

Graves Park – The Quarries



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The Quarries

- This covers four quarries in and around Graves Park, namely:-
 - The 'Elephant Hills' (across the river from the old quarry)
 - The Old Quarry
 - The Morrison's Quarry
 - The Homebase Quarry
- Estimates have been made for the volume and weight of stone quarried
- The logistics of removing the stone have been considered, and therefore their possible effect on local road development
- The above has been combined with the build dates of local major buildings to estimate potential customers for the stone
- Hopefully some archive research work might establish quarry ownership, production data, sales, etc to confirm the above.

The “Elephant Hills”

- The “Elephant Hills” comprise a large number (eg 10) bowls that have been dug out of the ground, leaving prominent ridges between them.
- At least two of them have left remains of stone edges, indicating that stone was extracted. It is possible that other minerals were dug out of some of the other bowls.
- In more recent times, a brick trackway has been laid, presumably to overcome the boggy nature of the entrance track. This might have coincided with using this area as a dumping ground for general park refuse.
- It has not been possible to estimate the volume of stone extracted, but it must be relatively small and of low quality

The “Elephant Hills”



The Old Quarry

- The Old Quarry is close to the Meadowhead road, and opposite the Morrison's quarry, but pre-dates them both.
- It was a source of good quality stone
- It was approximately 100m x 25m in area, and ranged from 5m in height down to nothing.
- Averaged out, this gives an indicative volume of stone of approx. 6000 cubic metres, equating to approx. 14 thousand tons.
- As a packhorse could carry 110kg, this equates to .05 cu m, or a piece of stone approx. 30cm x 30cm x 50cm, implying 50,000 journeys to extract the quarry.
- If the quarry had been active for fifty years, this is approx. three journeys per day, assuming working seven days per week.
- This is only possible if the stone was cut to these sizes within the quarry, any larger pieces would have required some sort of cart.

The Old Quarry



The Morrison's Quarry

- This is a much larger quarry, being approx. 225m x 80m in area, and up to 10m high (assuming the current road surface was the full depth of the excavation).
- The main quarrying appears to have been at the northern end of the site (currently the lorry unloading bay area). There was also a brickworks on the site.
- The estimated volume extracted is 45,000 cubic metres, equating to just over 100,000 tons
- Because of this quantity, and the quality allowing for much larger pieces of stone, there had to be a better transport system than packhorses.
- It is likely that this quarrying company initiated a good road in front of the quarry, running approximately where the current Chesterfield Road / Meadowhead Road now is, for distribution north and south.
- There is currently a footpath that runs around the top of the quarry bank, giving a good perspective of the quarry, particularly as the lorry unloading area is out of bounds to the general public.

