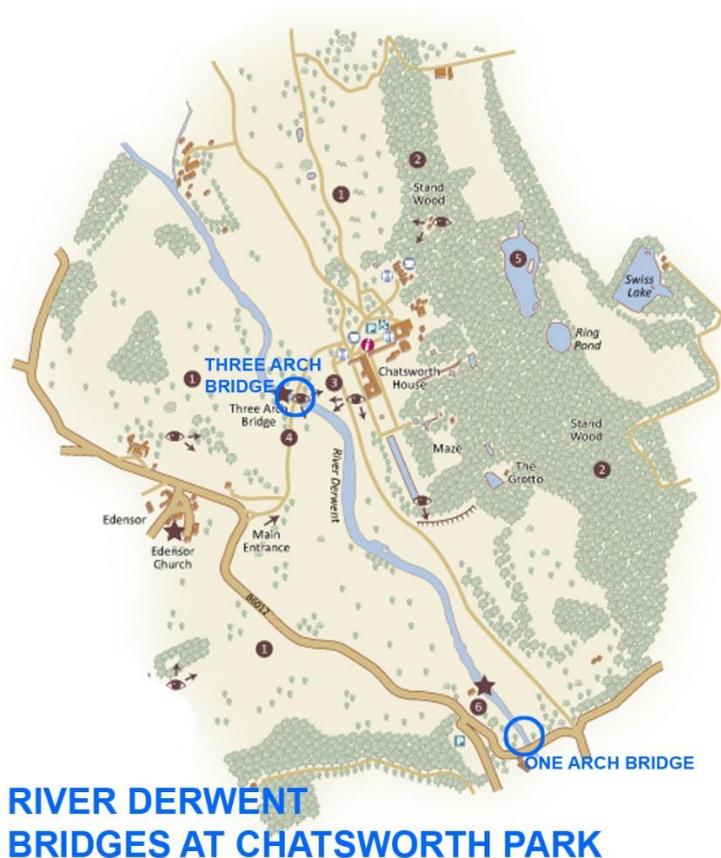
Events include Country Shows, Sculpture and Equestrian.

There is the historic house, gardens, farmyard, adventure playground, probably the Peak District National Parks most popular destination.

Canoeing and swimming on the River Derwent in Chatsworth Park is possible, offering a scenic experience with the historic Chatsworth House as a backdrop.

The Bridges

Chatsworth has two historic bridges, The Three Arch Bridge and the One Arch Bridge, built during Capability Browns major redesign of the estate between 1757 and 1765.



Chatsworth Three Arch Bridge



Capability Brown worked on over 250 large country estates. He was highly skilled in landscape engineering, especially with water.

Before the 1750s Chatsworth had lavish formal gardens up to the walls of the house, but beyond that the landscape was rough and bare. The banks of the River Derwent were steep, and the river could hardly be seen from the house. It was masked by trees.

The untidy village of Edensor was visible from the house and the Duke wanted it moved. Buildings were demolished and Edensor was rebuilt a few hundred metres north. Visitors today admire the gated village with its distinctive 'model village' in the Chatsworth blue paint style,

Brown cleared the riverside trees and sloped the ground away from the house on the west side to create meadows with open views over the River Derwent. He built a high weir to raise the water level of the River Derwent and to allow it to widen out to create a more natural looking 'lake' although it was still part of the river. The new 'lake' held behind the weir was up to 60 metres wide, considerably wider than the typical 20 metre width of the River Derwent upstream.

The grounds of Chatsworth include many elements of Capability Browns signature features; smooth rolling grassland reaching up to the walls of the house, a naturally landscaped 'lake', trees planted singly, in clumps, in belts and on rising ground.

He paid particular attention to approach roads and drives. Nationally his masterpiece is often said to be the approach drive to the front of Chatsworth House:-

The drive he created at Chatsworth, with falling parkland in the foreground and views of the bridge and the house beyond, backed by steeply rising wooded slopes, is one of the most impressive approaches to a country house in England.

While Capability Brown was constructing a new landscape design, the Duke had commissioned architect James Paine to add a new wing to the house and a separate stable block. Working with Capability Browns idea of a new carriage drive up to the front of the house, Paine designed the Three Arch Bridge which was completed in

1762. The bridge is angled so as to be seen from the House, and for visitors to receive a striking view of the house from the Entrance Drive.



This landscape architectural masterpiece is recognized as Browns touch of genius.

Paines' bridges are of an Italian style and quite different to the many other stone bridges upstream on the River Derwent.



