



Evergreen 3

Private Sector Specification and Delivery of Enhancement

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Chiltern Railways

- A train operating company with a difference
- Existed since privatisation in 1996
- Now owned by DB
- Initial franchise replaced with unique 20 year franchise in 2002
- Underlying market growth and opportunities
- Philosophy of gradual but continual improvement
- Consistency of approach over 15 years

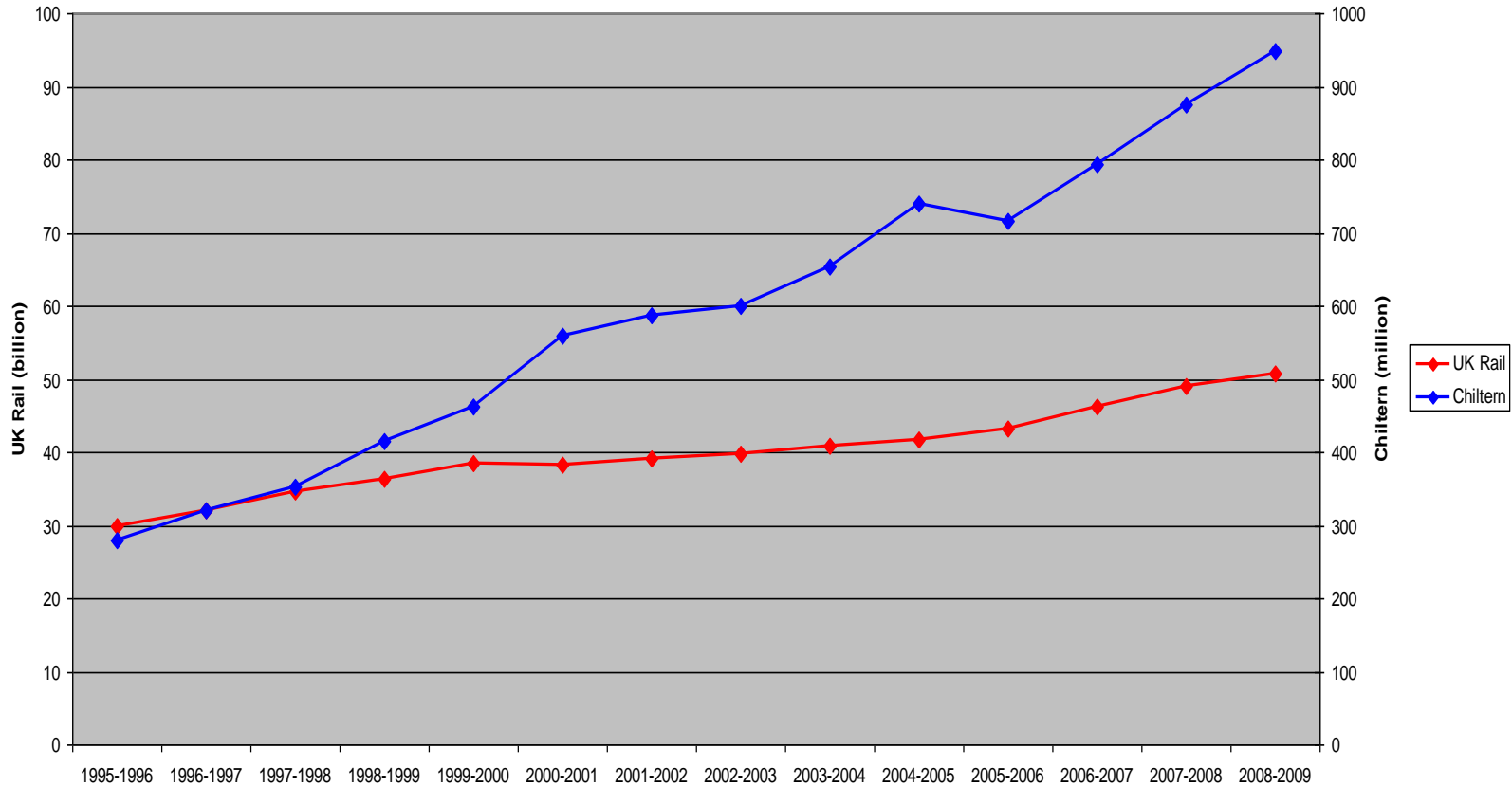
15 Years Ago

- Downgraded in the 1960's
- Survived closure plans
- Total Route Modernisation in 1991
 - New trains, signalling, improved stations
- Still a 75mph railway
- Extensive single track sections
- Capacity limitations



A Growing Market

Passenger Kilometres



What makes us different?



Why would a TOC do that?