The Morrison's Quarry



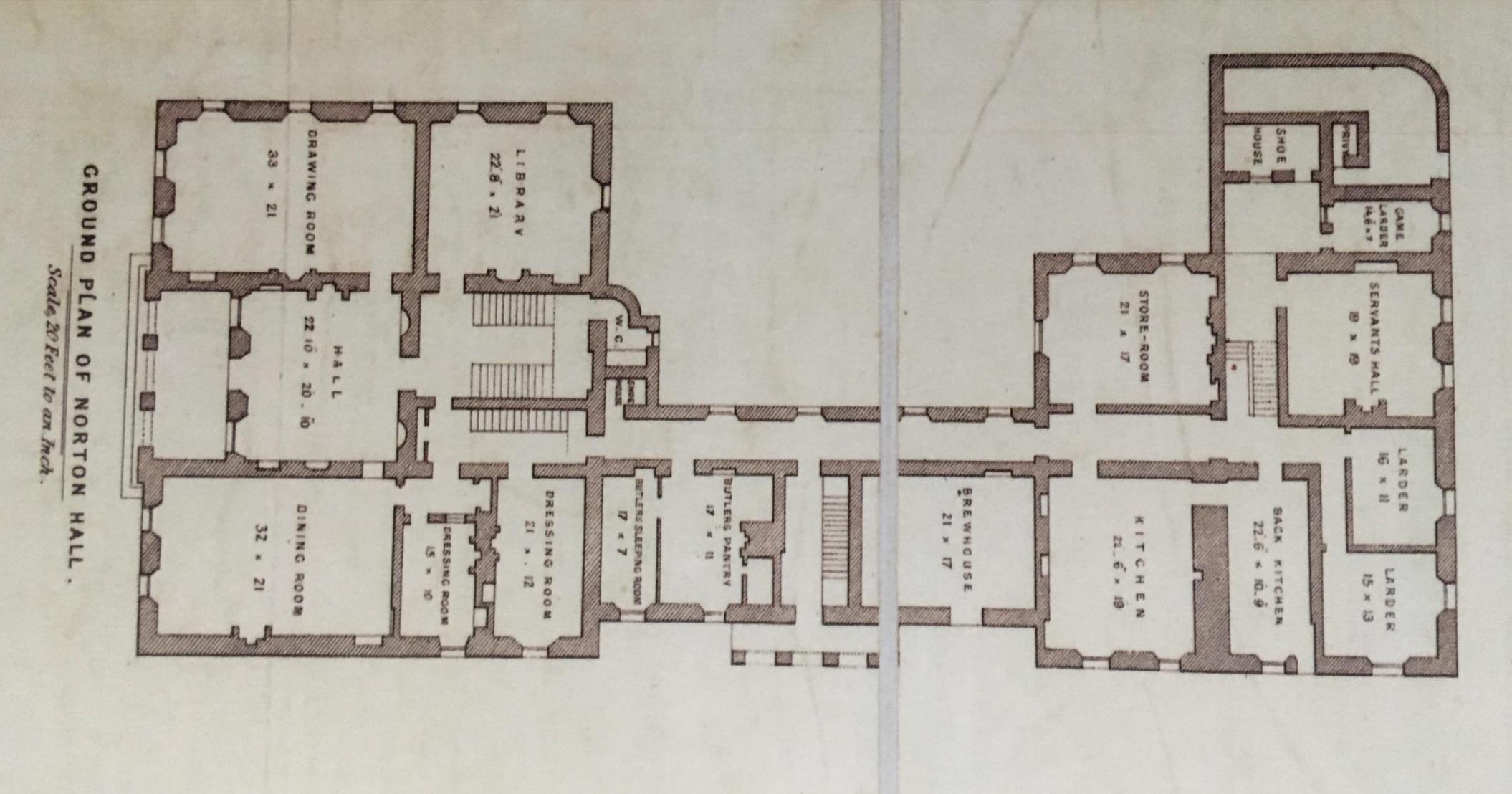
The Homebase Quarry

- Although this quarry is approx. 1.0 km away from Graves Park, it would have been significant, because:-
 - Derbyshire Lane and Scarsdale Road ran very close to the perimeter of this quarry
 - The building of a good road for the quarry would have had the effect of diverting traffic away from Derbyshire Lane, and eventually from the Old London Road
- The quarry occupies approx. 200m x 75m of area, and up to around 10m high (again, assuming that ground level was as today)
- This gives a potential stone extraction volume similar to (or slightly greater than) the Morrison's quarry.
- Again, this would have required a good road system in front of the quarry for the efficient transportation of the stone.

Typical Stone Demand – Eg Norton Hall

- Norton Hall has the following approx. dimensions:-
 - Length 140ft = 43m
 - Width 60ft = 18m
 - Height 40ft = 12m
- Assuming the walls are approx. 30cm thick, and that there are as much internal walls as external, then the volume of stone is:-
 - $2 \times 2(43 + 18) \times 12 \times 0.3 = 1160 \text{ cu m}$
- This equates to a weight of:-
 - $1160 \times 2300 \text{ kg/cu m} = 2,668,000 \text{ kgs} = 2668 \text{ tons.}$
- This can then be compared with the quarry capacity and output rate. Assuming a 50% wastage level:-
 - The Old Quarry could produce around 3 Norton Halls
 - The Morrison's quarry could produce around 20 Norton Halls

