

The Evergreen 3 Project

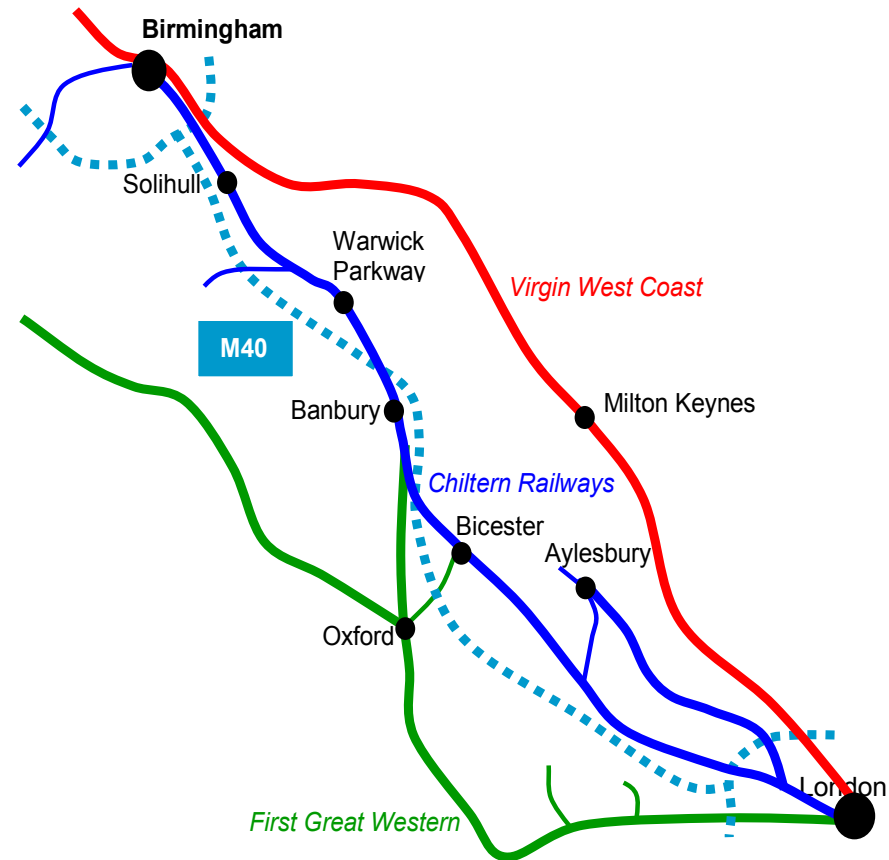
Railway Civil Engineers' Association
26th January 2012

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Strategic Development Manager
Chiltern Railways

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- Linking London and Birmingham
 - England's first and second cities
- Prosperous part of middle England
- Competes with parallel M40 motorway, GWML and WCML
- Chiltern has built significant market share, much of it new to rail

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The railway that almost died



- 1910-1966: The best way from Birmingham to London
- 1970s: Increasingly rundown – a “duplicate route”
- 1980s: Marylebone to be closed and made into a bus station
- 1990s: Total Route Modernisation by NSE - but only as a low-density commuter line
- 1997 on: Chiltern Railways invest over £500m to recreate a profitable main line



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Investment in infrastructure



Evergreen 2 – extra line capacity and platforms



Evergreen 1 – track doubling

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Investment in the fleet

Class 168 – first new trains to be ordered by a privatised TOC



Wembley LMD

Class 172 -
high
acceleration
DMUs to
increase line
capacity



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Investment in access to the railway



