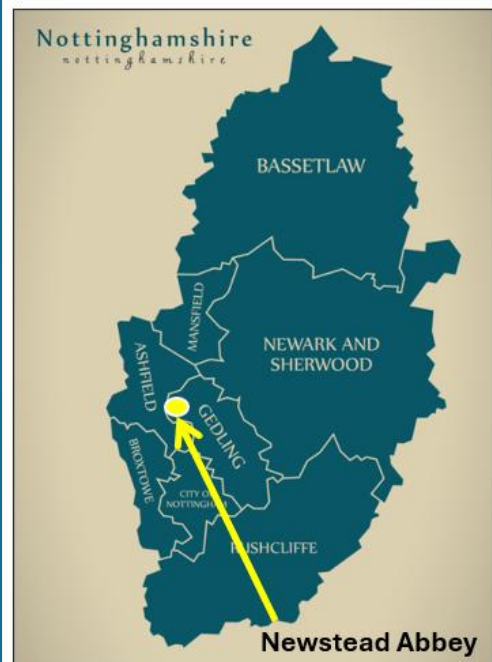


NEWSTEAD ABBEY BACKGROUND INFORMATION

This Here is some background information about the location, history and geology of the Newstead Abbey area of Nottinghamshire where the 2026 Dowsing Research Project will be based.

Other Dowsters will be undertaking related research close to their home locations. It will be interesting to check if differing geologies may explain any differences in the research findings in the various locations.

Location



Newstead Abbey and surrounding parkland is managed by Nottingham City Council. It is situated mid-west of Nottinghamshire in the English Midlands, near Ravenshead. The post code is NG15 9HJ. The elevation is 349 feet above sea level. The GPS co-ordinates are 53.07884°N, -1.19206°W. The Ordnance survey grid reference is SK 54220 53817.

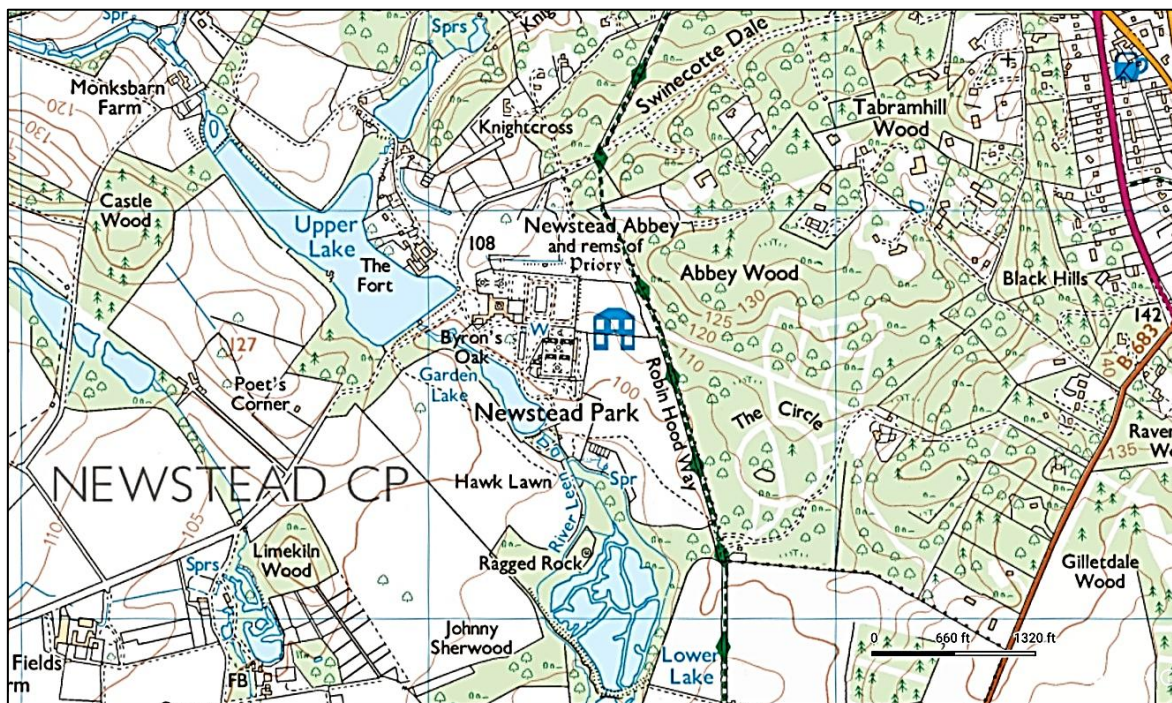
A long sweeping private road known as Swinecotte Dale leads for around 1.5 miles from gates on the A60 road through woodland. The Robin Hood Way walking route runs north-south through Newstead Park.