Below the Three Arch Bridge, the River Derwent has been widened to 60 metres wide for over 800 metres as it flows past Chatsworth House. The clever bit of Capability Browns artistry is that the weir which dams the river is concealed from views from the house.

Chatsworth One Arch Bridge



The One Arch Bridge is at the south of the park and was completed in 1760.

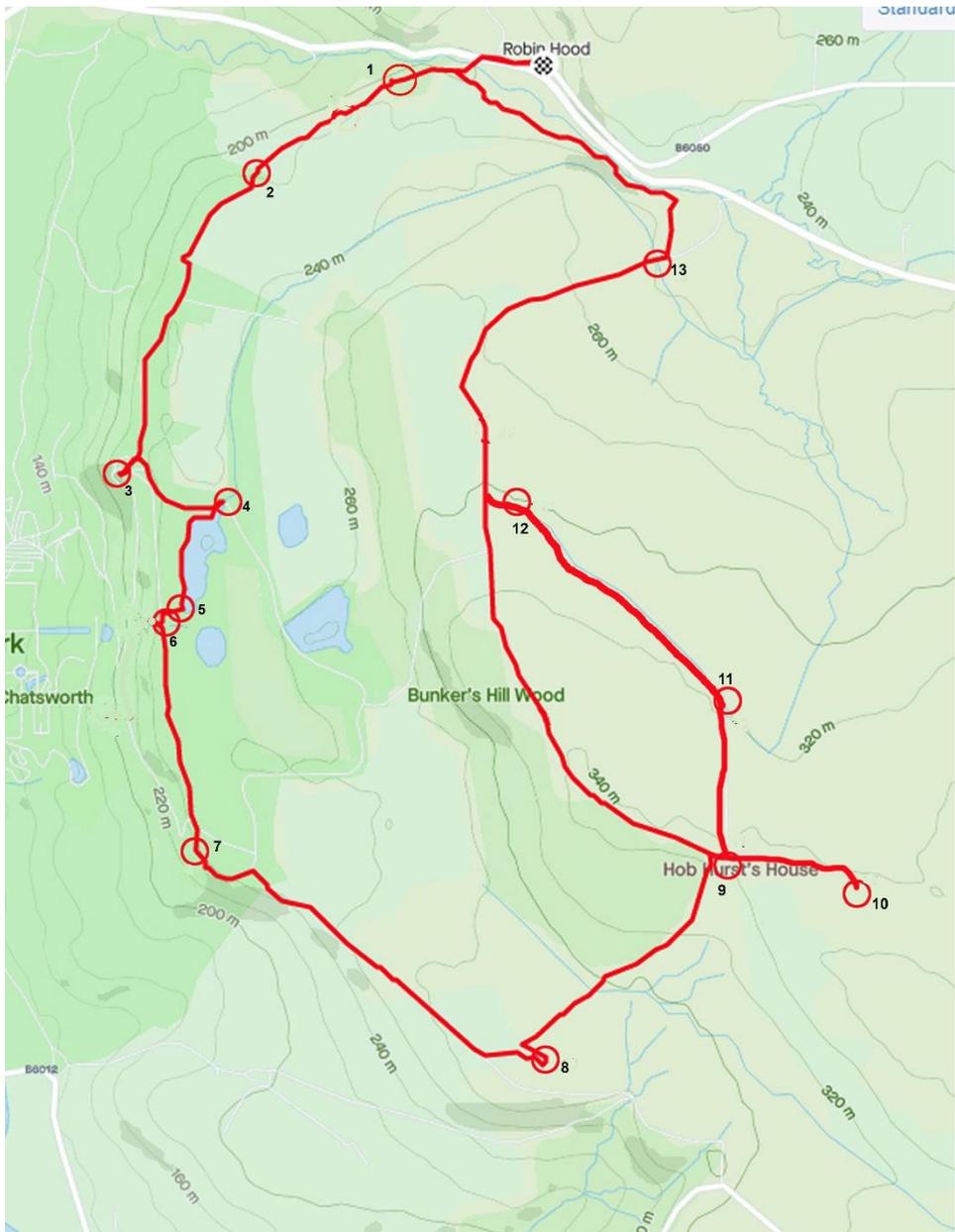
To create a single arch bridge Paine had to raise the height at the centre of the arch to seven metres above the river, creating a dramatic hump-back bridge

The hump was not a problem for 18th century horse riders and carriages with good forward visibility. Not so for drivers of low modern cars who can't see over the hump until on top of it.

The bridge is now traffic-light controlled.

Taking the whole 67 miles of the original River Derwent, the 2 miles of river through Chatsworth Park is without doubt the River Derwents' grandest landscape setting.