Achievements

- £370m invested
 - Stations
 - Depots
 - Car parks
 - Track and signalling



Chiltern Railways

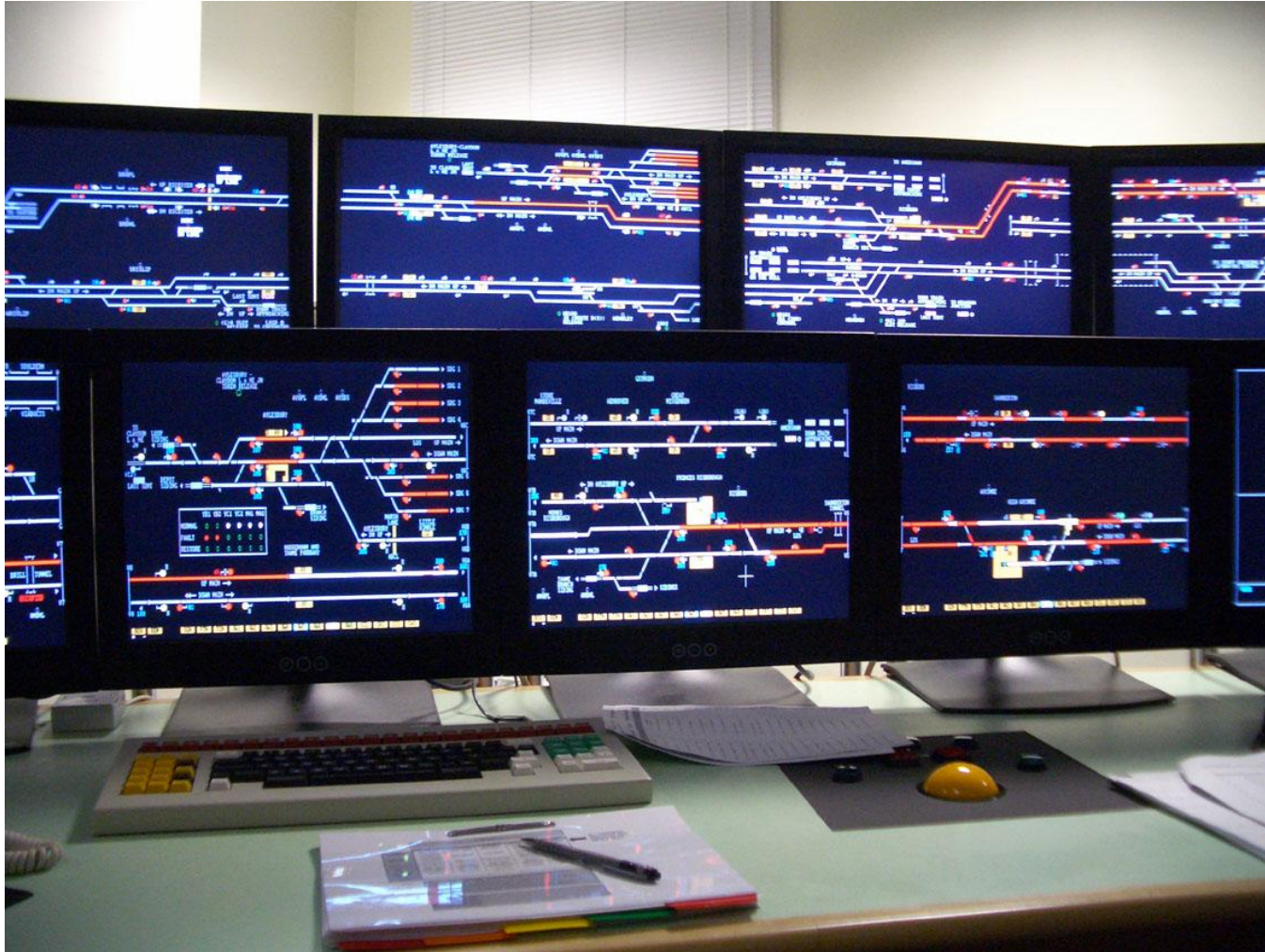
Aylesbury Vale Parkway



Wembley Depot



Evergreen 2





But it takes a very special mix of people...

- Infrastructure Engineers
- Signalling Engineers
- Rolling Stock Engineers
- Timetable planners
- Economists
- All with extensive experience and understanding of the Chiltern business
- All with an understanding of what the others do

The Heart of a Railway Business

- Relationship between timetable, infrastructure, trains
- TOC understands passengers better than NR or DfT
- “Investment should be led by those closest to the customer”