The main dowsing research area is situated on the edge of the woodland known as Abbey Wood, to the west of the Abbey site and close to where the Robin Hood Way passes through the park (see OS maps below).

NEWSTEAD ABBEY BACKGROUND INFORMATION



Extract from OS Landranger Map 120 of Nottinghamshire



Extract from OS Explorer Map 270 of Nottinghamshire

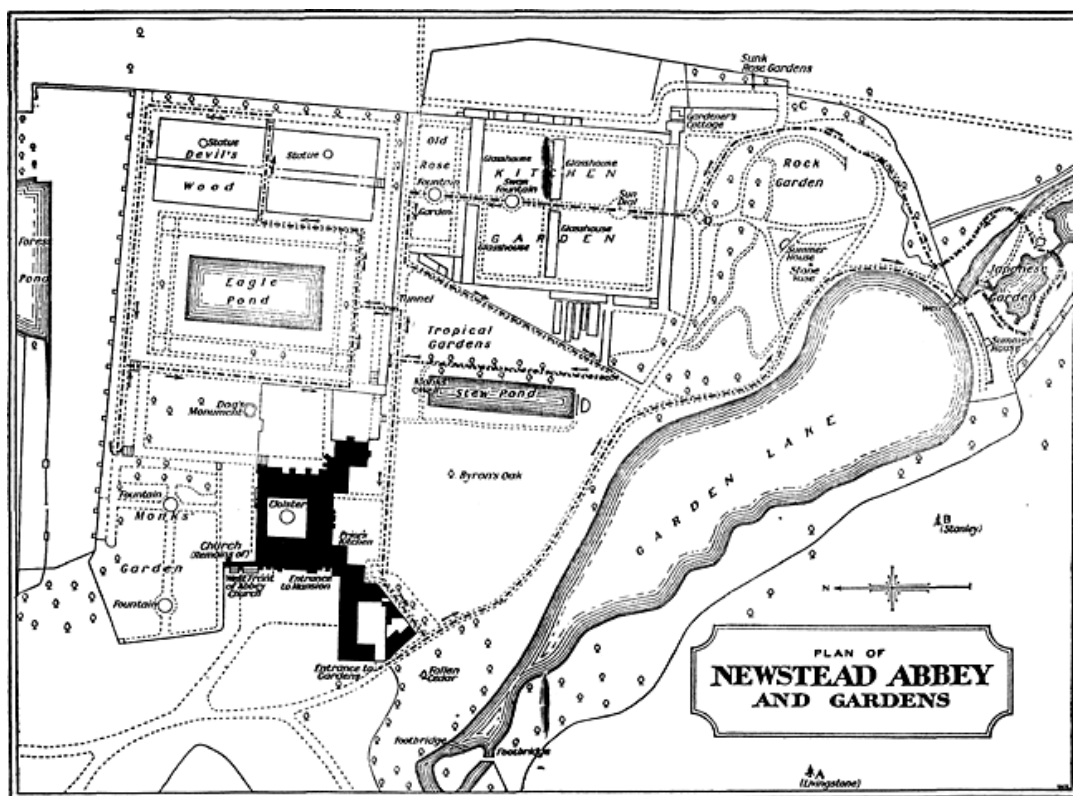
NEWSTEAD ABBEY BACKGROUND INFORMATION

History

An Augustinian priory dedicated to St Mary was founded at Newstead in c.1163. A Priory was a centre of learning and scholarship as opposed to the larger Abbeys that were centres of pilgrimage and religious worship.

Following the Dissolution of the Monasteries it was acquired in 1540 by the Byron family who used it as a country house until it was sold in 1818 by Lord Byron the poet. Despite it only having been a humbler Priory, the mansion became known as “Newstead Abbey,” subsequently passing through the hands of several different families before being presented to Nottingham City Council in 1931. Since then, the Council have maintained the house and gardens together with important collections of furniture, paintings and Byron artefacts. A £103,000 grant for repairs to the buildings was obtained from Historic England in October 2025.

