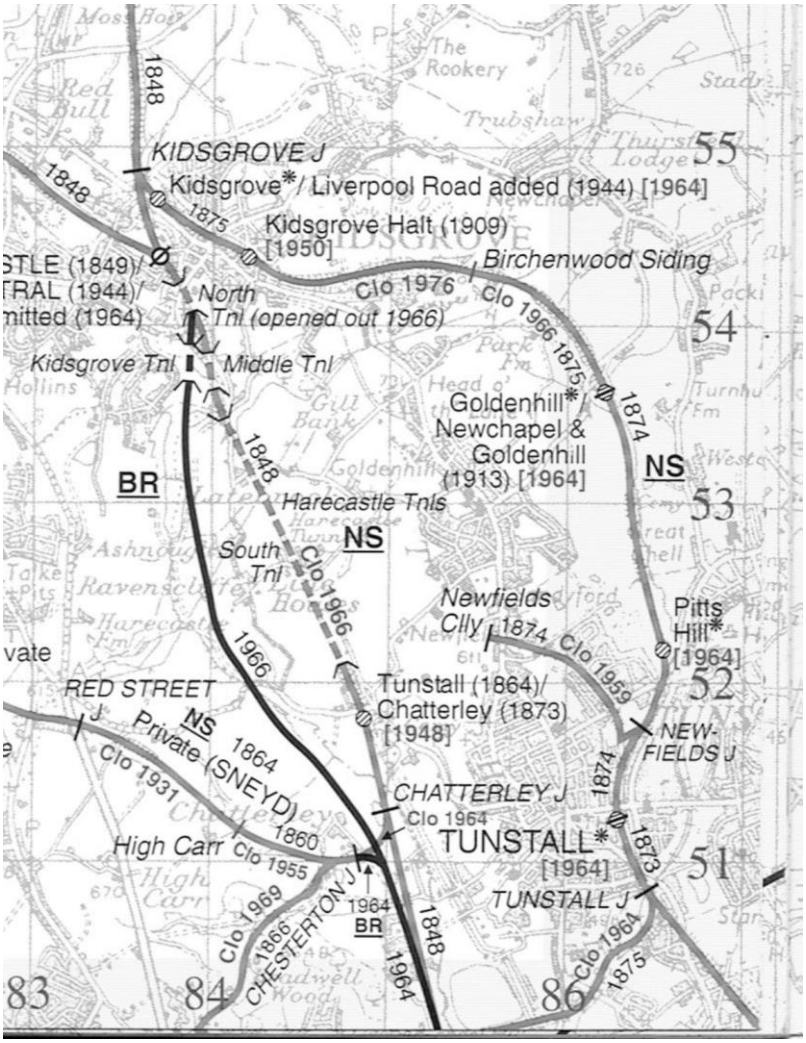
Exploring the Harecastle Canal & Railway Tunnels and the Burslem Branch Canal.

RCHS West Midlands & North West Group Joint Walking Event: Thursday 28th June 2017

Harecastle Tunnels

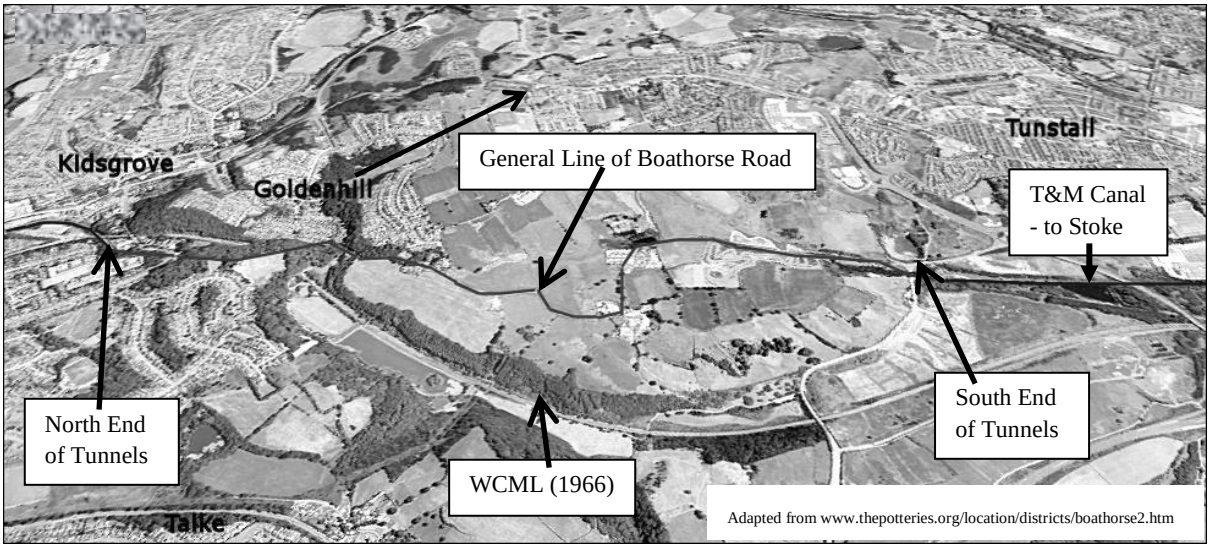


From: Railways of Great Britain: A Historical Atlas, M H Cobb; Ian Allan (2005)

The map (left) shows the line of the sequence of the three 1848 Harecastle railway tunnels, and the line of the 1966 diversion to allow for electrification of the line. The North Tunnel was opened up at the time of electrification, at which time the remaining two tunnels were closed.