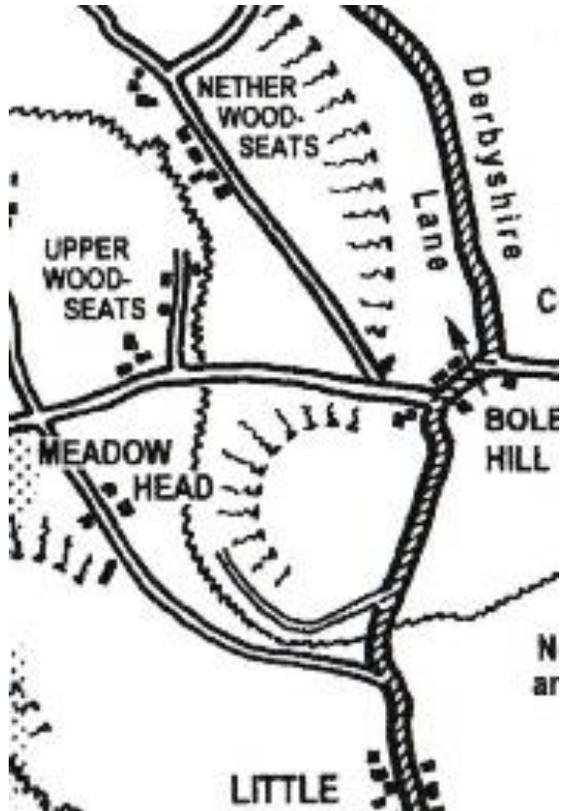
Norton Hall layout



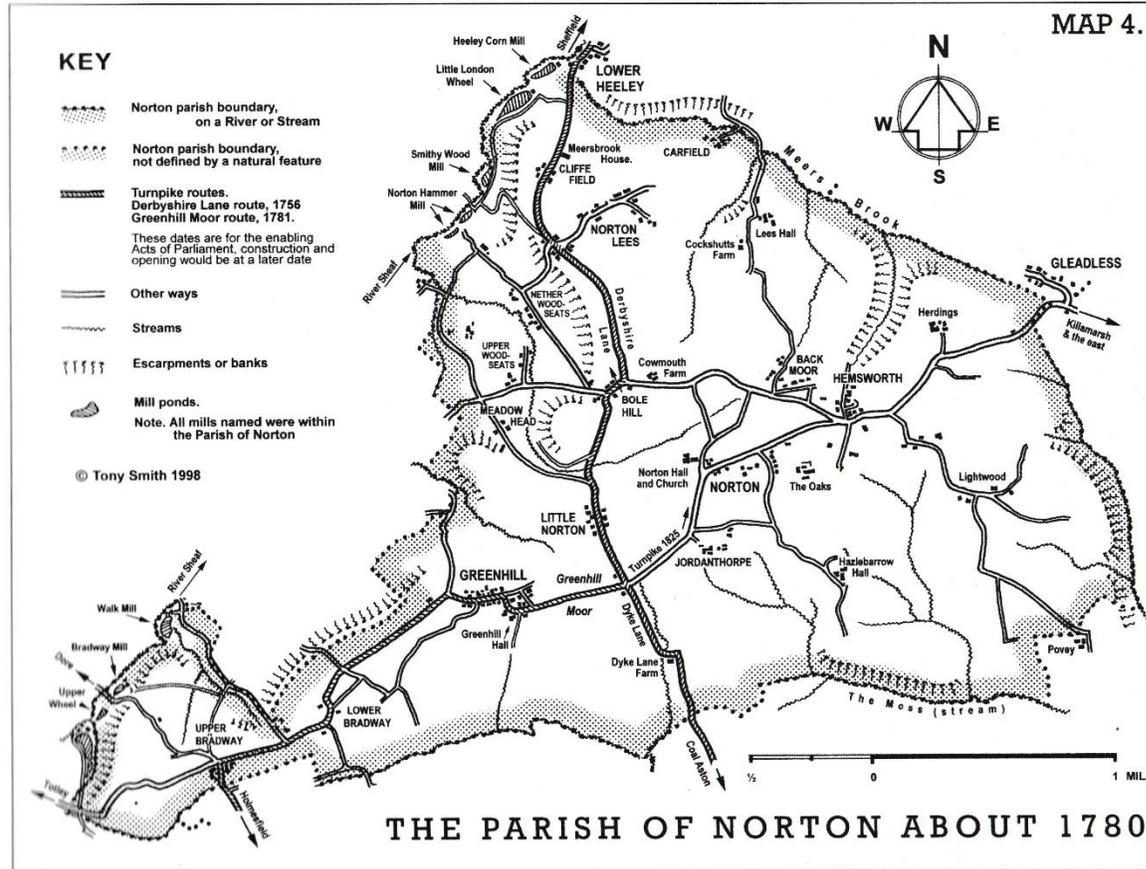
Timeline for stone demand in the location