The remains of the Priory are surrounded by parkland landscaped by Lancelot ‘Capability’ Brown in the 18th century, together with extensive woodland that once formed part of Nottinghamshire’s Sherwood Forest.



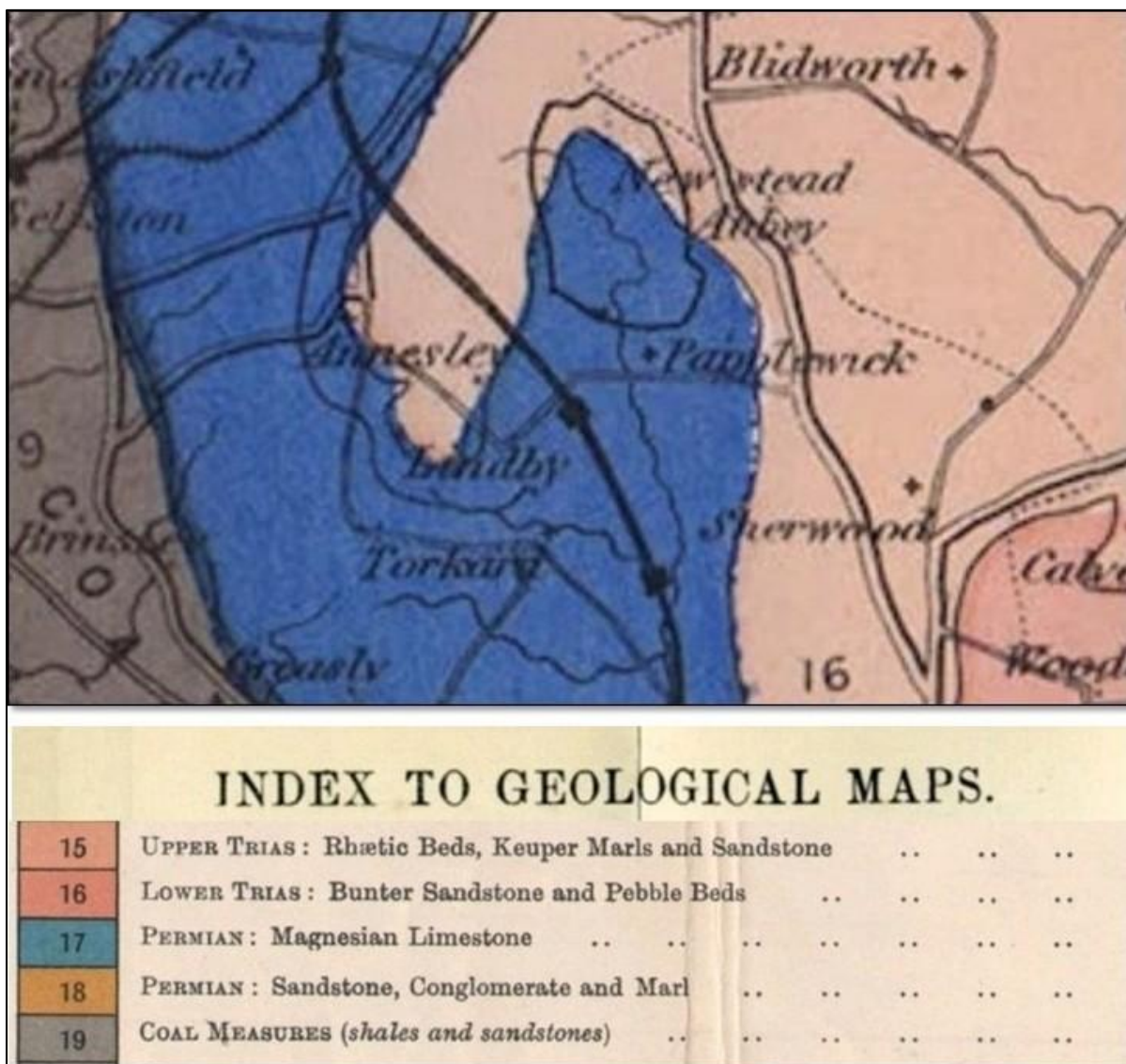
Plan of Newstead Abbey and surrounding landscaped Gardens with the former Priory in black. The dowsing research area is predominantly to the West and South of what is shown on this plan

