

▶ You are visiting one of the UK's major reservoirs.

There are around 2000 large reservoirs in the UK. They date from the 1800s to the present day.

Reservoirs are used for:

- ▶ Water supply
- ▶ Irrigation
- ▶ Electricity generation
- ▶ Flood control
- ▶ Navigation
- ▶ Recreation

Reservoirs are often in tranquil, hilly areas. They can be perfect places for family walks, picnics and learning more about our vital infrastructure.

See inside for:

- ▶ locations of reservoirs with visitor facilities elsewhere in the UK.
- ▶ Details of the common types of dam
- ▶ Information about the British Dam Society

▶ What is the British Dam Society

The BDS is an Associated Society of the Institution of Civil Engineers. Members can be individuals, companies or other organisations. It is open to anyone wanting to share experience or knowledge of all aspects of dams and reservoirs.

▶ Aims and Objectives

The BDS exists to advance the education of the public and the profession in technical subjects relating to planning, design, construction, maintenance, operation, safety, environmental and social issues of dams and reservoirs.

At a national level BDS organises:

- ▶ Meetings and visits
- ▶ Conferences
- ▶ Publications

For more information contact the British Dam Society at www.britishdams.org

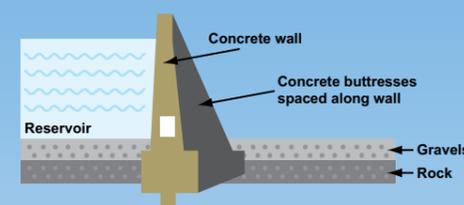
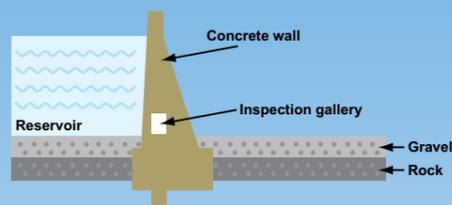
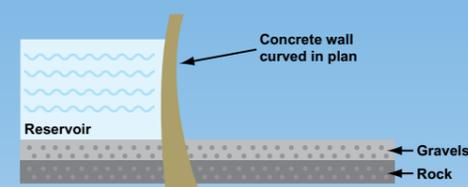
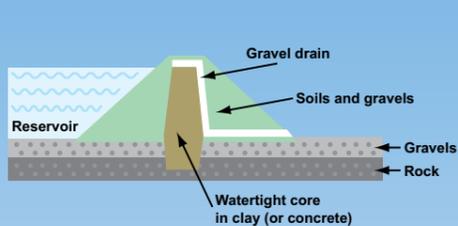
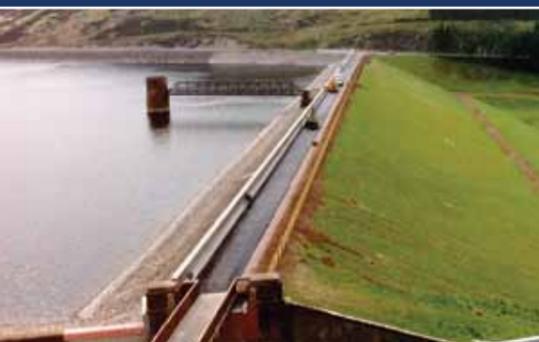


The British Dam Society

caring for dams, people and the environment



TYPES OF DAMS



▶ Embankment Dam

Embankment dams are mainly made from natural materials. The two main types are **earthfill** dams and **rockfill** dams. Earthfill dams are made up mostly from **compacted** earth, while rockfill dams are made up mainly from dumped and compacted rockfill. The materials are usually excavated or quarried from nearby sites, preferably within the reservoir basin.

A cross-section (or slice) through an embankment dam shows that it is shaped like a bank, or hill. Most embankment dams have a central section, called the **core**, made from **impermeable** material to stop water passing through the dam. Clayey soils, **concrete** or **asphaltic concrete** can be used for the core.

▶ Arch Dam

Arch dams are made from **concrete**. They are curved in the shape of an arch, with the top of the arch pointing back into the water. An arch is a strong shape for resisting the pushing force of the water behind the dam. Arch dams are usually constructed in narrow, steep sided valleys. They need good rock for their **foundations**, and for the sides of the valleys, to resist the forces on the dam.

There are only a few arch dams in the UK, including Monar Dam in Scotland.

▶ Gravity Dam

A gravity dam is made from **concrete** or **masonry**, or sometimes both. It is called a gravity dam because gravity holds it down to the ground stopping the water **reservoir** pushing it over.

A cross-section (or slice) through a gravity dam will usually look roughly triangular.

Gravity dams are suited to sites with either wide or narrow valleys, but they do need to be built on sound rock.

There are more than 250 gravity dams in Britain. Masonry was used in many early dams, as far back as the 17th century. However, concrete became more common from about 1900.

▶ Buttress Dam

Buttress Dams are made from **concrete** or **masonry**. They have a watertight upstream side supported by triangular shaped walls, called buttresses. The buttresses are spaced at intervals on the **downstream** side. They resist the force of the **reservoir** water trying to push the dam over.

The buttress dam was developed from the idea of the **gravity dam**, except that it uses a lot less material due to clear spaces between the buttresses. Like gravity dams, they are suited to both narrow and wide valleys, and they must be constructed on sound rock.

Since 1945, 14 buttress dams have been constructed in the UK, mainly for hydroelectric schemes in Scotland.

Major Dams & Reservoirs with Visitor Centres

▶ See websites for further information on the visitor centres and opening hours.



16 LLYN BRENIG
LL21 9TT
www.dwrcymru.com



15 DINORWIC
LL55 4UR
www.fhc.co.uk



14 DRAYCOTE
CV23 8AB
www.moretoexperience.co.uk



13 CARSINGTON
DE6 1ST
www.moretoexperience.co.uk



12 ELAN VALLEY
LD6 5HP
www.elanvalley.org.uk



11 LLYS-YFRAN
SA63 4RR
www.dwrcymru.com



10 ROADFORD
PL16 0RL
www.swlakestrust.org.uk



1 PITLOCHRY
PH16 5ND
www.sse.com



2 KIELDER
NE48 1BX
www.visitkielder.com



3 DERWENT VALLEY
S33 0AQ
www.peakdistrict.gov.uk



4 RUTLAND
LE15 8PX
www.anglianwater.co.uk



5 GRAFHAM
PE28 0BH
www.anglianwater.co.uk



6 HANNINGFIELD
CM11 1WT
www.essexwt.org.uk



7 BEWL
TN3 8JH
www.bewlwater.co.uk



9 BLAGDON
BS40 7UN
www.bristol-water.co.uk



8 CHEW VALLEY
BS40 8TF
www.bristol-water.co.uk