Each of the locations can be found on the route above

Start and finish at the Birchen Edge car park.

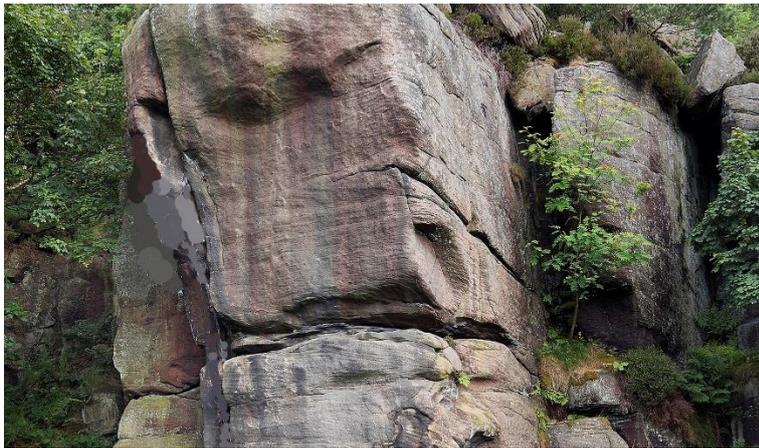
Location 1 OS ref SK 27299 71928

Chatsworth Edge

W3W generated.inhaler.inhales

Dobb Edge is known as Chatsworth Edge to rock climbers. It is not very popular because it has some very hard crack climbs which are currently out of fashion.

Rock climbers regard Chatsworth as the Cinderella of the Eastern Edges. It is overshadowed by its grand neighbours Froggatt and Curbar Edges, and isn't a proper 'edge', more a jumble of isolated buttresses. It faces northwest and only receives sun on summer afternoons.

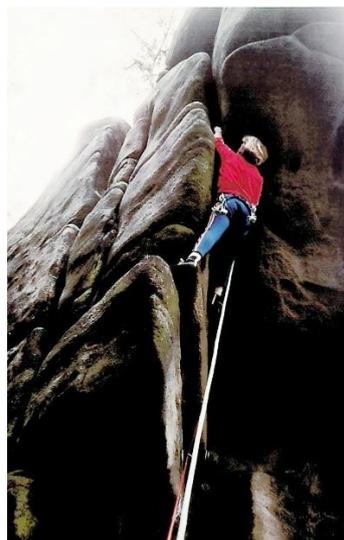
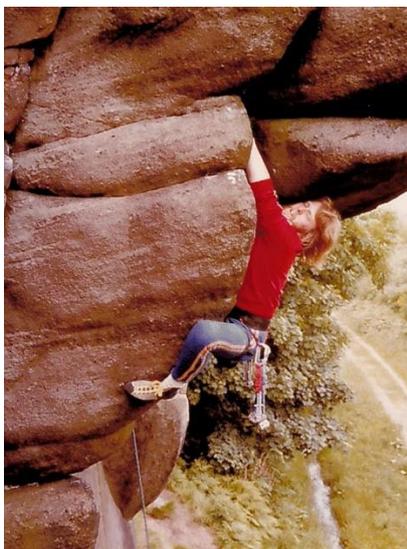


History says that the 11th Duke of Devonshire approved of climbing. Sometime in the 1950s he was taking a carriage drive past Chatsworth Edge with his keepers who saw young men with ropes climbing on the rocks.

The keepers said that the climbers were 'trespassing' to climb on the Dukes land.

Climbers, said the Duke, are doing no harm.

The photos show Emerald Buttress with a climber on Emerald Crack, climbing with the Dukes permission.



Location 2 OS ref SK 26992 71732

Chatsworth Deer Park wall and stile

W3W hobble.freezers.searching



A tall wall to keep the deer in. This tall wall was built at the time when Chatsworth had a herd of Red Deer. Unfortunately, Red Deer can leap over fences and walls, as the Chatsworth gamekeepers discovered. They now have fallow deer who are less frisky.

The red deer population on nearby Big Moor are believed to have started by three escaped deer from the 'captive' herd on Chatsworth Estate. They found Big Moor an ideal habitat with no predators. Today there are over 200 red deer on Big Moor.

Location 3 OS ref SK 26493 70616

Hunting Tower – south cannon

W3W blindfold.stirs.parsnip



Magnificent viewpoint over Chatsworth Park, built to give a good view of the park and historically a horseback hunting chase.

A Wow moment!