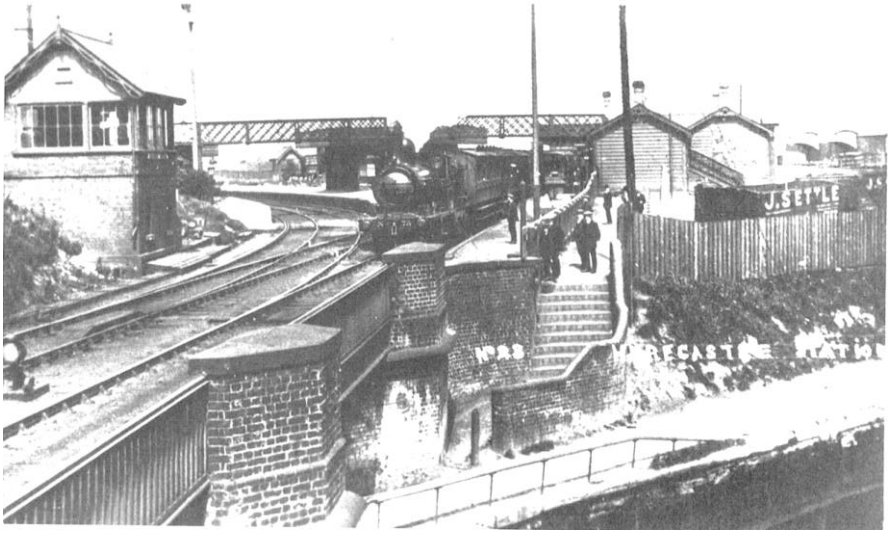
The northern portals of the two canal tunnels – Brindley (1775; 2880yds) & Telford (1827; 2926yds) – are south of Harecastle (now Kidsgrove) railway station, and to the west of the railway. The railway ran over the Telford tunnel between the Middle and South railway tunnels; then between the two parallel canal tunnels for the length of the South Tunnel after which it crossed the Brindley tunnel, just to the north of Chatterley railway station. The southern portals of both canal tunnels are to the east of the site of the station, which closed in 1948.

Boathorse Road (see map below) by which the horses travelled over the canal tunnels, ran north from Chatterley on the east side of the tunnels and crossed over the top of them c.2/3 mile north of the southern portals, meeting the tunnels again at Kidsgrove on the west side of the Brindley tunnel.

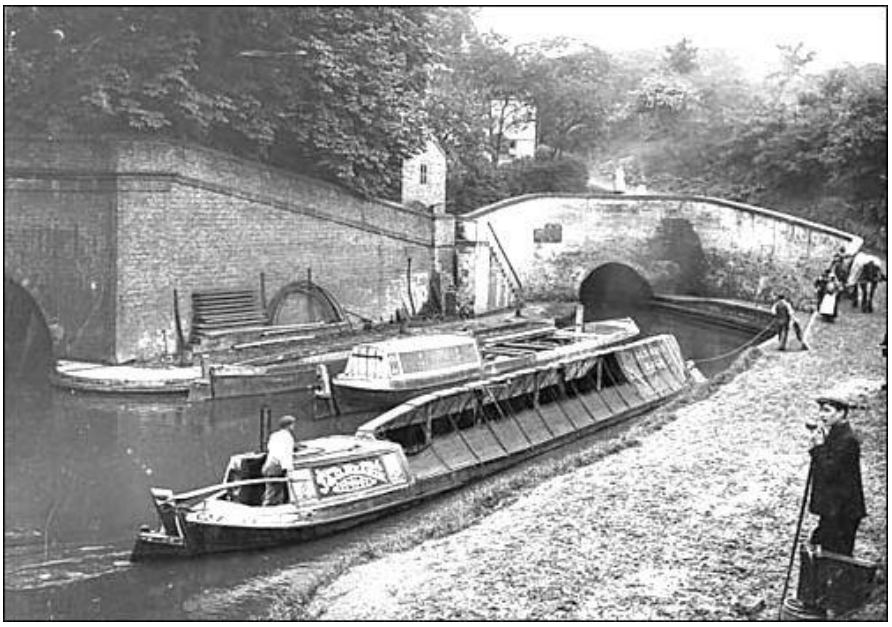


The general line of Boathorse Road (centre of picture) - sections have been merged into other roads including Acres Nook Road & The Avenue. Boathouse Road is approximately 2 miles long. The 1966 diversion for the West Coast Main Line is shown going through Bathpool Park.

Harecastle Tunnels: A Brief Chronology



Harecastle Station looking north from the bridge over the Trent & Mersey Canal, c1910.
The J S Settle coal yard, beyond the coal wagons, is now the station car park.
The towpath is lower right and the canal tunnels are to the left out of the picture. (J Ryan collection)
Harecastle station opened in 1848; renamed Kidsgrove Central in 1944 & Kidsgrove in 1966.



A pre-1914 view of the northern portals of the Harecastle tunnels. A boat is about to enter and be legged through Brindley's tunnel and the horse is being led towards Boathorse Road. (www.thepotteries.org)