New car parks and bus interchanges



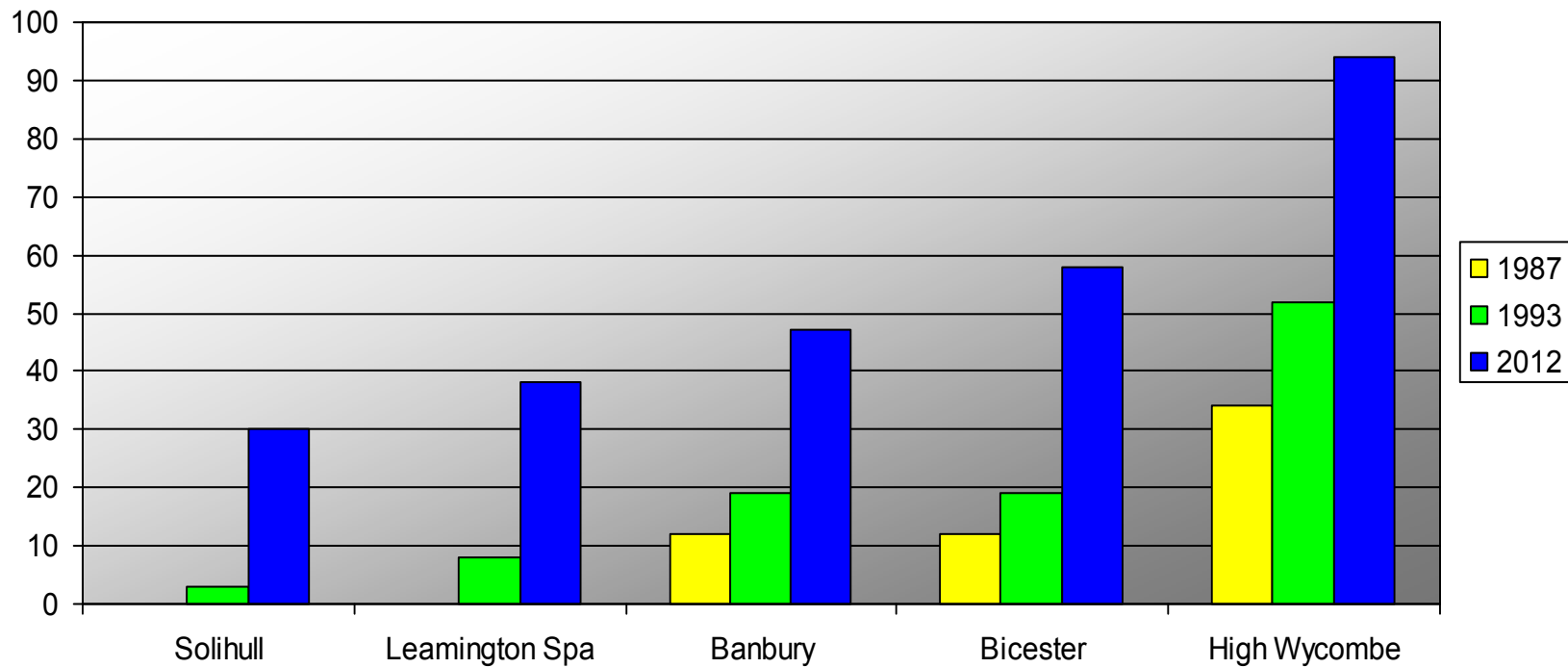
New Parkway stations

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Investment in the timetable

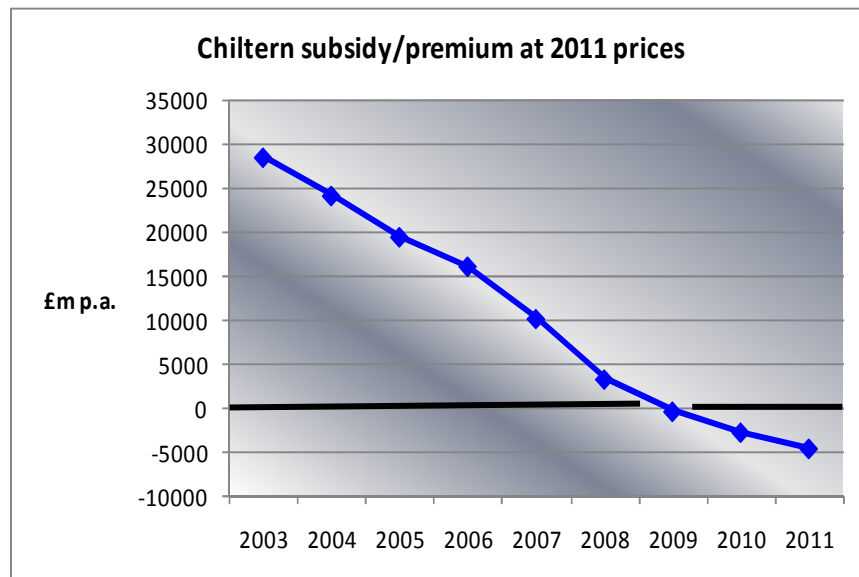
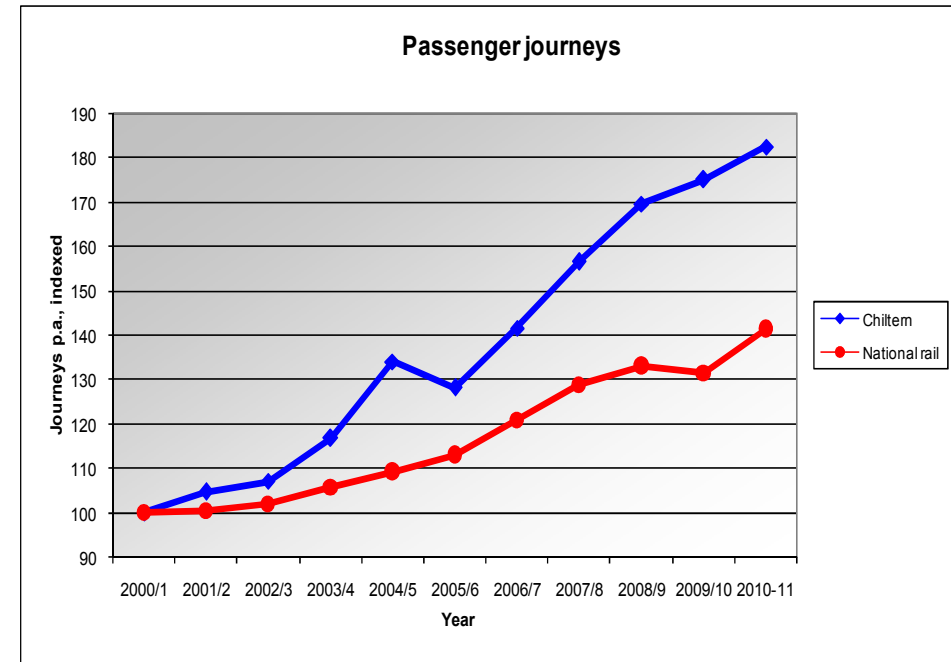
Trains to London each weekday



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The results to date



- More traffic
- Better performance
- Taxpayer subsidy eliminated
- A more useful railway
 - For the passenger
 - For the nation

Evergreen 3: The project



- £250m investment project
 - Phase 1: Chiltern Main Line
 - Phase 2: A new route to Oxford