Location 4 OS ref SK 26880 70520

Emperor Stream entry into Emperor Lake

W3W scavenger.trout.bulges



The 3km Emperor Stream channel was dug to divert water from Umberley Brook into the man-made Emperor Lake. Joseph Paxton was Head Gardener at Chatsworth from 1826 and masterminded an extensive redesign of the gardens. Amongst his 'Grand Designs' was the very high Emperor Fountain.

It only took six months to build!

The Emperor Lake, a 3.2 hectare lake (eight-acre) lake, was dug on the moors 350 feet (110 m) above the house to supply the natural water pressure. It is a shallow lake with a simple earth dam construction.

The work was finished in early 1844, and the resulting water could reach a height of 296 feet (90 m).

However the Tsar did not visit in 1844 as planned and he died in 1855 and never saw the fountain.

Its fair to say that the Emperor Fountain is the Jewel in the Crown at Chatsworth.

Location 5 OS ref SK 26707 70131

Emperor Fountain supply pipe

W3W archduke.keyboard.vibrates



Recently refurbished at the top end but still controlled by the original valve which is located by the Emperor Fountain, 122 metres lower down. The fountain once reached 90 metres height, but now is controlled to reach 60 metres.

Because of the limited supply of water, the fountain usually runs on partial power and only reaches half its full height, but occasionally it is switched to maximum flow.

The water power of the Emperor Lake was a practical means of generating Chatsworth's electricity from 1893. Three turbines and a generator were installed within an underground chamber, approximately 120 m (400 feet) down the hill from the Emperor Lake.

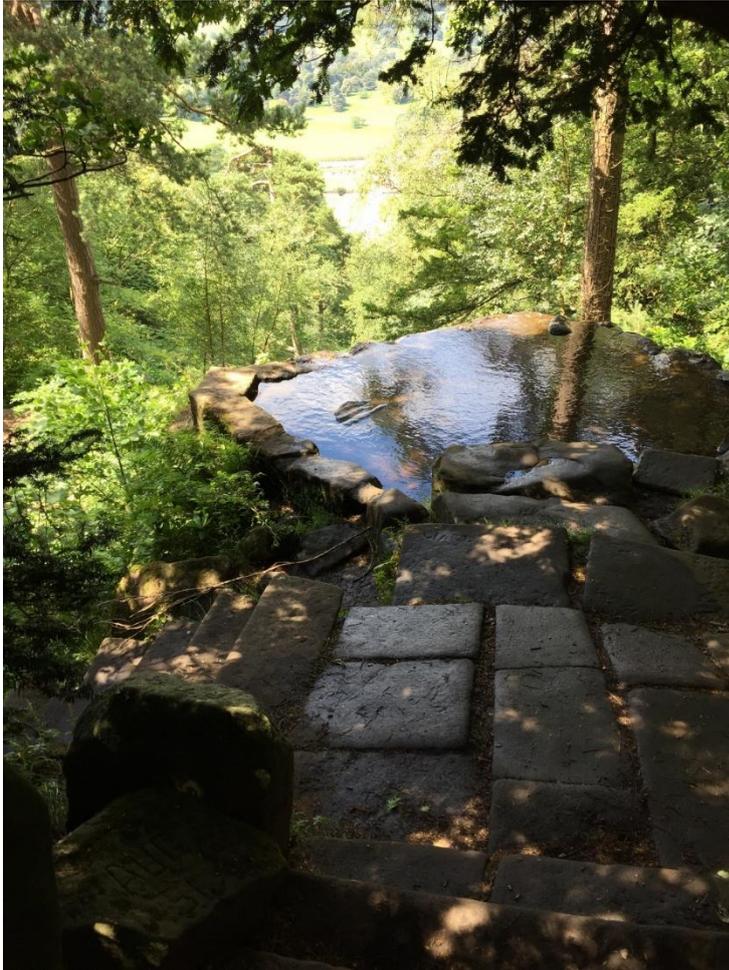
From 1936 the house was connected to mains electricity supply.

In 1988 a new turbine was installed, and the Emperor Lake now produces about a third of the electricity the house needs.

Location 6 OS ref SK 26632 70097

Sowter Stone basin above the Cascade

W3W popping.unstated.hedgehog



The water for the Cascades and most of the other ponds, lakes and fountains in Chatsworth Garden comes from the Swiss Lake which predates the Emperor Lake.

Swiss Lake took its water from the Umberley Brook leat, a man-made channel which begins at Umberley Well.

Swiss Lake was originally called the Great Pond and was built between 1710 – 1717 to provide water for the Great Cascade, one of the main attractions of Chatsworth Gardens.