Evergreen 3 – Business Drivers

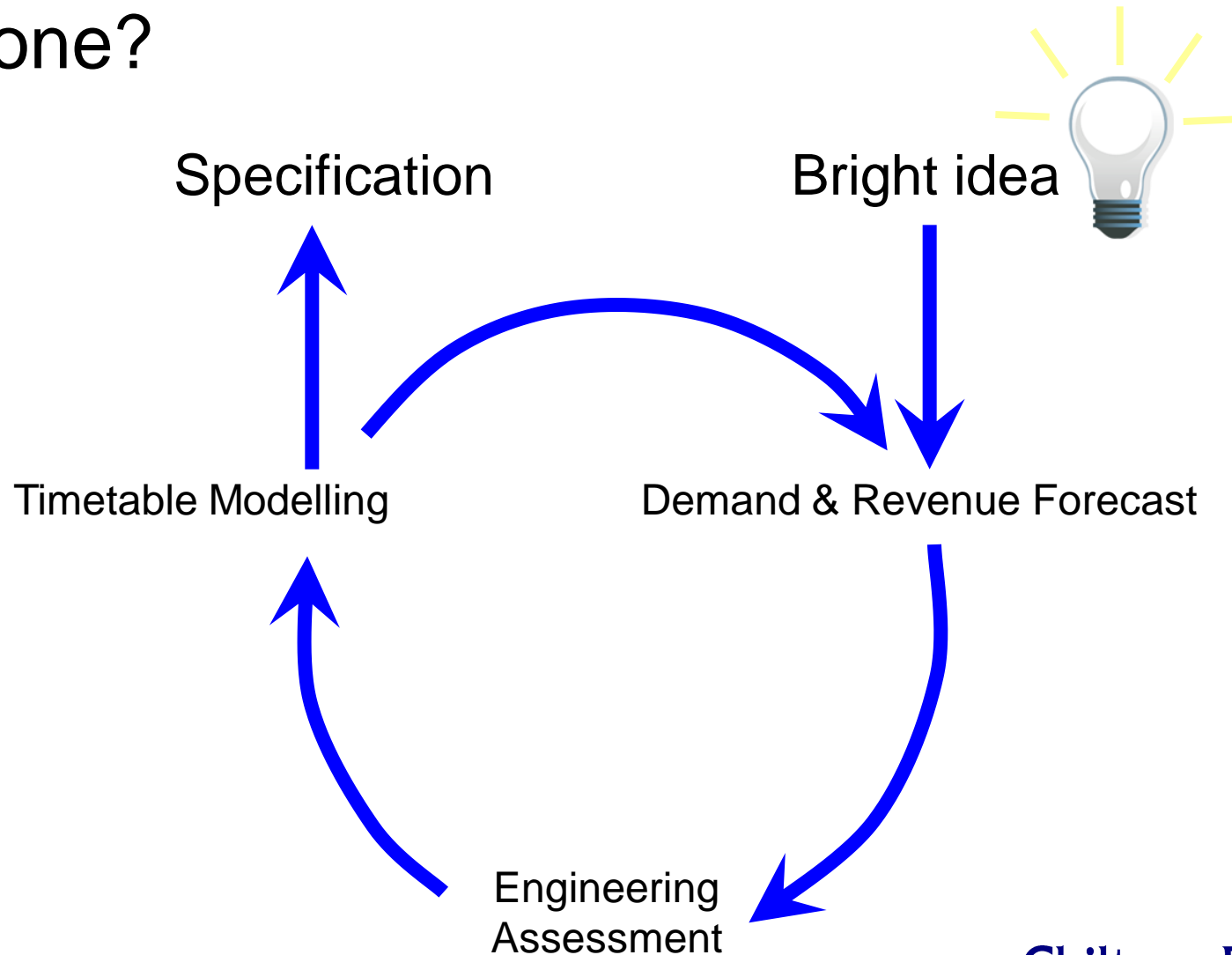
- Need to turn aspirations and ideas into defined project with ability to enter into contract
- Process and timescales set out in franchise agreement
- Essential to secure the 20 year franchise

Evergreen 3



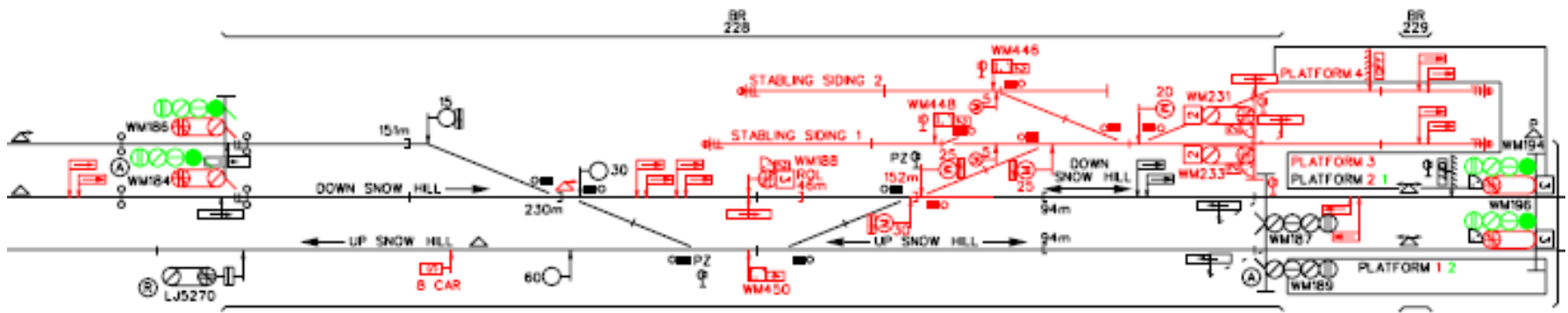
- Increased speeds (mostly 100mph)
- More flexible track layouts
- A new route to Oxford
- New and improved stations

Development and specification – how was it done?