- Financial close with DfT January 2010
- Secures franchise through to 2021

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Evergreen 3:

Development and funding

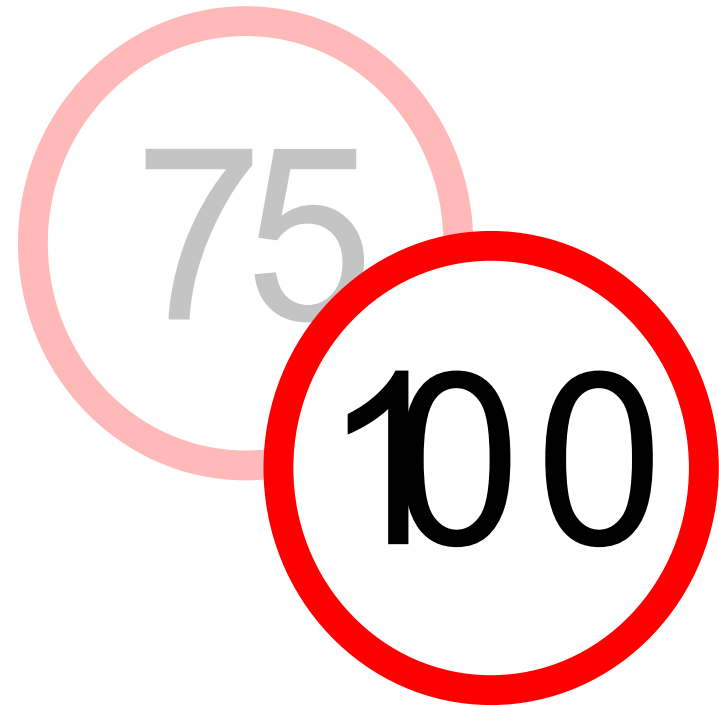
- Chiltern undertake specification and outline design
- Chiltern take the risk on project development and statutory authorisation
- Asset Protection arrangement with Network Rail
- Chiltern appoint contractors
- Output sold to Network Rail at agreed milestones
- Completed works then form part of Network Rail's RAB
- Chiltern pay higher track access fees, earned by carrying more passengers