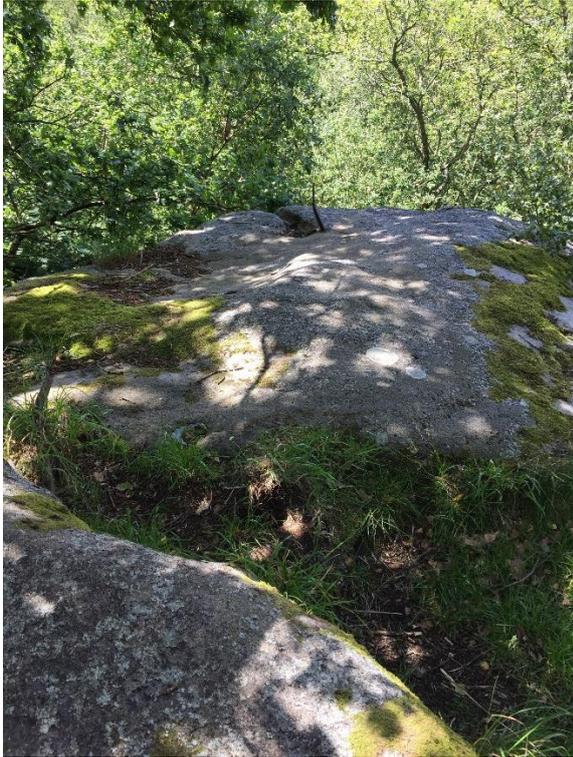
The Great Cascade was built 47 years before Capability Brown began work on a major redesign of the grounds.

In their time at Chatsworth, neither Capability Brown (1757 – 1765) nor Joseph Paxton (1826 - 1858) changed the way the Great Cascade operated.

Location 7 OS ref SK 26807 69207

Abandoned water feature

W3W cute.speeding.defrost



Not noticed by many people is an abandoned water feature above a small rock face close to the south moor gate. A basin with metalwork and several large holes which might have supported a structure.

Possibly a waterfall fell over the edge from the rock basin.

Location 8 OS ref SK 28050 68511

Chatsworth South Stone Circle

W3W widen.bunks.altitude



Quite a fine stone circle, although heavily overgrown and rarely visited. A good number of standing stones remain.

The location is immediately next to a well used packhorse route, with a number of holloways. These would have been heavily used to deliver supplies to the rear of Chatsworth House, not least of which would have been a continuous supply of coal for heating the House and the Great Glasshouse.

Location 9 OS ref SK 28733 69244

Hob Hurst's House

W3W bandstand.saying.wipe



Not a house but a Bronze Age square burial mound over 3000 years old.

One of the first Ancient Monuments to be taken into the care of English Heritage by the 1882 Act.

Location 10 OS ref SK 29074 69218

Guide Stoop

W3W starting.defenders.blend



Now a little used footpath, but once an important crossing point over East Moor. Used by workers on the Chatsworth Estate, and by tradesmen.

There used to be grouse shooting butts on East Moor. When I last walked there they were in disrepair.

Grouse shooting does take place on Beeley Moor which is part of the Chatsworth Estate.

Driven grouse shooting can be a controversial topic, with some people concerned about its impact on the environment and moorland management. I think the present Duke of Devonshire has taken a view that this activity is not appropriate at Chatsworth House.

Location 11 OS ref SK 28676 69801

Umberley Well conduit bridge

W3W initiates.snaps.lake



Umberley Well conduit was the original source of water to Chatsworth Gardens. It feeds into Swiss Lake. The Umberley Brook leat is a man-made channel which begins at Umberley Well.

Swiss Lake was originally called the Great Pond and was built between 1710 – 1717 to provide water for the Great Cascade, one of the main attractions of Chatsworth Gardens.

Location 12 OS ref SK 27904 70484

Umberley Well conduit overspill weir

W3W reset.exhales.tides



Umberley Well leat (conduit) supplying Swiss Lake. This river capture is a modern concrete overspill weir allowing excess water to overspill and drain naturally across Gibbet Moor to join the Emperor Stream, and into the Emperor Lake.

Location 13 OS ref SK 28431 71409

Emperor Stream

W3W [diets.willpower.pyramid](https://www.willpower.pyramid)



The Emperor Stream river capture was built by Joseph Paxton in the 1830s to power the impressive Emperor Fountain. It diverts water from the Umerley Brook and runs 3km across the moor to the Emperor Lake.

When the Emperor Fountain is in operation the water has 'the time of its life' before reaching the tranquility of the River Derwent. A bit like an 'Alton Towers' rollercoaster thrill ride for water.