NEWSTEAD ABBEY BACKGROUND INFORMATION

Geology

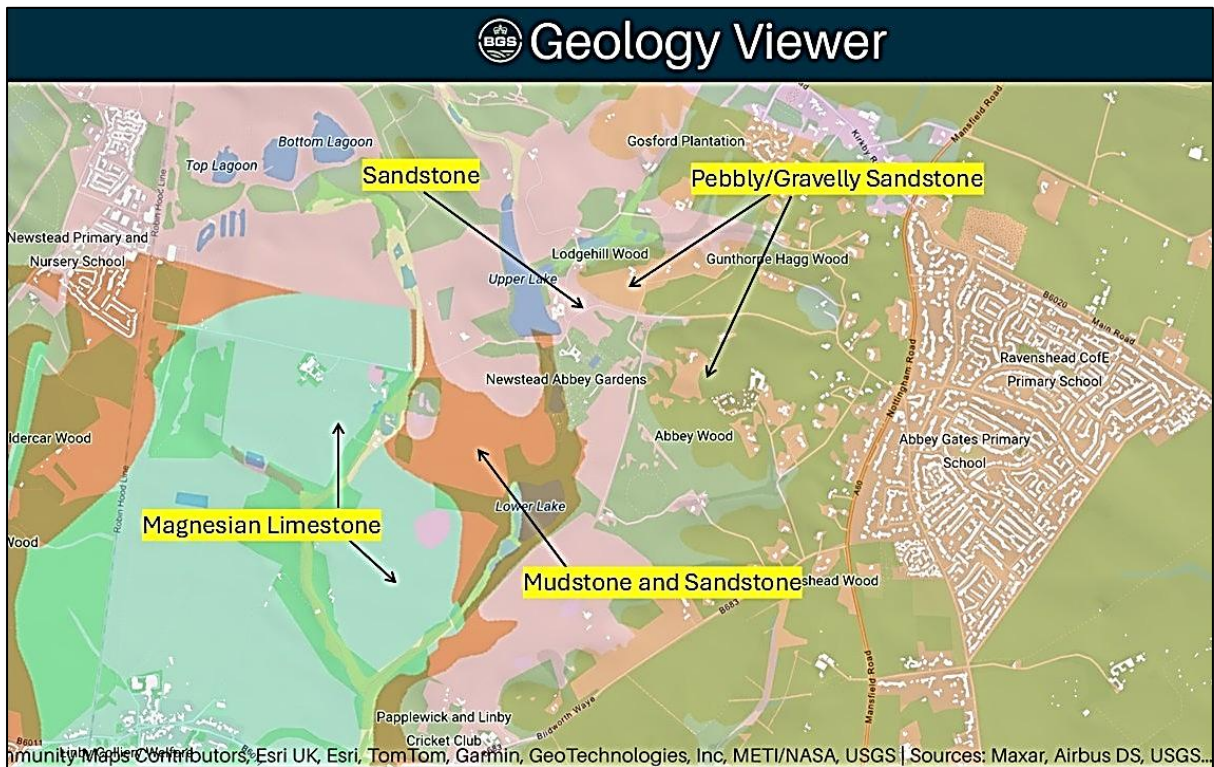
The geology is important because it affects the flow and nature of the underground water and therefore the patterns of energy emanating from that water that we dowse on the surface, and may lead to different results in different areas of the country.

The geology of the Newstead area comprises eastwards-dipping bunter sandstone overlaying magnesian limestone & clay, underneath which are the Nottinghamshire coalfields (grey on diagram below) which outcrop further west. Newstead itself is on the border of the sandstone (pink on diagram below) and magnesian limestone (blue on diagram below). Beneath the sandstone is a large aquifer (see page 6).



Extract from the British Geological Society (BGS) Map of Nottinghamshire

NEWSTEAD ABBEY BACKGROUND INFORMATION



The Geology of the Newstead area. Based on the British Geological Society (BGS) Online viewer

Key:

Magnesian Limestone (Cyan)



Cadeby Formation-Dolostone. These sedimentary rocks are shallow-marine in origin. They are biogenic and detrital, generally comprising carbonate material (coral, shell fragments), forming beds and locally reefs.

Description: Dolostone, grey to buff grey, commonly oolitic or granular, with subordinate mudstone, dolomitic siltstone and sandstone.

Lower Boundary: At base of dolostone or dolomitic siltstone, overlying organic-rich mudstone (Marl Slate) or where that is absent, Permian basal sands and breccias.

Upper Boundary: At upward transition (usually sharp) into Edlington Formation or, farther east in the subsurface, the Hayton Anhydrite.