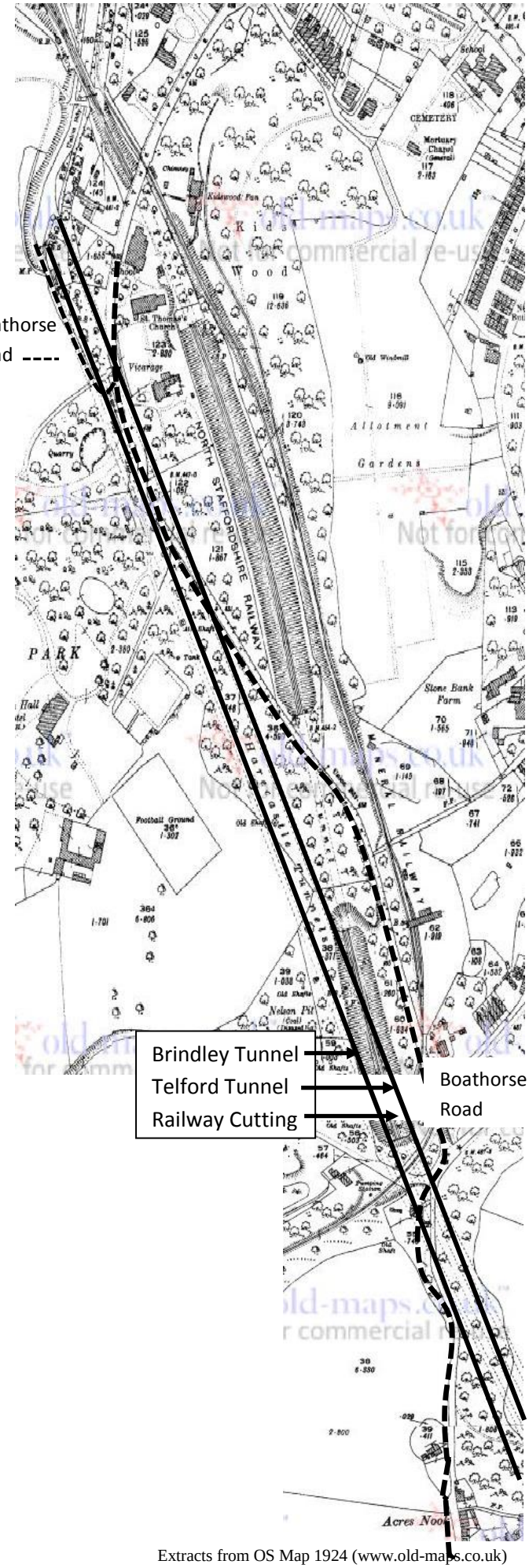
1775 – Brindley Tunnel Completed
1777 – T&M Canal fully open
1827 – Telford Tunnel opened
1827-1914 – Both tunnels operational
Brindley – southbound traffic
Telford – northbound traffic

1848 – Railway tunnels opened. An alternative route to the west was discarded, mainly due to the opposition of Thomas Kinnersley of Clough Hall, but partly because tunnels would be more direct and on easier gradients, for which the canal tunnels' shafts could be used during construction.
The North Tunnel (130 yds) was built on the cut-and-cover principle solely to avoid trains disturbing worshippers at the nearby Kidsgrove church.
The South Tunnel (1766 yds) lies between the two canal tunnels but 18ft higher from water level.
The length of the Middle Tunnel is 180 yds.

1914 – Brindley Tunnel closed, and electric tugs introduced in Telford Tunnel
1954 – Tug service removed and airtight door & large fan built at southern end.

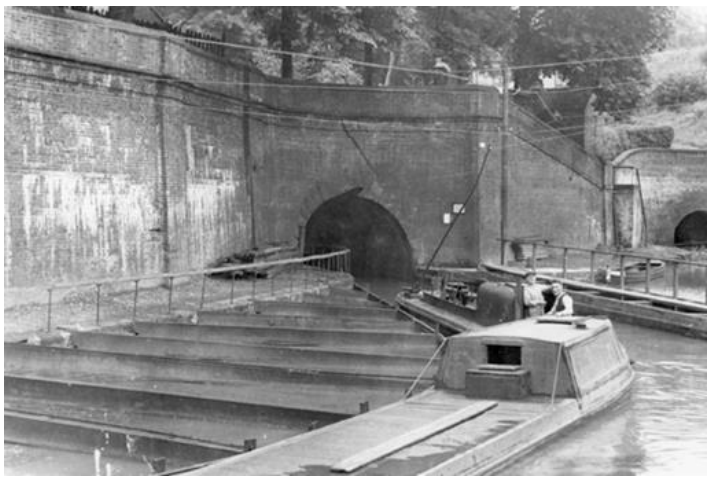
1966 – North Tunnel opened out and replaced by flying buttresses.
A 2.5-mile diversion line, with one new tunnel, was built. This option was cheaper than enlarging the existing tunnels to take overhead wires, and, interestingly, takes most of the more westerly course first considered some 120 years earlier.

The North Staffs 1848 line is to the right in both of these photographs. Between the trees to the top of the left picture is the opened up North tunnel. Kidsgrove station is c300 yds further north. The picture to the right shows the 1964 diversionary line (left) entering the 243 yards Kidsgrove tunnel (Flying Stag collection).