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Phase 1: Objectives

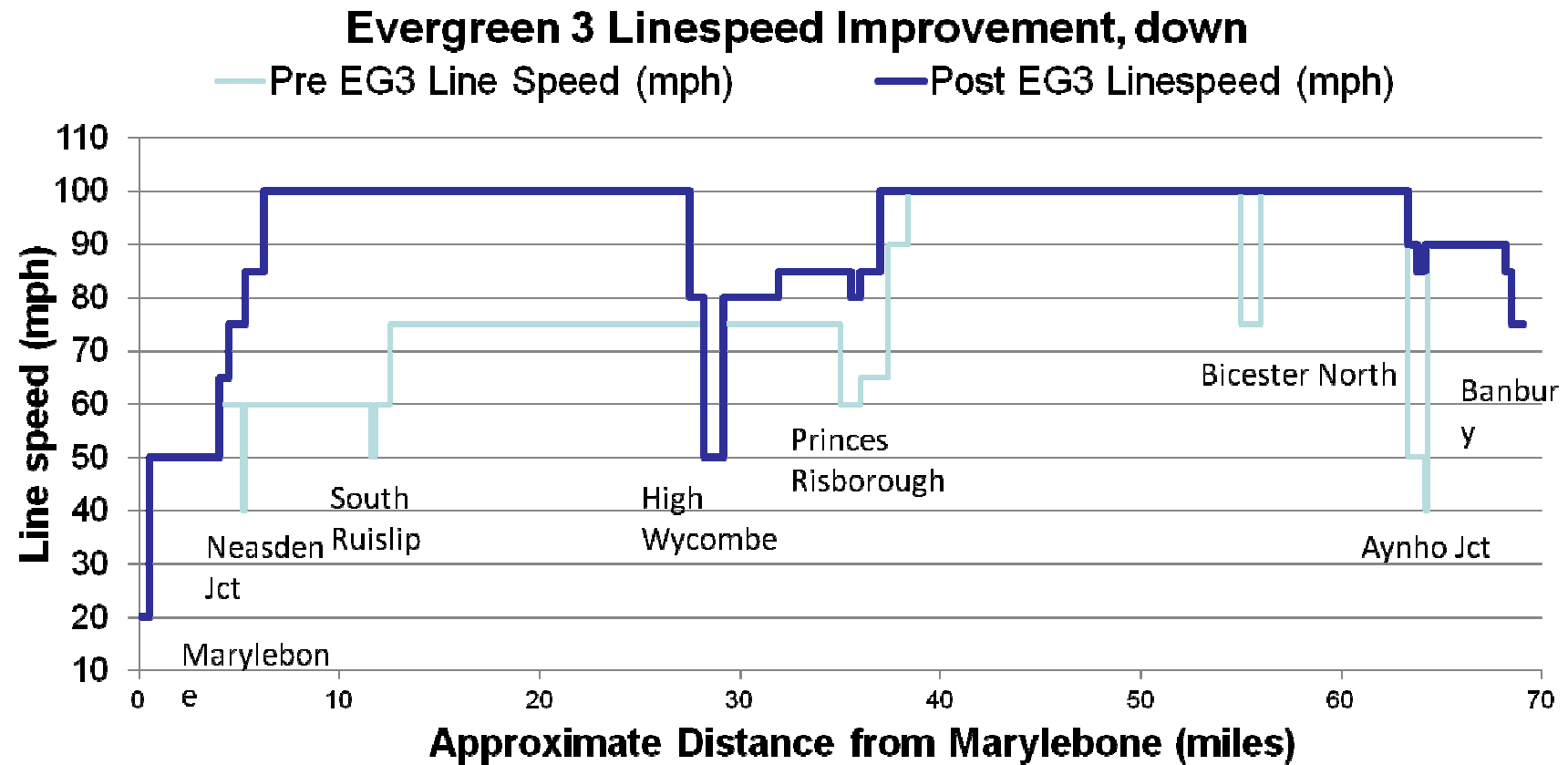
- Faster journeys
 - 90 minutes London Birmingham
 - Most journey times reduced by 20%
- Better rolling stock utilisation
- Reduced speed differentials
 - Loco-hauled trains can run as fast as DMUs
- Loops for overtaking
- 7-day railway
 - Full bi-directional working