Thickness: 0 – 100m

NEWSTEAD ABBEY BACKGROUND INFORMATION

Mudstone and Sandstone (Orange-Brown)



Edlington Formation-Mudstone and sandstone. These sedimentary rocks are lacustrine or shallow-marine in origin. They are detrital, generally fine-grained (but can include layers of coarser material) and form beds of carbonate-rich deposits sometimes including precipitated beds of evaporites.

Upper boundary: Sharp, upward passage from dolostone of Cadeby Formation.

Lower boundary: Upward passage into dolomitic limestone of Brotherton Formation.

Thickness: 0-65m

Pebbly/Gravelly Sandstone (Beige-Brown)



Chester Formation-Pebbly (gravelly) sandstone. These sedimentary rocks are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting).

A feature of the Chester Formation on borehole geophysical logs is the sonic velocity which is always higher than in the bulk of the overlying formations, and often higher than in the underlying formation.

Thickness: 50 – 600m

Sandstone & Clay (Pink)



Lenton Sandstone Formation-Sandstone. These sedimentary rocks are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting).

Description: Sandstone, very fine- to medium-grained. Argillaceous, red-brown with buff mottles, cross-stratified; subordinate beds of red-brown mudstone and conglomerate.

Lower Boundary: Gradational, upward passage by interdigitation, from mudstone of Edlington Formation. Overlaps successively onto Cadeby Formation and Basal Breccia to south of Nottingham.

Upper Boundary: Marked but gradual upward increase in grain size and pebble content into overlying Nottingham Castle Sandstone Formation.

Thickness: 12 to c 70m

NEWSTEAD ABBEY BACKGROUND INFORMATION

Coal Mining and Fracking

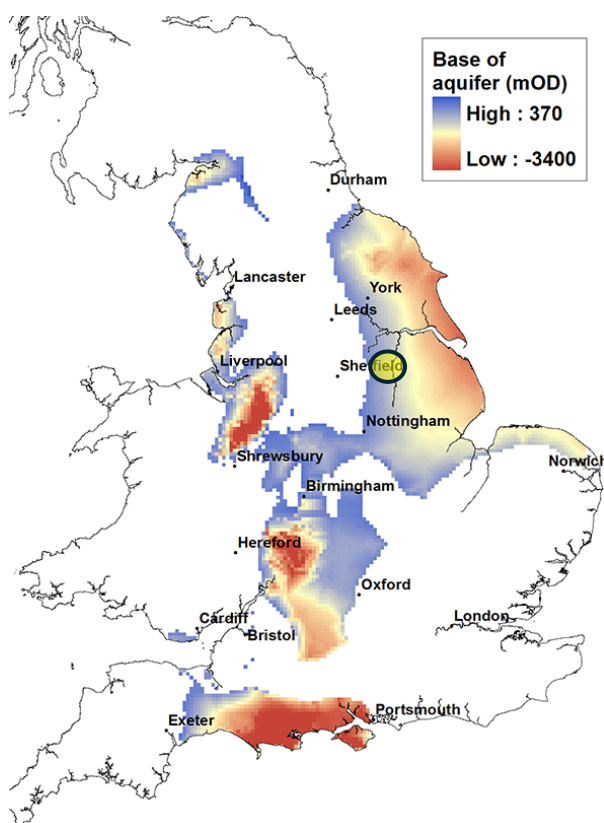
Nottinghamshire has a rich history of coal mining dating back to the early 14th Century. The nearest collieries were at Annesley (opened 1865 and closed in 2000) and Newstead (opened 1874 and closed in 1987). The shafts of closed colliery often start to collapse, flood with water. They can also have buildups of gas, all of which can affect the surrounding rock strata and underground water over time.

There are several mine gas recovery and methane extraction schemes at former collieries in Nottinghamshire. There are also two proposed shale gas extraction (fracking) sites in North Nottinghamshire. However, none currently affect the Newstead area.

Aquifer

The Sherwood Sandstone outcrop covers nearly a quarter of the County, occurring as a broad belt between Nottingham and South Yorkshire. The sandstone deposit thickens northwards from 100 metres near Nottingham to 300 metres east of Worksop in the north of the county. Newstead is around 10 miles NNW of Nottingham shown in the yellow circle on the aquifer map (right).

The sandstone is also a major aquifer that serves as an important water supply for a wide area. The deposit comprises 2 distinct horizons. The lowest 20-50 metres consist of fine soft red sandstones with up to 10% clay. Known as the 'Lenton Formation' these are overlain by 80-250 metres of clean coarse-grained sandstones.