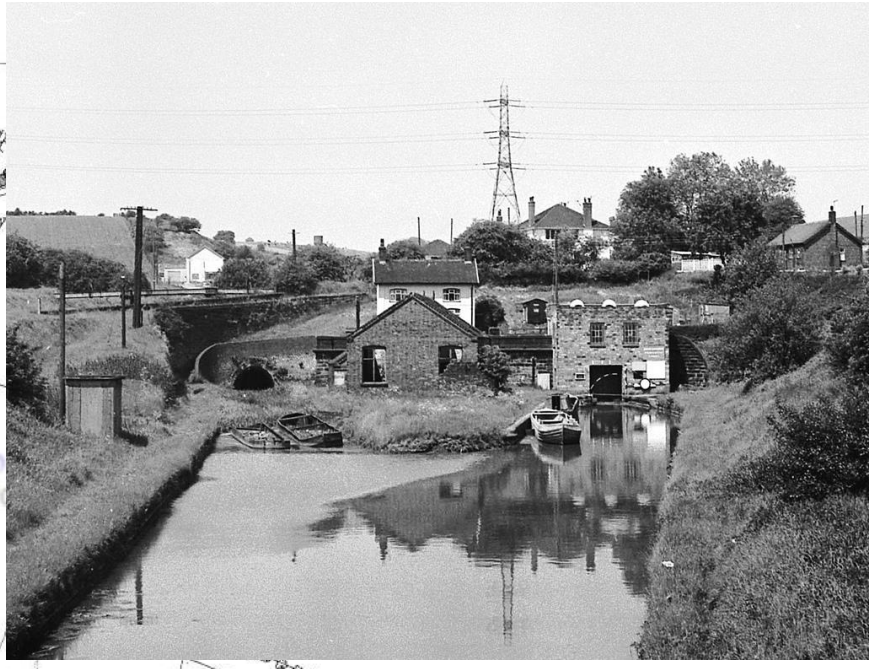
Extracts from OS Map 1924 (www.old-maps.co.uk)

Legging through the (?Brindley) Tunnel: date unknown
The Telford Tunnel was built with a tow path.



A tunnel tug and battery boat waiting at the Harecastle Tunnell, c.1930s. (Virtual Waterways Archive Catalogue)

The tugs were introduced in 1914, following the closure of the Brindley tunnel, with the purpose of overcoming ventilation difficulties in addition to accelerating traffic and so increasing capacity through the tunnel (the tugs could travel at twice the speed of a horse). By the time of this photograph, battery power had been superseded by overhead cables through the tunnel and a tram-type pick-up on the tug. The pontoon affected the clearance of the tunnel and the towing service was removed in 1954 with boats going through the tunnel under their own power: The absence of ventilation shafts was overcome through the installation of an air-tight door and a large fan at the southern portal (photograph below).



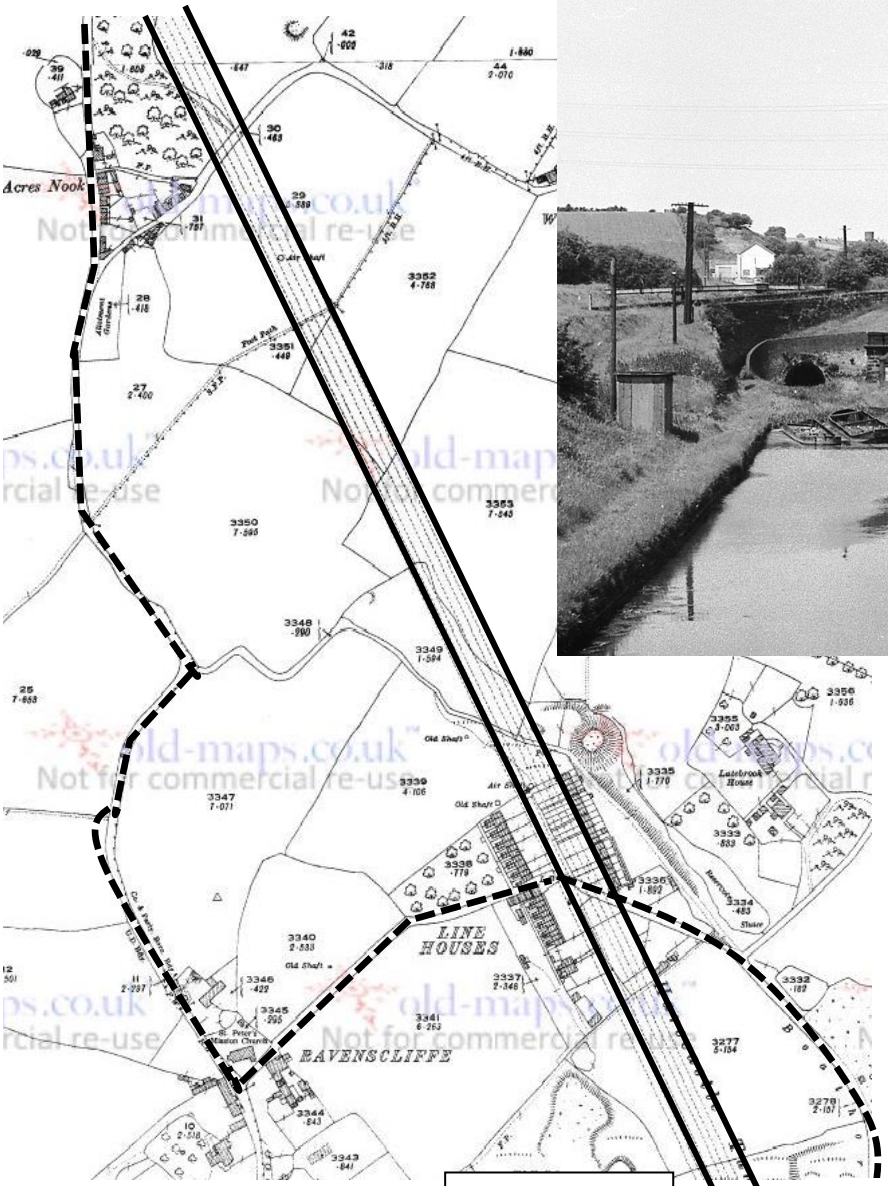
The southern portals of the canal tunnels (RCHS)
Date is not given but it is certainly at a time of decay.
The railway (opened 1848; closed in 1966) is to the left.
The site of Chatterley station (closed 1948) is obscured by the buildings & trees in the centre of the picture.

Sources for Harecastle Tunnels not noted in text:

Britain's Historic Railway Buildings, Gordon Biddle; Ian Allan, 2011.