Decision Support Systems

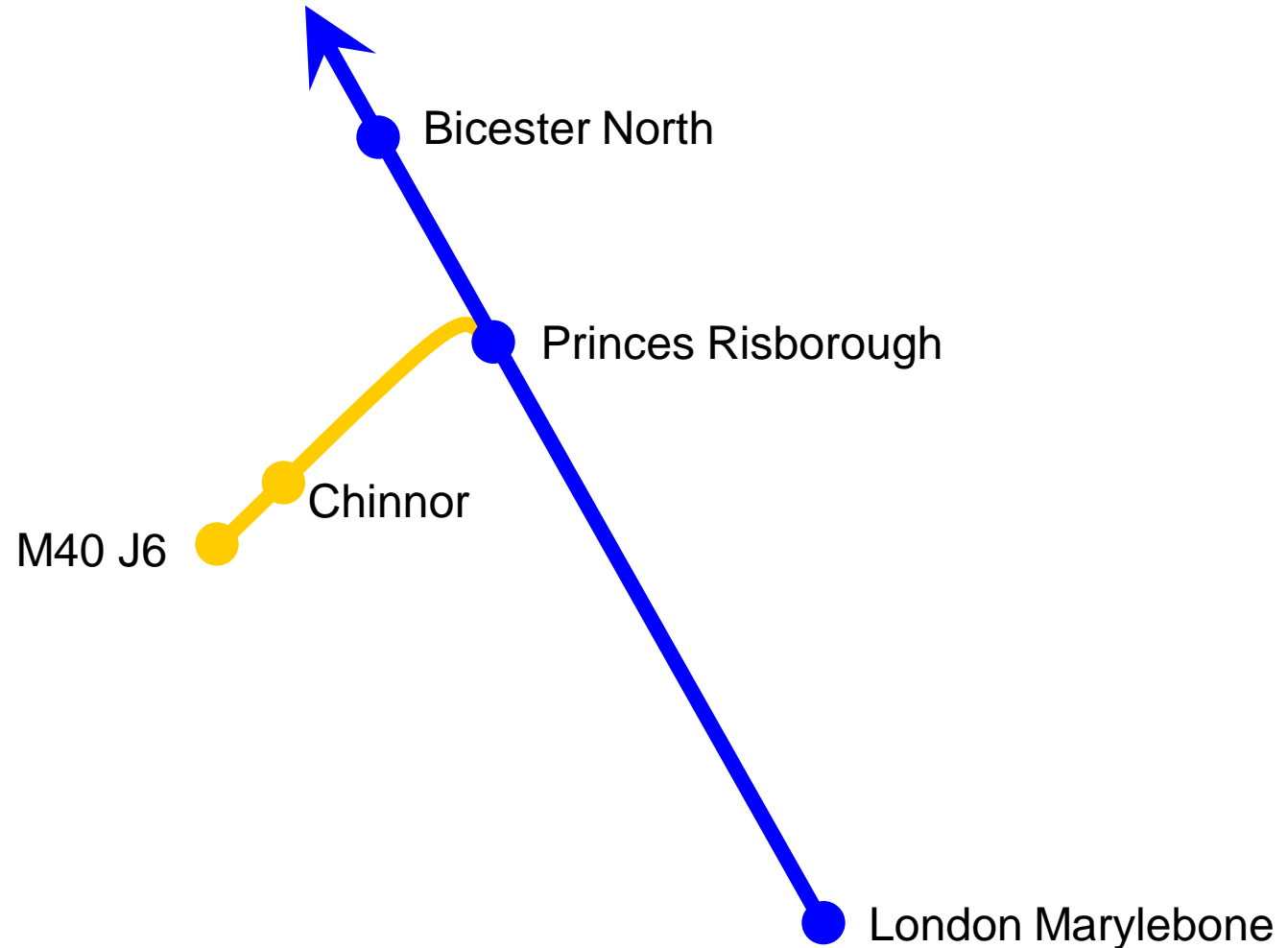
- Demand and Revenue:
 - Econometric models
- Infrastructure Costs:
 - Expertise and costing models
- Timetable and Performance:
 - Expert timetable planners
 - Railsys – industry standard dynamic operational modelling



How did the scheme evolve...

- Two distinct aims:
 - Improve access to rail from north and west Oxfordshire
 - Make journey time to Birmingham more competitive

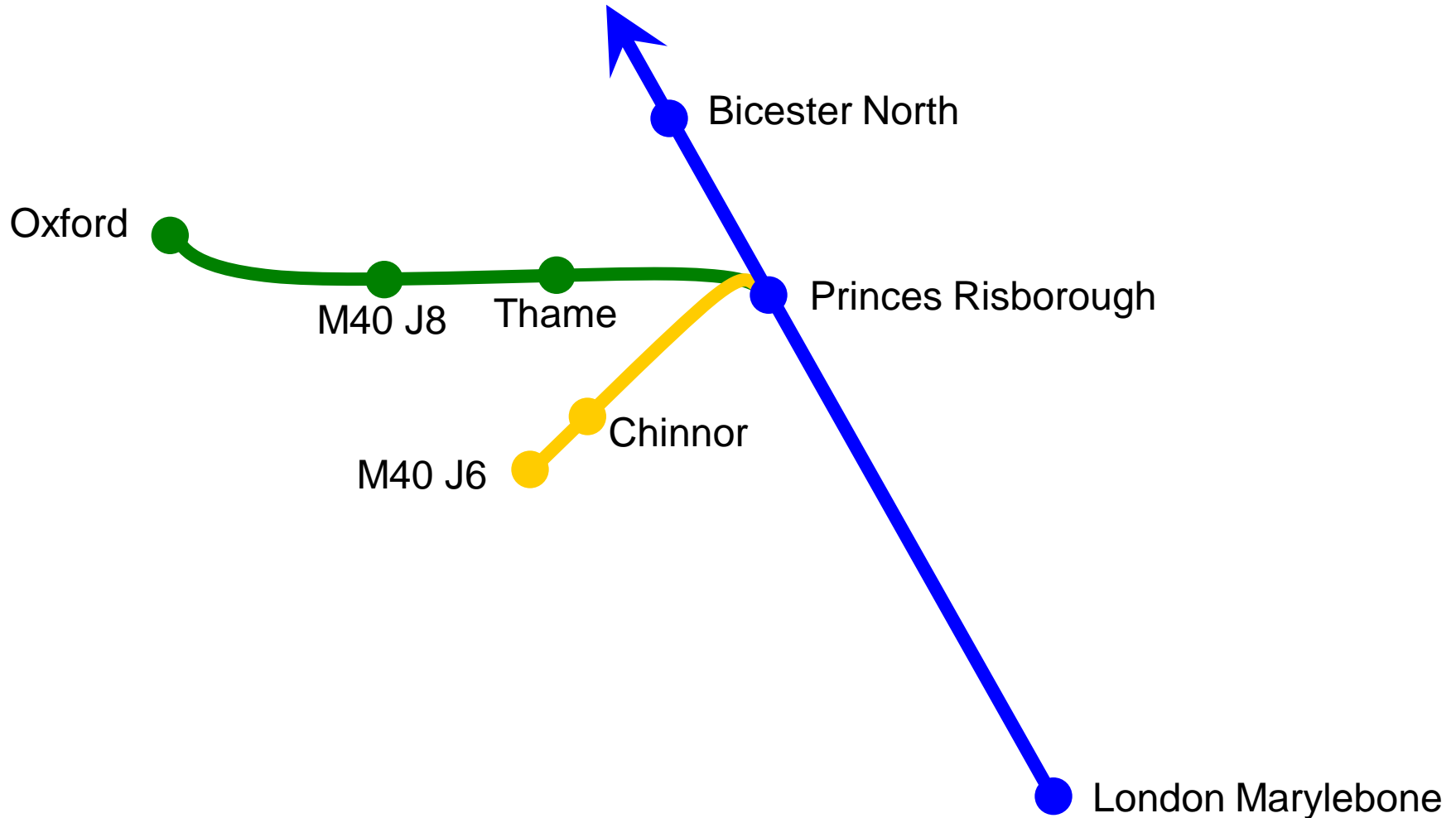
How did the scheme evolve...