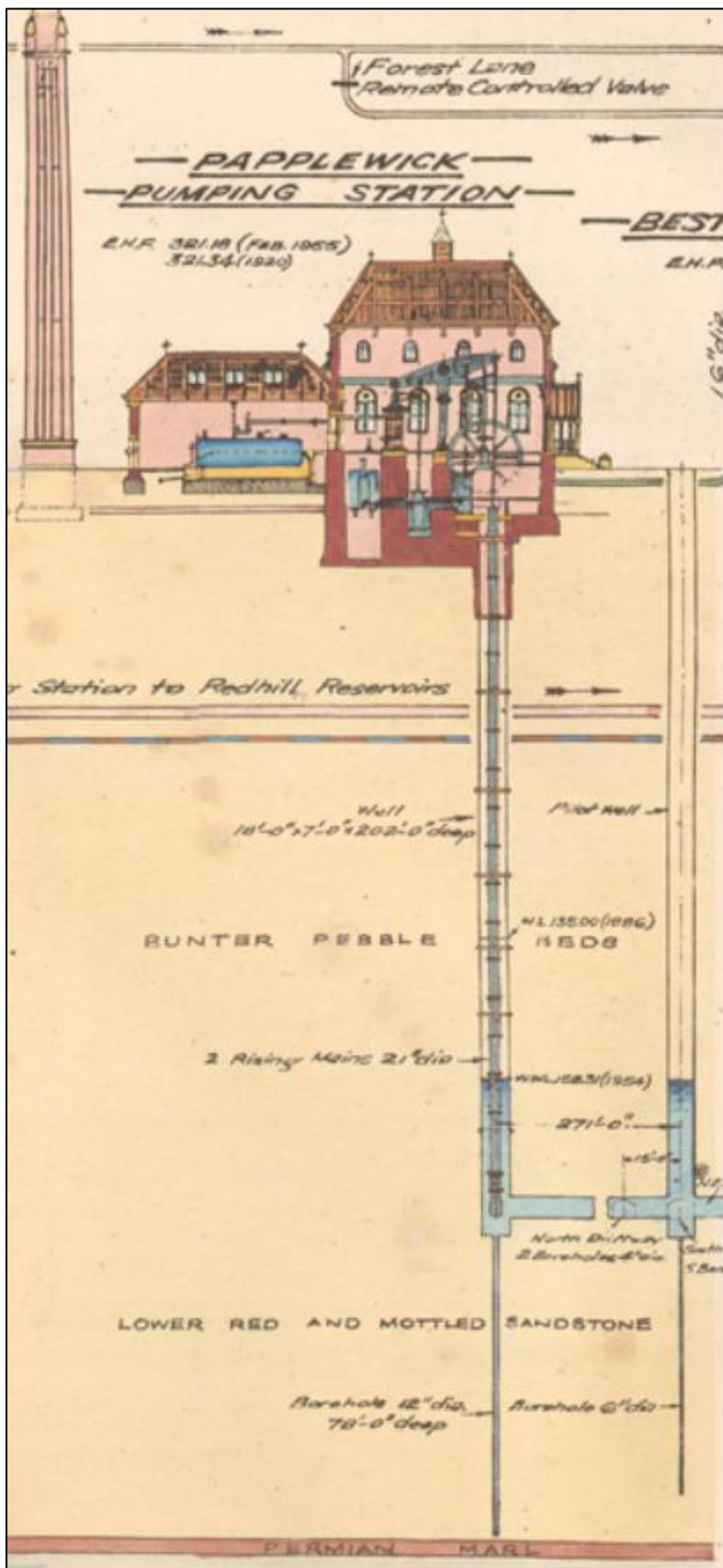


Source: Nottinghamshire County Council Adopted Local Minerals Plan

Water extraction and boreholes can also affect the rock strata and underground water over time.

A mile or two south-east of Newstead is Papplewick pumping station, one of several in Nottinghamshire. It was built in the 1880s to pump fresh water from the aquifer to reservoirs to supply the city of Nottingham. Two 84m (275ft) deep wells were drilled into the Bunter Sandstone. It is now an industrial museum.

NEWSTEAD ABBEY BACKGROUND INFORMATION



This image of one of the original blueprints for Papplewick pumping station was found on the internet. Source unnamed.