Railway Passenger Stations in Great Britain, Michael Quick; RCHS, 2009.

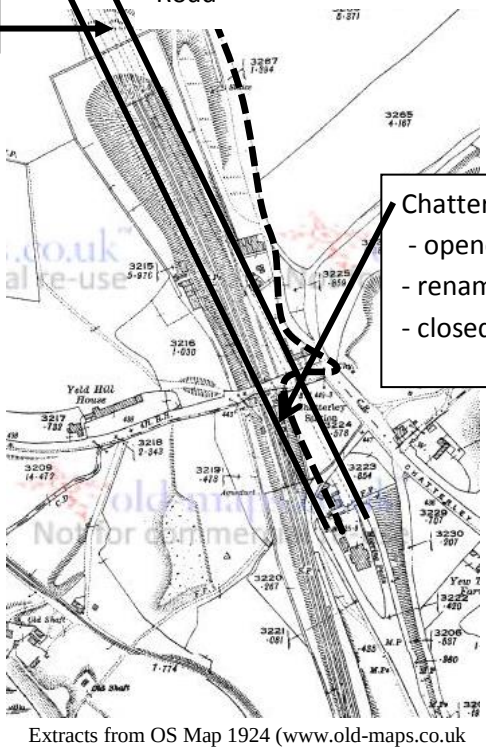
RCHS Waterways History Research Group



Brindley Tunnel
Telford Tunnel
Railway Tunnel

Boathorse Road

Harecastle South Tunnel. 1948. Boathorse Road is to the right and crosses over the tunnels from east to west towards the top of the picture.



Chatterley Station:
- opened as Tunstall in 1864
- renamed Chatterley in 1873
- closed in 1948

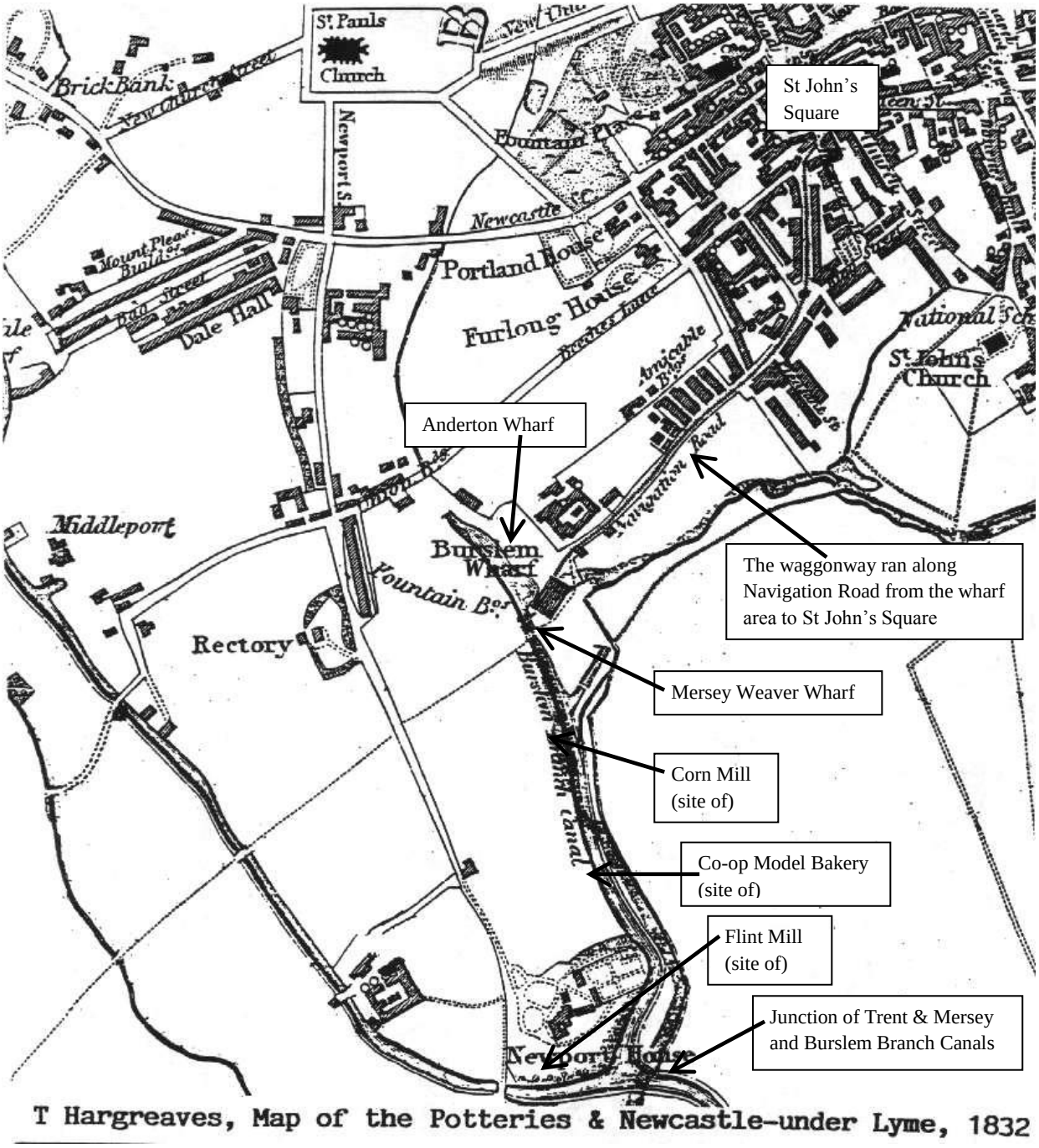
Extracts from OS Map 1924 (www.old-maps.co.uk