The Chinnor Line



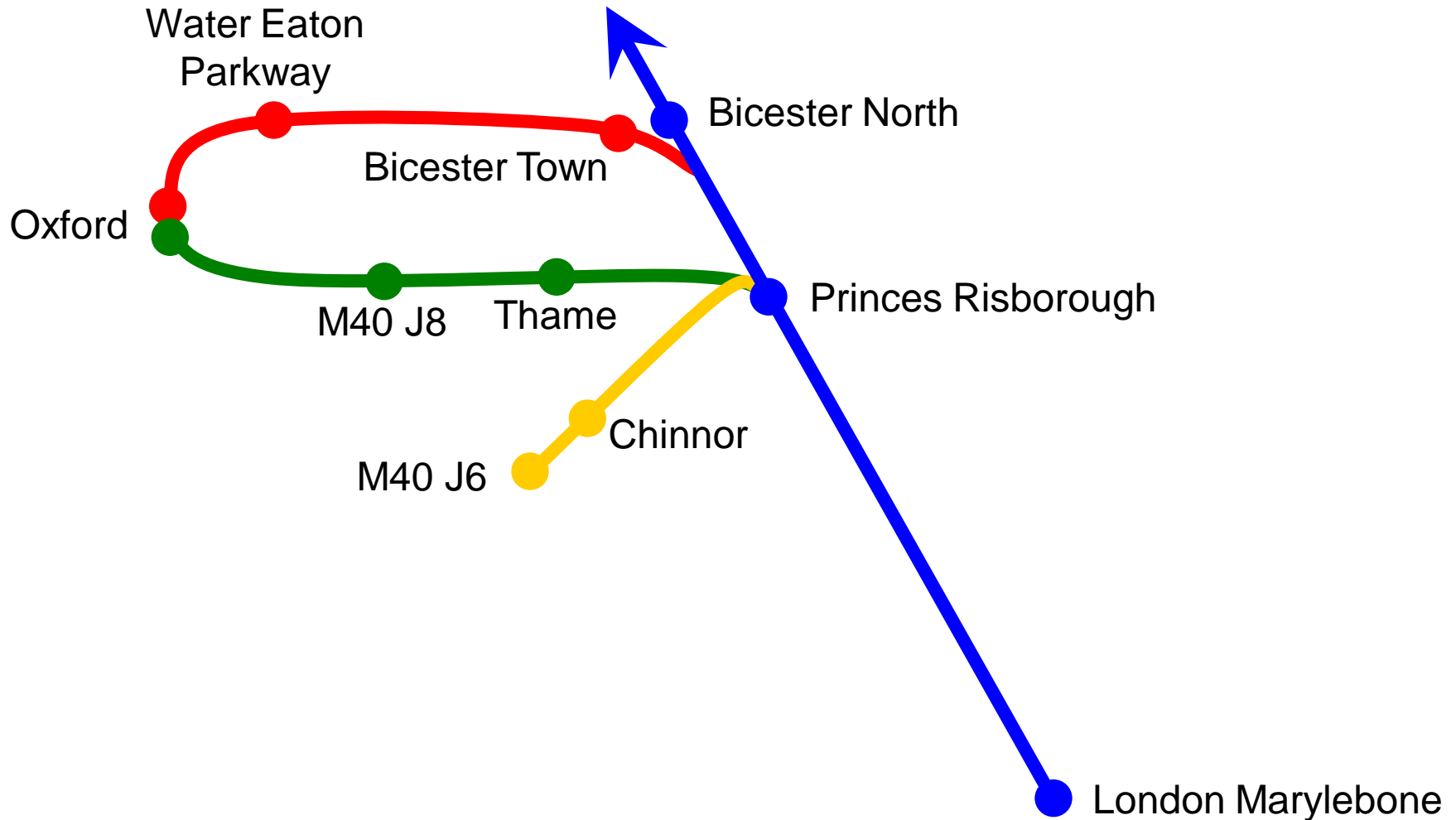
How did the scheme evolve...



