

# Graves Park – The Quarries



Tony Spillane  
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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





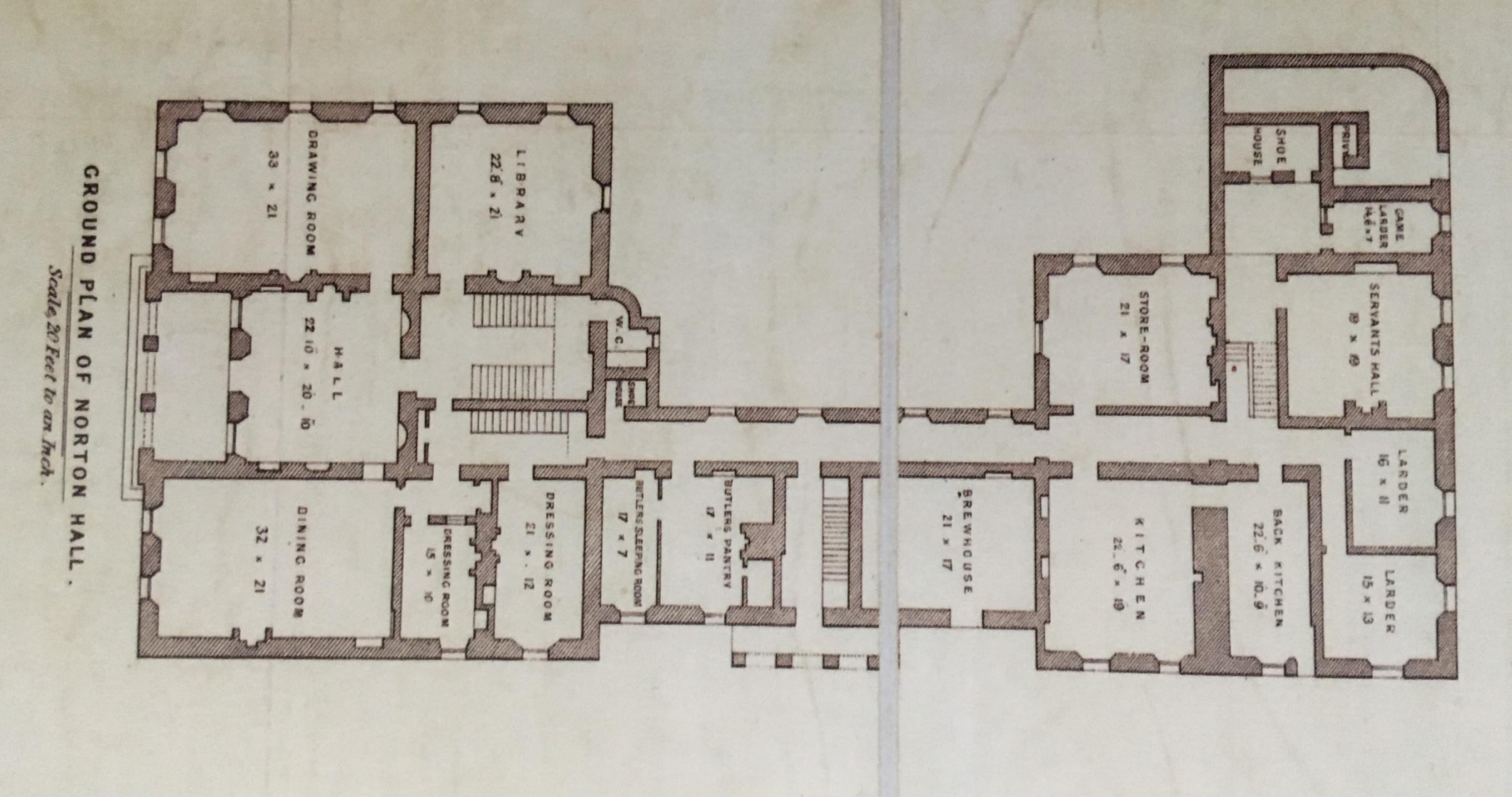