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Phase 1: Linespeed improvements



Phase 1: Scope

- 38 new sets of points
- Platform works at 14 stations
- 2 new underbridges
- 3 new footbridges replacing at-grade crossings
- 87 new signals installed
- 91 signs erected
- Cost of around £120m

Phase 1: Programme

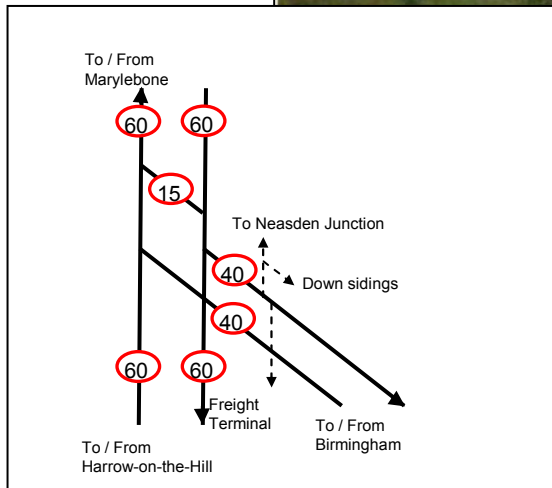
- Financial Close: January 2010
- Work commenced: March 2010
- Construction strategy based around a large number of weekend possessions
- Some late-night midweek working with last trains curtailed
- Culminated in a 2 week blockade in August 2011
 - First week to remodel Neasden Junction, with Marylebone closed
 - Second week to install and commission new signalling
- Work complete end of August 2011
- New timetable launched 5 September 2011

The blockade: partnership

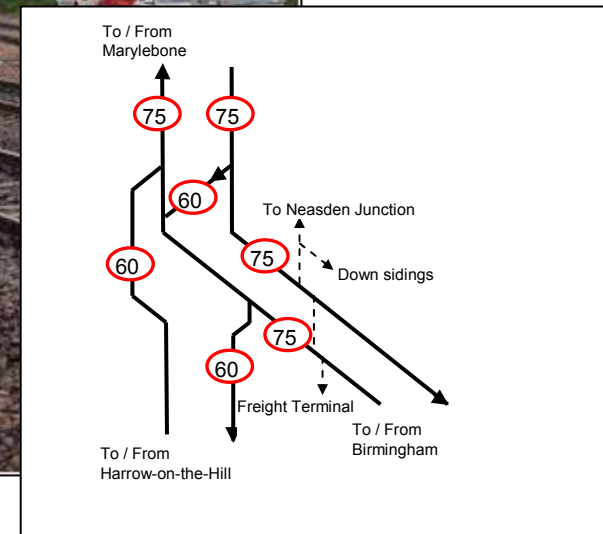


- 2 Chiltern trains each hour diverted to Paddington
- Excellent co-operation from FGW to free up paths
- Extra Chiltern staff at Paddington to help passengers

Neasden South Inc.