Roger Brice, June 2017

The Burslem Branch Canal

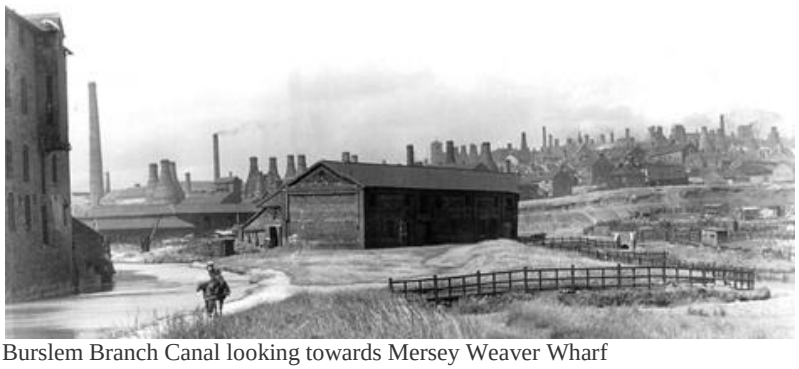
"Burslem, an ancient town, with a market held for a long period by custom, and subsequently sanctioned by an act of parliament, is about three miles from Newcastle and two from Hanley, entitled to the precedence of other towns in this district, as claiming to be the mother, as it is the metropolis, of the Staffordshire Potteries." (from a journal of 1828)

"The making of a turnpike-road from Burslem, in connexion with the Liverpool and Manchester turnpike road at Lawton, under an Act passed in 1763, facilitated the carriage of raw materials and manufactured goods, and gave rise to improvements in the buildings; but the completion of the Grand Trunk Canal, in 1777, gave a stronger impetus to manufacturing enterprise, and to the building of larger manufactories, and a better description of dwelling-houses. A branch canal, from the main line, brought nearly up to the town, in 1805, gave further facilities to traffic; and, from the period when the main line of the Canal was completed, to the present, great local improvements have progressively gone forward."
(John Ward "The Borough of Stoke-upon-Trent" 1843)



The 3/8 mile **Burslem Branch Canal** was authorised by an Act of Parliament in 1797 and designed to increase wharfage for the Middleport and Burslem areas. Construction work was completed in 1805, 30 years after James Brindley completed the adjoining Trent and Mersey Canal. In its short length it accommodated two major wharves for the Anderton and Mersey Weaver companies, a boat repair yard, a corn mill and a large steam bakery. It was closed following a major breach in 1961. The wharf area served the canal until 1958.

The canal wharves were linked to Burslem town centre by a horse-drawn tramway up the hill of Navigation Road. The success of the canal was immediate, paving the way for Burslem to develop a reputation as the home of pottery manufacturing within Stoke-on-Trent. Industrial development continued along the canal during the 2nd half of the 19th century. The canal also was immortalised by Arnold Bennett when Denry Machin's horse and cart crashed into it in his novel The Card.



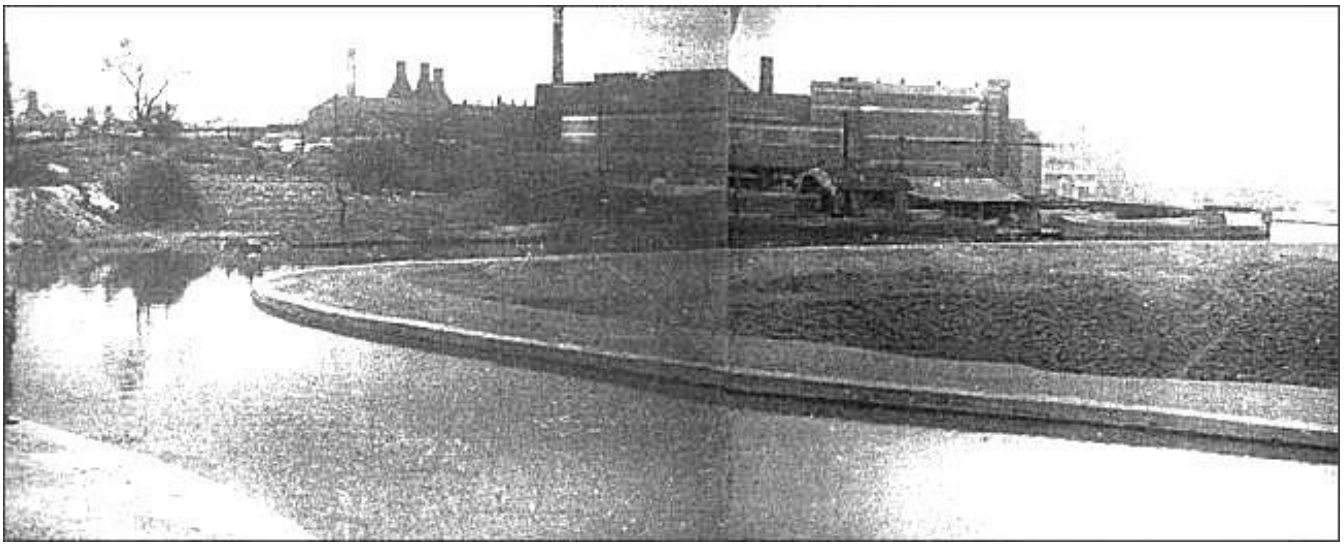
Burslem Branch Canal looking towards Mersey Weaver Wharf
The Anderton Wharf (& the canal terminus) is in the distance to the left.