The Thame Line

- Reuses a disused railway corridor
- Built as a single track line
- Single track tunnel at Horspath – now home to bats
- Housing built across the line since closure
- Breached by M40 – heavily skewed bridge required
- Congestion on southern approaches to Oxford

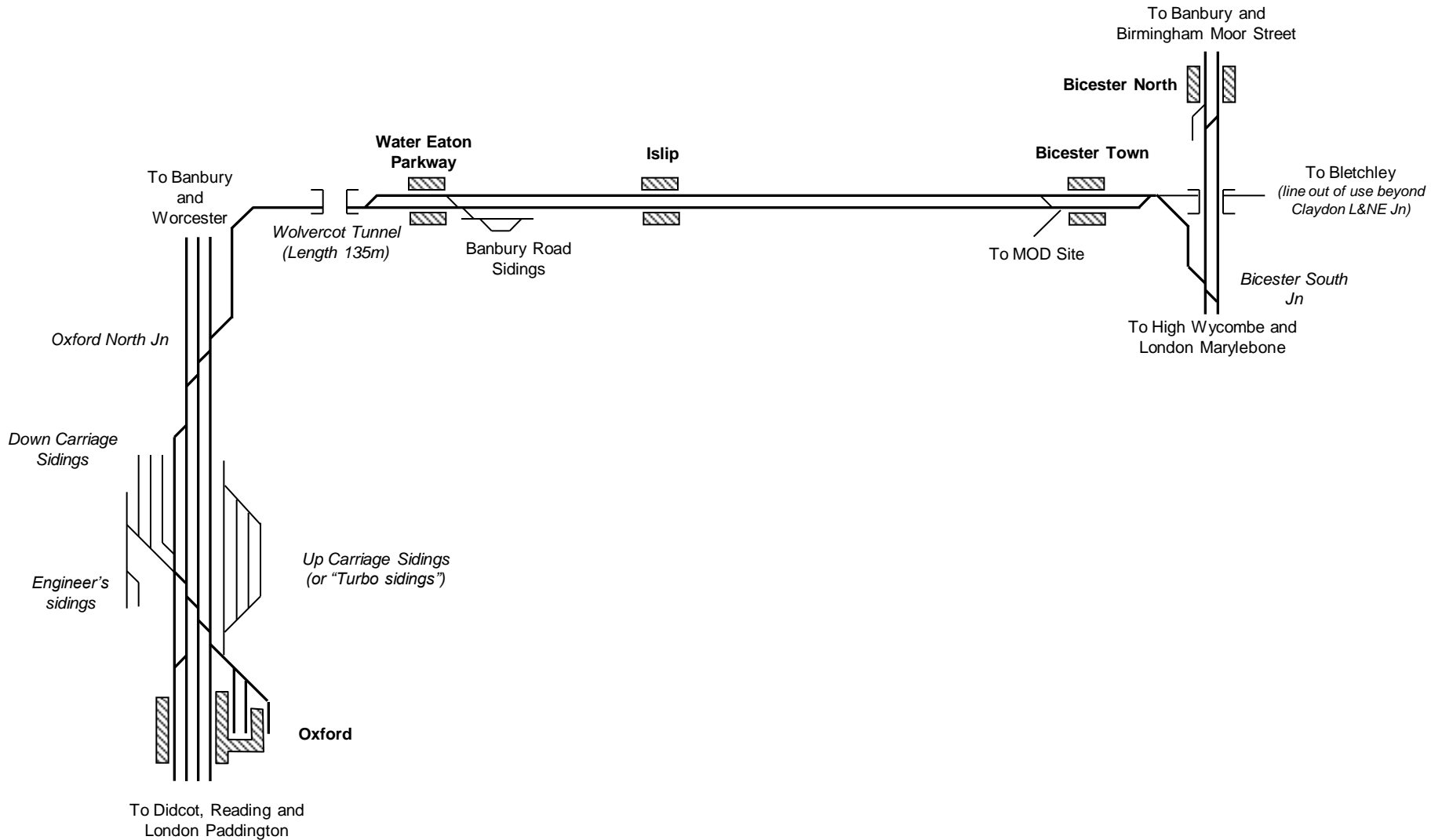
How did the scheme evolve...