Previous layout – Aylesbury line is “main”



New layout – Birmingham line is “main” at 75mph

Neasden South Jnc. remodelling



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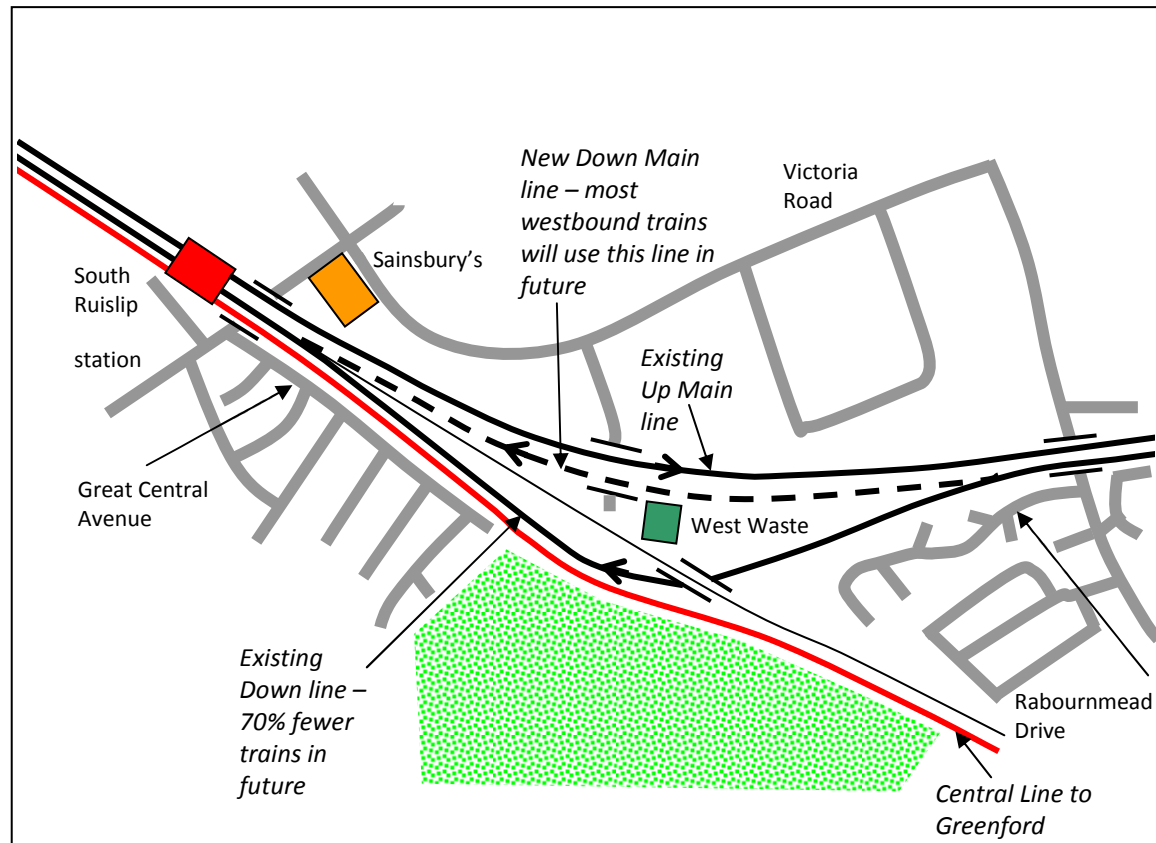
Higher line speeds Neasden to Ruislip



- 100mph now attained very shortly after leaving London
- Cab view shows 97mph passing through Sudbury & Harrow Road (previously 60mph)

Northolt Junction

- New Down line created
- Original down line retained as loop
- Linespeed increased from 50mph to 100mph
- New facing crossover at West Ruislip for West Waste access and Bi-di working



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Bucks footbridges



- 5 foot crossings replaced with new bridges and/or footpath diversions
- Complex planning issues due to rights of way, Chilterns AONB and site access