- c1600's Norton Hall (Mark 2)
- 1815 Norton Hall (Mark 3)
- 1520 & 1881 Additions to St James Church
- 1744 Norton Grange
- 1880 Norton House (Country Club)
- 1714 Norton Rectory
- ? Norton Green
- 1737 Norton Stables
- 1590 The Oakes
- C1600 Norton Lees Hall
- ? Cockshutt Farm
- ? Bolehill Farm
- ? Chantrey House
- c1800 Chantrey Grange
- ? Graves Park Nursery
- ? Graves Park walls
- ? The Summer House
- C1350 & 1550 Greenhill Hall
- ? Jordanthorpe Farm
- ? Cowmouth Farm
- C1600's The Poplars, Bolehill
- 1622 Hazelbarrow Hall
- 1821 Hazelbarrow Farm
- 1859 Bagshawe Arms
- Early 1600's Nail Makers Arms

Timeline for transport change in the location

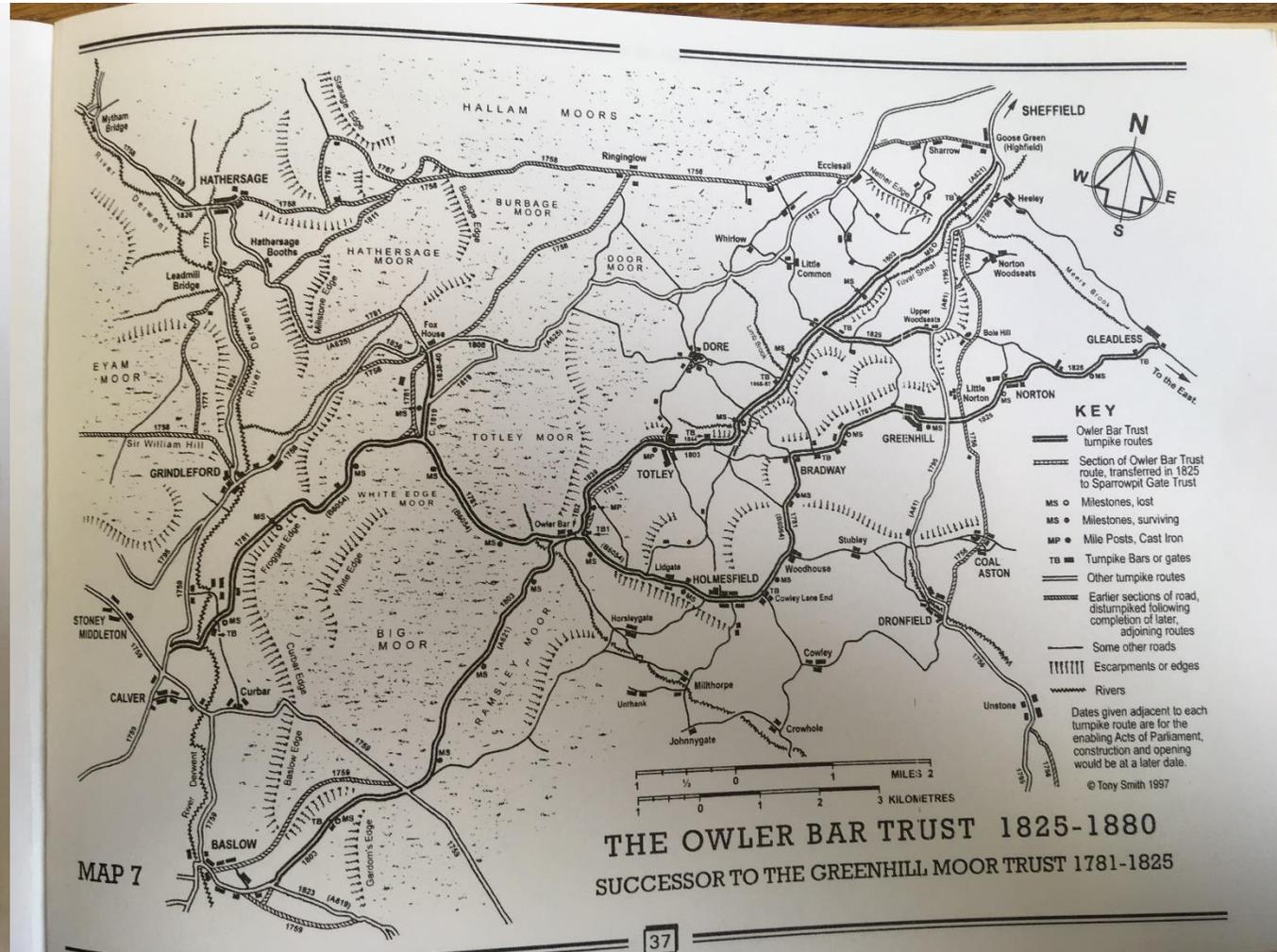
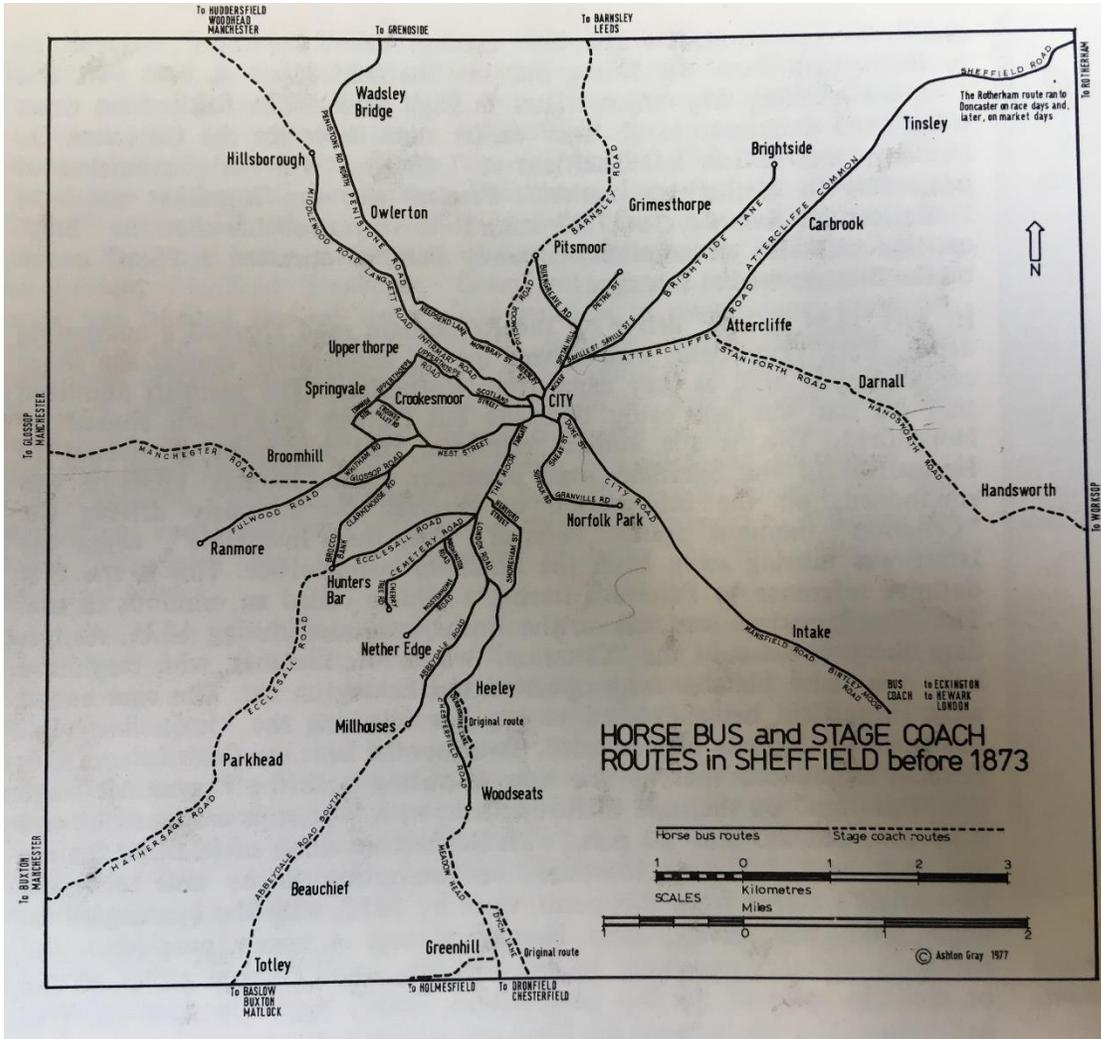


Old London Road is the main route north / south



Turnpike location numbers

Timeline for transport change in the location



Two short bypass roads (aligned to quarries)

By-pass roads joined up to form the Chesterfield Road / Meadowhead

Timeline for transport change in the location

Possible route
towards
Morrison's
Quarry



Old London Road

Potential by-pass route to new road at Morrison's Quarry
(near Little Norton)