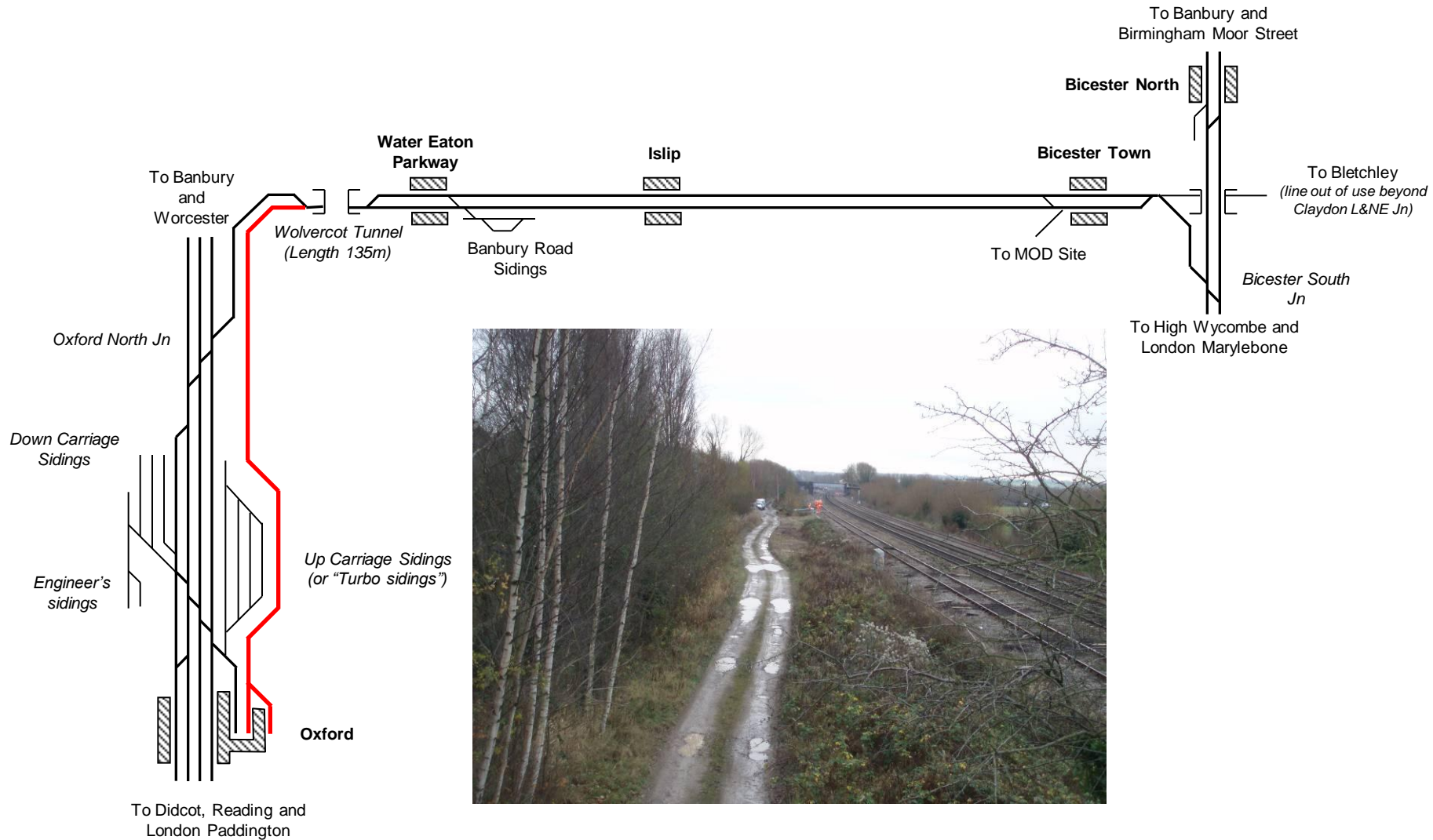
The Bicester Town Line



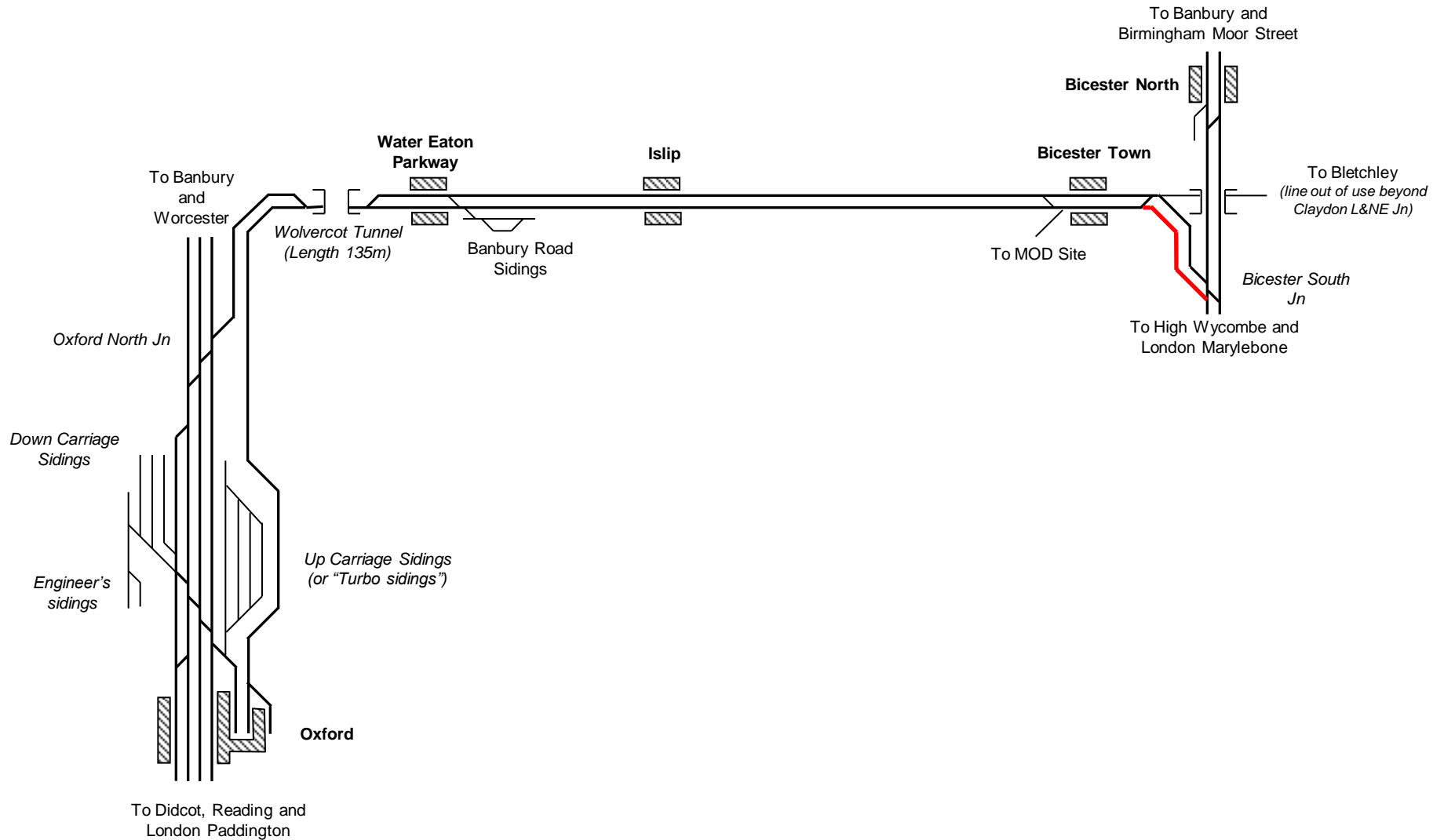
Refinement of the preferred option



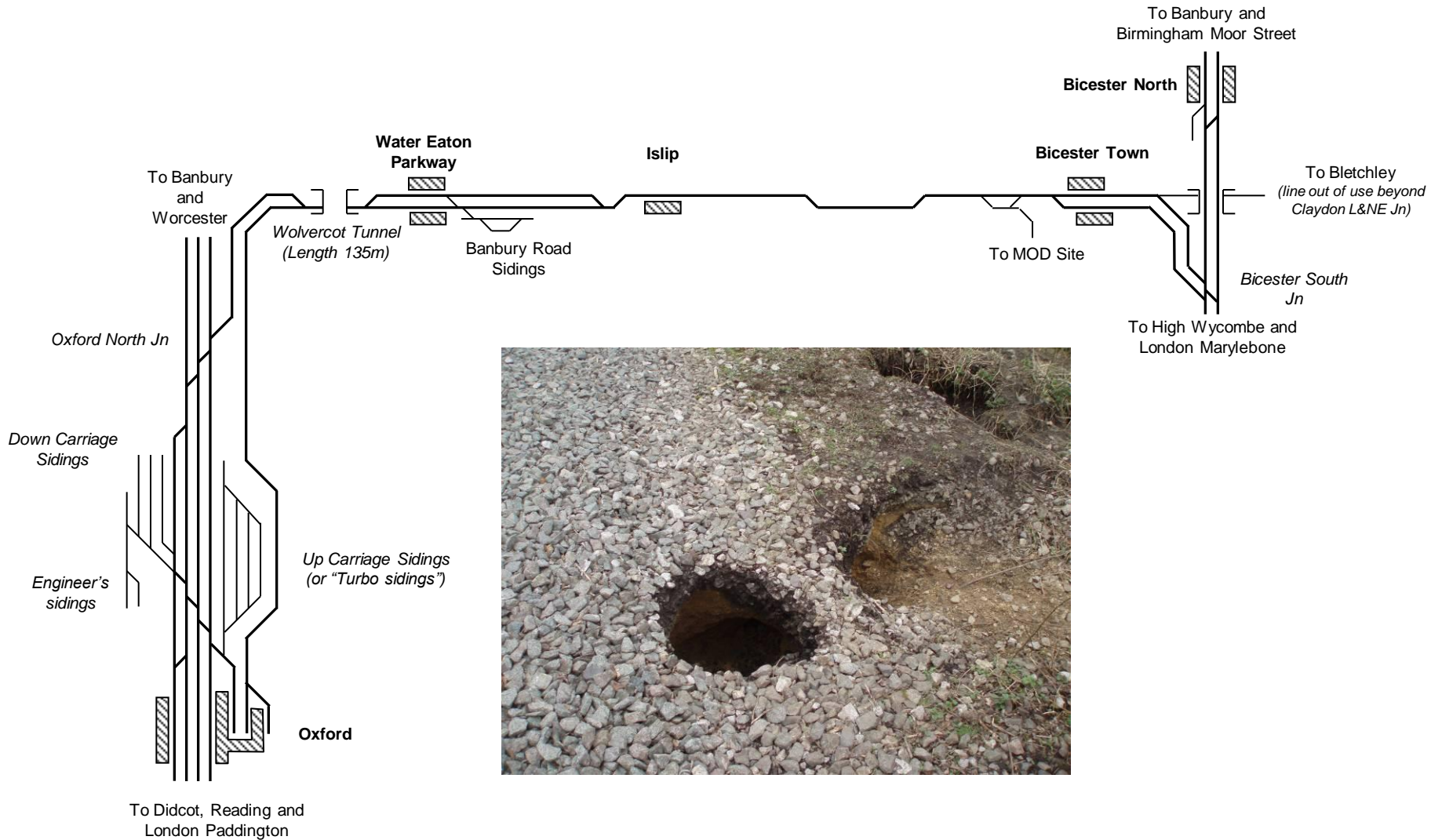
Refinement of the preferred option



Refinement of the preferred option



Refinement of the preferred option



Meanwhile, on the Mainline....

- Numerous options tested to deliver <100 minute Marylebone – Moor Street journey time
- Preferred option consisting of a combination of infrastructure and rolling stock improvements
 - Increased line speeds north of Ruislip
 - Altered track layouts at several locations
 - Re-engining of existing fleet of trains

The Credit Crunch takes effect...

- Financing rolling stock enhancement becomes very difficult and very expensive
- But infrastructure enhancement is (relatively) unaffected
- Therefore a further 10 minutes of journey time savings had to be found from additional infrastructure enhancements and improved timetabling

The key to unlock the extra 10 minutes...



What made it all possible?

- People from different professional backgrounds...
- ...all with an intimate knowledge of the Chiltern business....
- ...working closely together to test ideas and refine the solution.

Chiltern Railways



If you think our way, *travel our way.*