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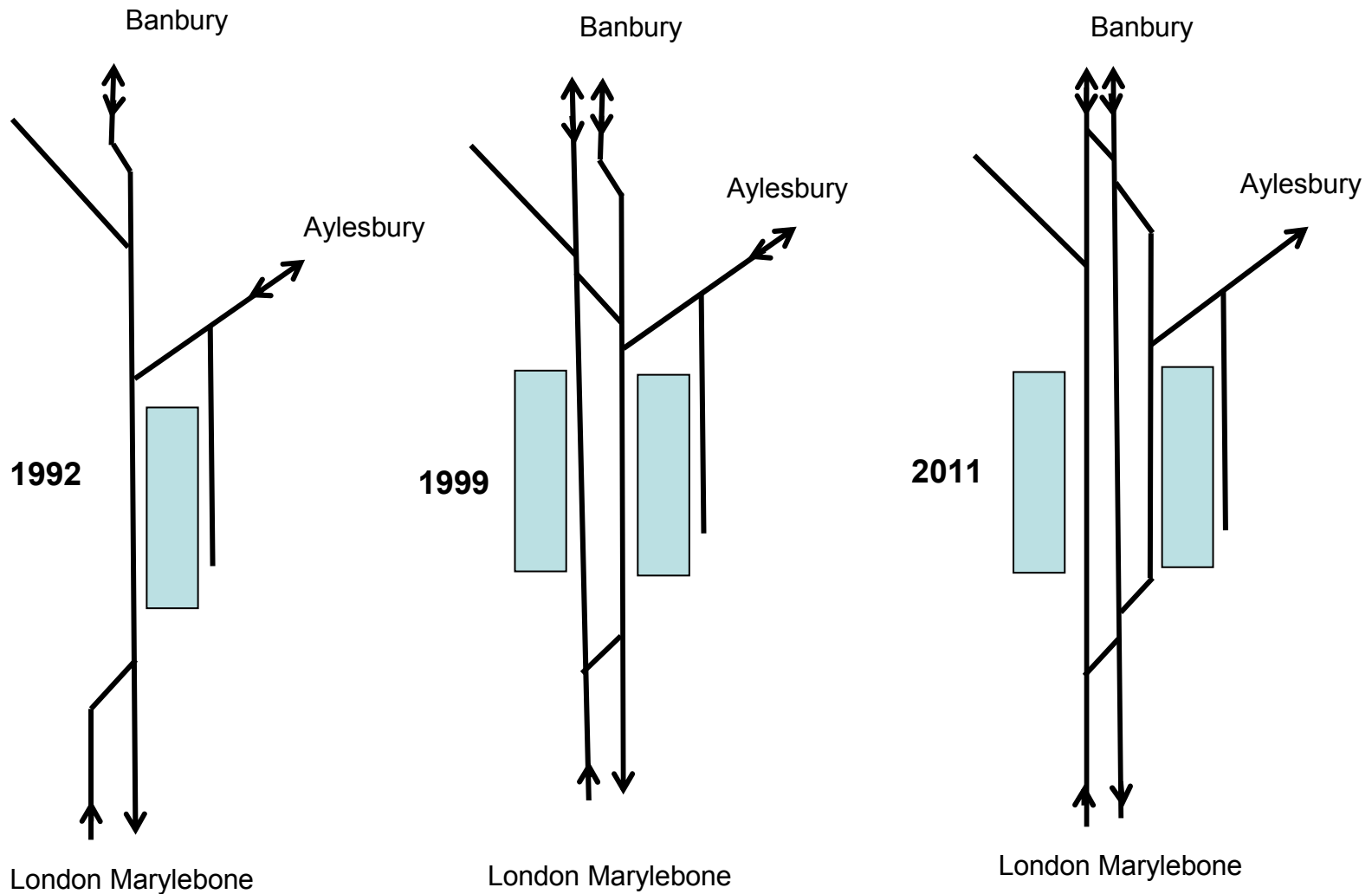
Princes Risborough



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Chiltern's investment at Princes Risborough



Bicester North



Old layout – Up line has 25mph restriction

New layout – platform built out, and Up line has 100mph line speed



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Aynho Junction

- Junction of Chiltern and Didcot-Chester lines, south of Banbury
- Chiltern line speed raised from 65 to 90mph (Up) and 40 to 85mph (Down)
- Additional crossover to enable full bi-di working on both Chiltern tracks



New 90mph turnout

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Birmingham Moor Street



- Closed in 1987 and left derelict
- Buildings restored 2003
- New “GW-retro” style footbridge and through platform canopies 2006
- Terminal platforms reinstated 2010
- England’s second city now has a first-class station

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Silver service



- Refurbished Mk3 coaches
- Power-operated doors and retention toilets being fitted
- Still the best vehicles in the UK!

