



EMBANKMENT LAYERS

Each horizontal layer making the dam is composed of various materials: fill, filter, rock, and gabions.

Special attention was given to the impervious core layer that ensured sealing the dam and holding water behind it.



WORK PROTECTION

Whilst building the dam, it is important to protect the works from occasional floods.

This is ensured by leaving part of the dam free until the spillway could take over the task.



GABION PROTECTION

Gabions are provided downstream on the spillway.

A pipe culvert crosses the dam at a low level to allow controlled flow.

A penstock valve is provided on the upstream side for this purpose.

An automatic recorder registers the valuable data.

FUNCTIONING DAM

This photo was taken after heavy rainfall.

It demonstrates the purpose of the dam.

It is hoped that this captured water has the time to percolate into the ground thus recharging the aquifer.



WADI SAHNA DAM

Oman is blessed by its mountains and wadis.

However, the lack of vegetation allows rainwater to rush to the sea.

Across many wadis the Ministry of Regional Municipalities and Water Resources decided to build aquifer recharge dams to give water a chance to percolate into the alluvial deposits.

One of these wadis is Sahna in the Madha enclave.

The dam also provides flood protection and control through a spillway and a culvert across the dam.

It is an earth and rock dam with a central impervious core consisting of clayey materials.

Blocking the wadi by the dam, exposed the existing road and some neighbouring lands to floods.

A saddle dam had to be built and the road diverted onto its crest.

After the rain, more and more tourists are attracted to the site to enjoy the scene.

When dry the dam's reservoir has to be cleared from mud and fine particles carried by water and deposited in the basin, in order to facilitate seepage into the aquifer.

SPILLWAY

The spillway is seen with rock protection upstream and downstream and concrete slab on its crown.

Two concrete retaining walls contain the spillage section of the dam.