# The Homebase Quarry

- 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

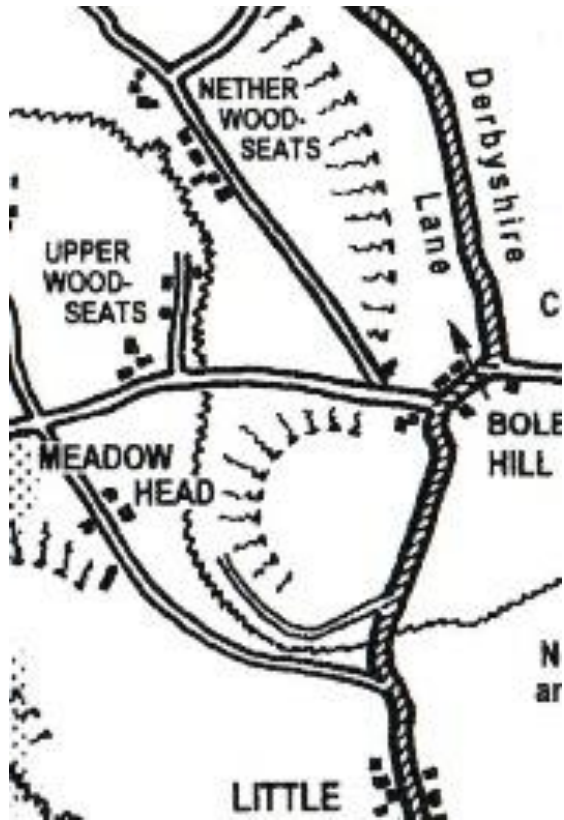
# Norton Hall layout



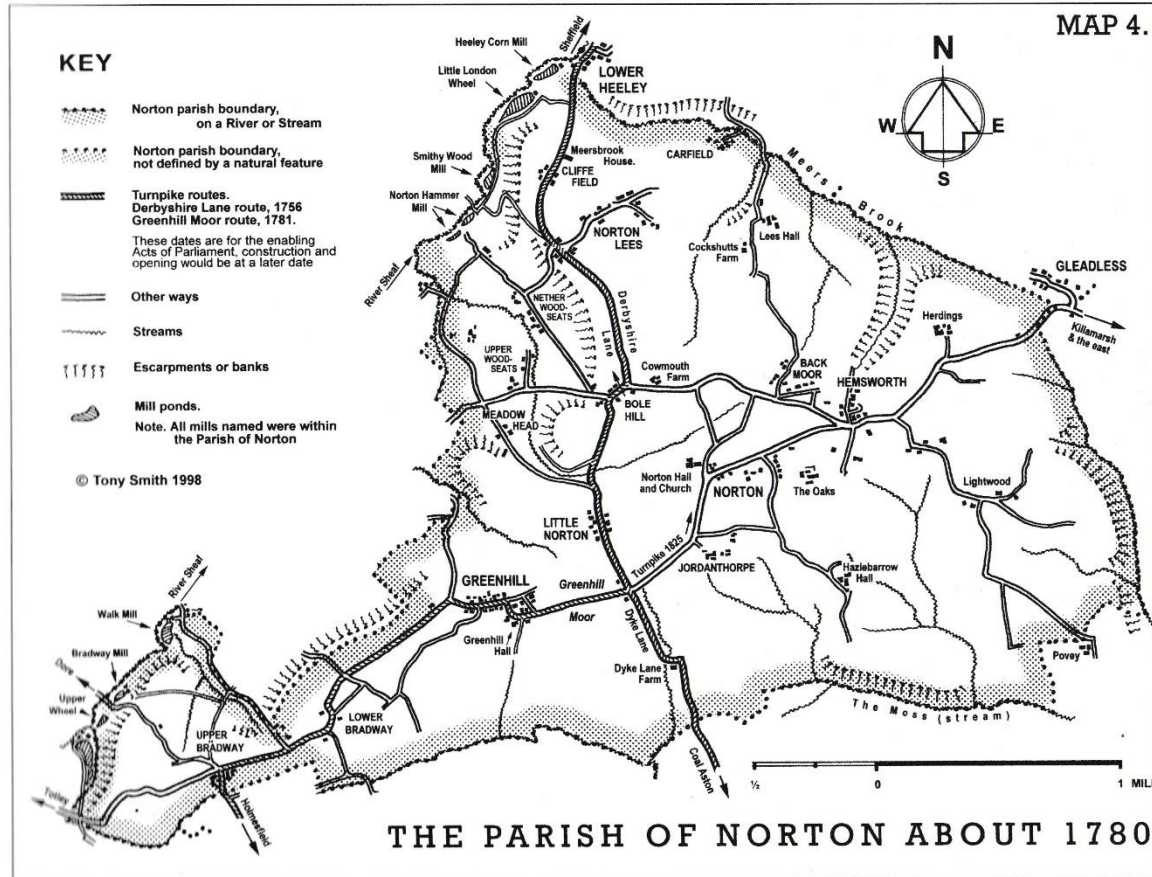
# Timeline for stone demand in the location