The canal breach, 1961 (Burslem Canal Trust)
In 2013, the Wolstanton Colliery narrow boat Elizabeth was believed to be in good condition buried 6ft down.

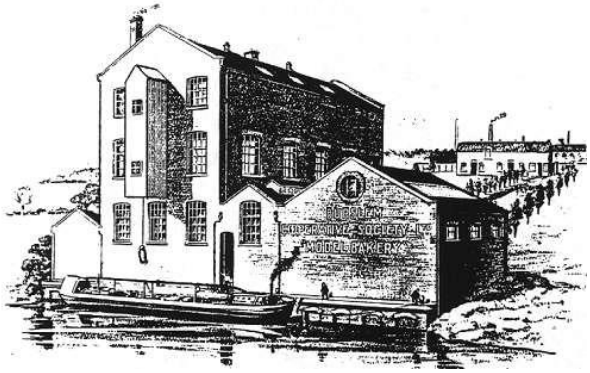
The canal breached in 1961 on the outside of the bend near to the junction with the T&M canal. Much of the 5½ mile summit pound of the Trent & Mersey Canal from Etruria to Kidsgrove was drained into the valley beside the canal.

The side walls of all canals through Stoke-on-Trent had been repeatedly built up following years of mining-related subsidence. This was done by the addition of concrete box sections on top of the existing towpath edge. Some attempt had been made to strengthen the raised walls by the use of "contrefort" buttress reinforcements at regular intervals, but maintenance standards were generally poor and recent excavations have established that the build quality was not always as good as it might have been.

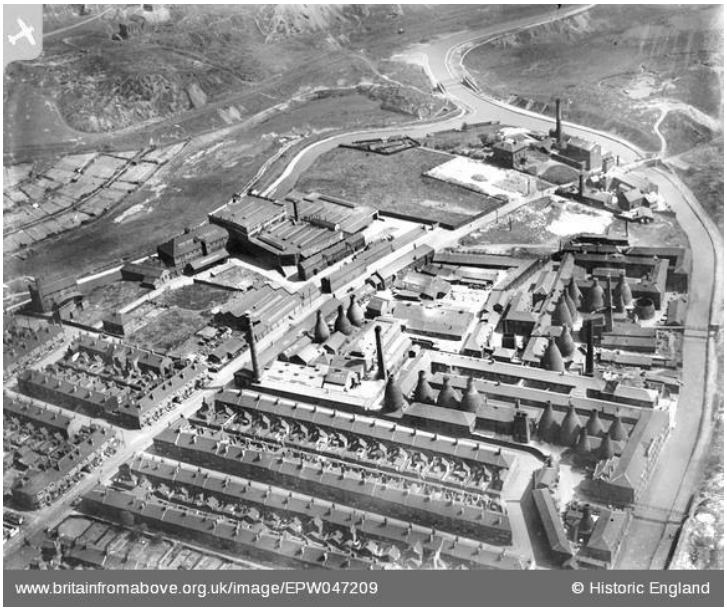
The breach in the Burslem Branch Canal occurred opposite a boat maintenance yard where craft were regularly "side-slipped" into the water. Boats would often be moored on the opposite bank to break the wave when other craft were being launched but this was not always done. The progressive effects of these launches, in what was already a weak area due to it being the outside of a bend on an embankment, are thought to have contributed to the collapse.



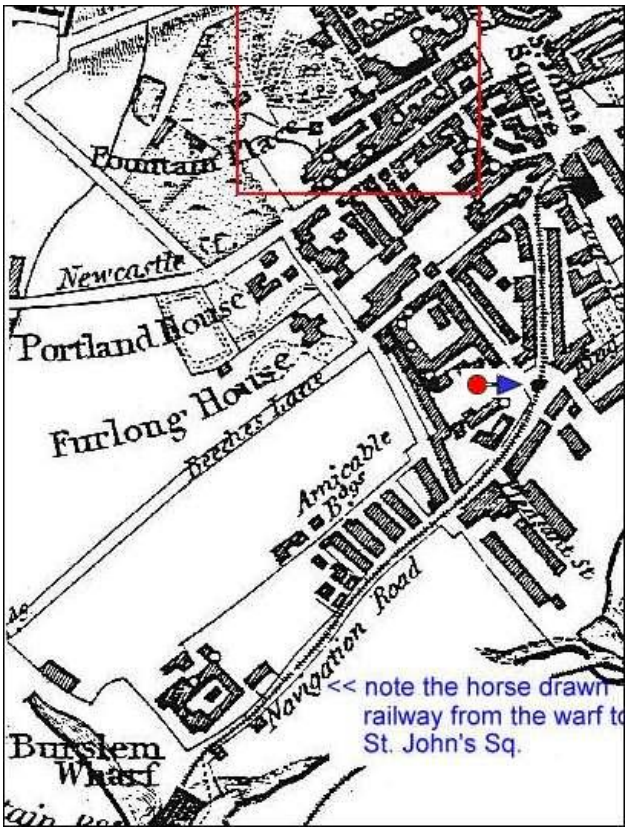
This (undated) composite picture is the only known photo of the junction of the T&M and Burslem Canals. In the foreground is the T& M which continues off to the left of the picture. The junction of the Burslem Canal is on the left and the Burslem Canal is across the centre of the photo. (ThePotteries.org)



Burslem Co-operative Society, Model Bakery, Newport, 1910



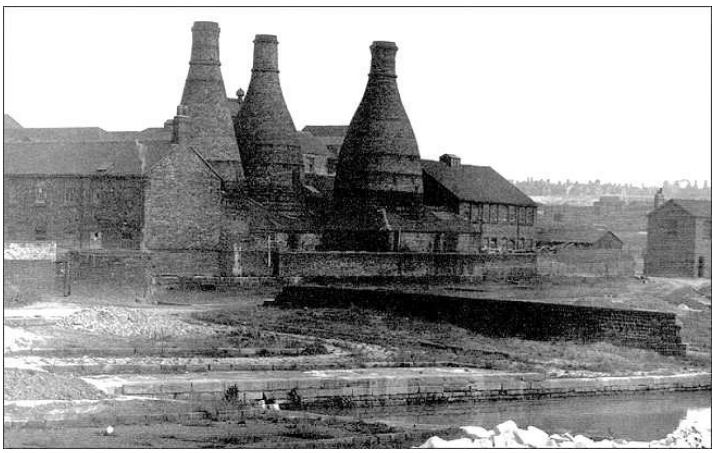
View of area to NW of junction of T&M and Burslem Branch Canals (1935)



1832 map showing the waggonway running along Navigation Road from the Burslem canal wharf area to St. John Square.

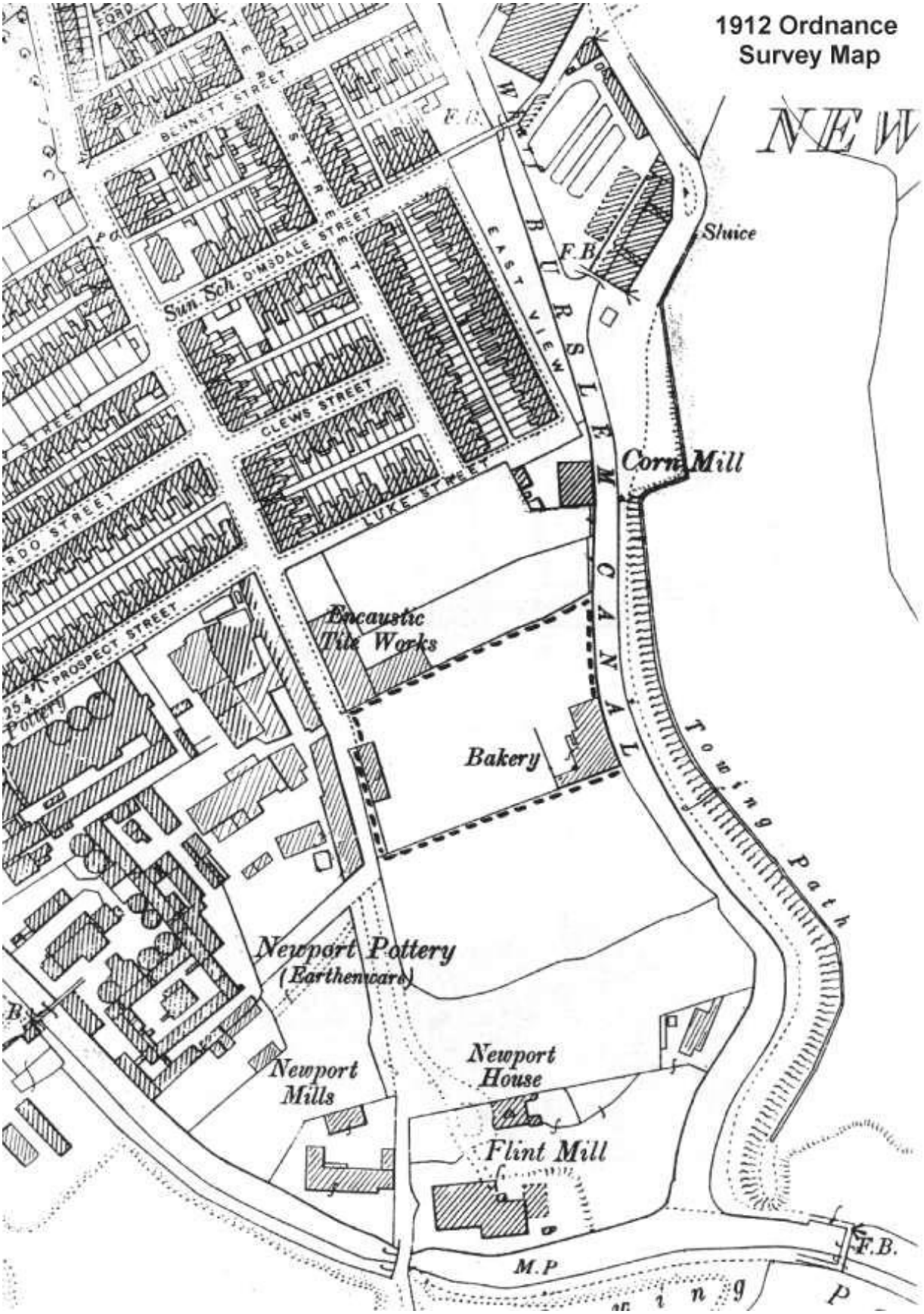
Sources for Burslem Branch Canal text & Images:
Burslem Port Trust (www.burslemport.org.uk/)
ThePotteries.org
(www.thepotteries.org/waterways/burslem_branch.htm)
NABO News, May 2013
Britain from Above (https://britainfromabove.org.uk)

Looking down Navigation Road (photo taken from where the arrow is on map to the left)



The old Anderton Company Wharf

Unloading at Anderton Wharf in 1956



Note the change in urbanisation of the area formed by the "confluence" of the two canals during the second half of the 19th century (compare 1912 and 1832 maps). The area, neglected in the 2nd half of the 20th century, is subject to ongoing regeneration & development today. Unfortunately, much of the (grade 2) listed remains of former glory remain uncared for.

Roger Brice, June 2017