- 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

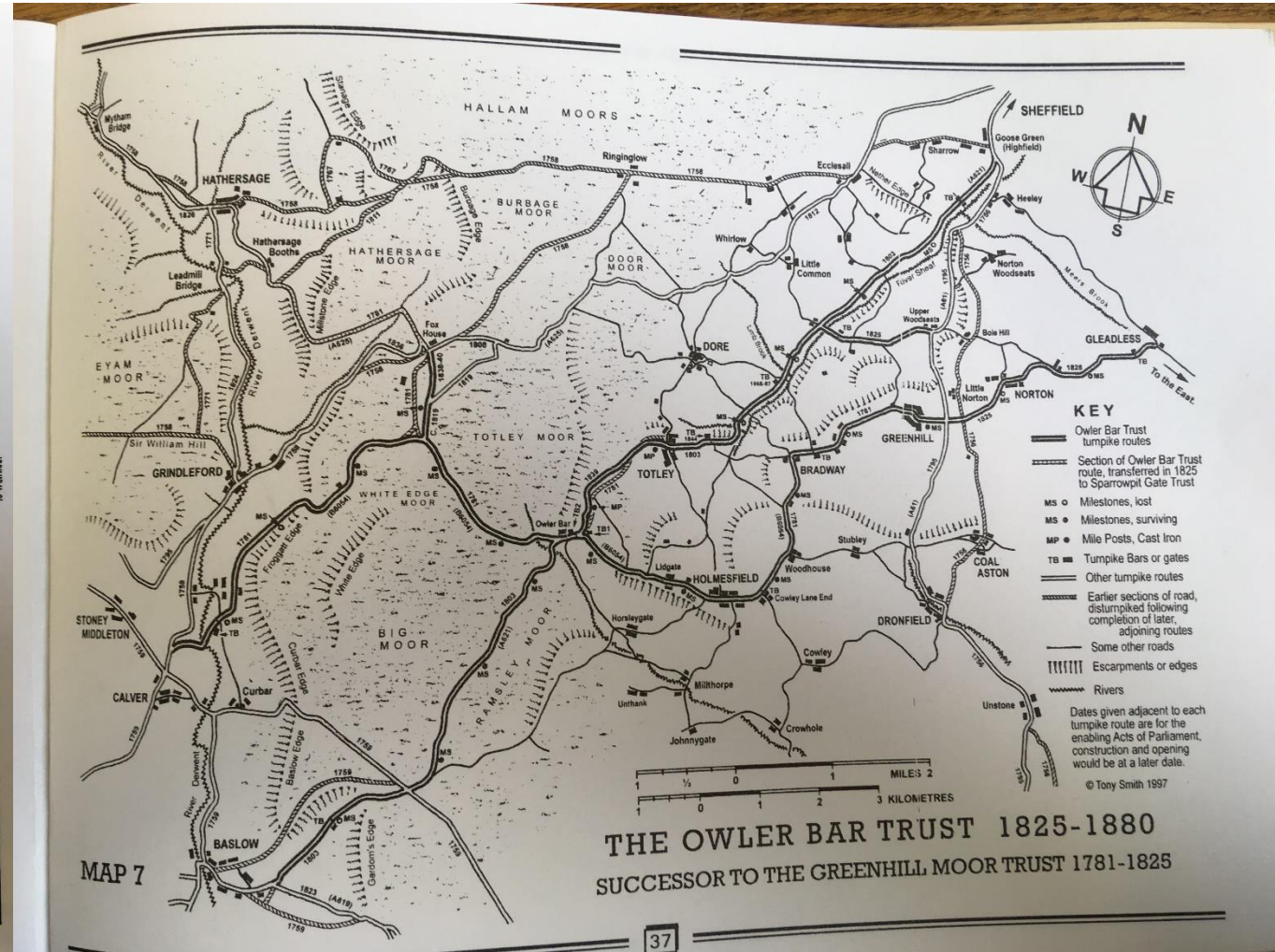
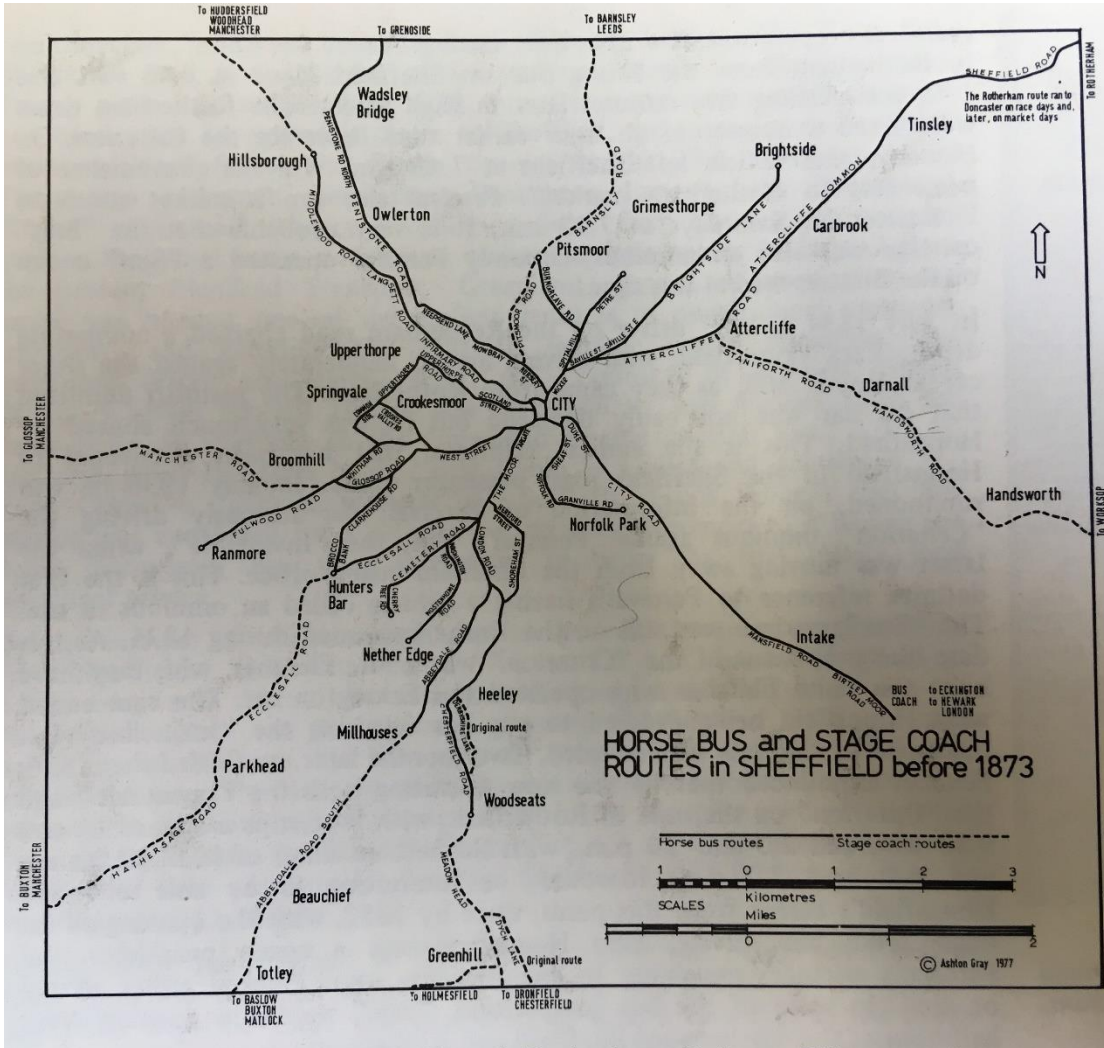


Old London Road is the main route north / south



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)