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Chiltern Main Line is here



- “Great British Railway Journeys” presenter Michael Portillo helped launch Chiltern Mainline on 5th September

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Faster journeys, more trains

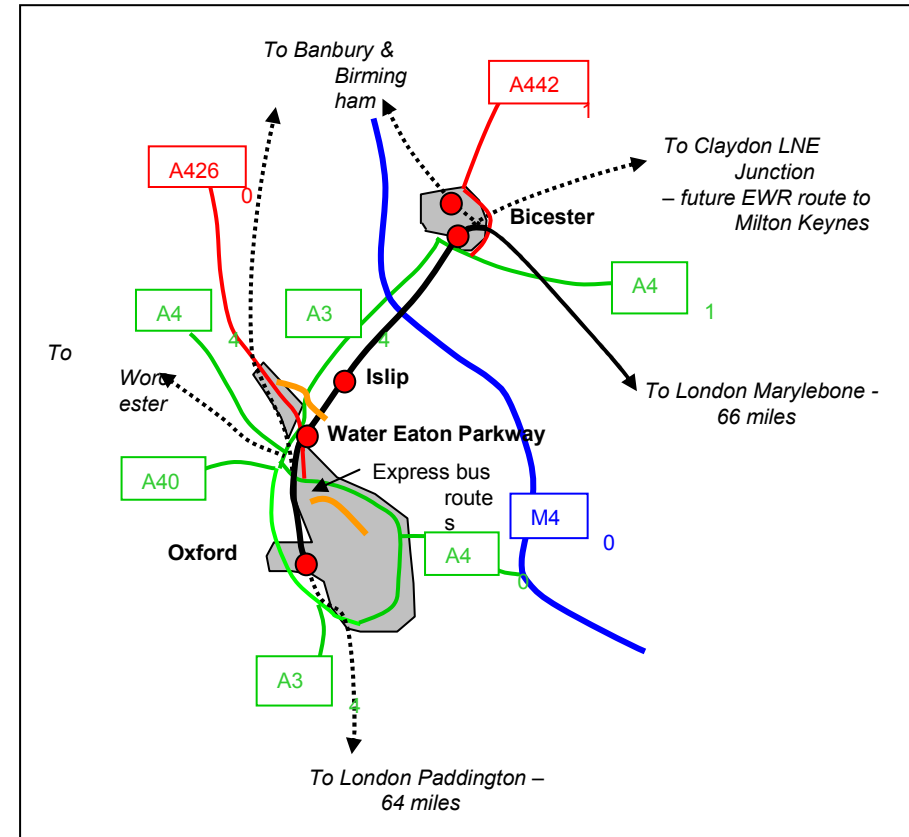
To/from London Marylebone	Previous regular best (mins)	Sept 2011 Evergreen 3 (mins)
Beaconsfield	31	23
High Wycombe	37	27
Bicester North	50	41
Banbury	67	51
Warwick Parkway	92	71
Birmingham Moor Street	119	90

- Banbury – Marylebone is now quicker than Oxford -Paddington
- Birmingham Moor St.-Marylebone is only 8 minutes slower than New St.-Euston
 - and half the price!
- 395 Chiltern trains each day – more than ever before
- 24% business increase since timetable launch



Phase 2: Chiltern to Oxford

- New Marylebone-Oxford route
- Relieves crowding on the fast-growing Thames Valley line
- New north Oxford railhead at Water Eaton Parkway
- Greatly enhanced Bicester-Oxford commuter service
- Direct rail link to Bicester Village fashion centre
- Oxford-High Wycombe link for first time since 1964
- Facilitates East-West Rail

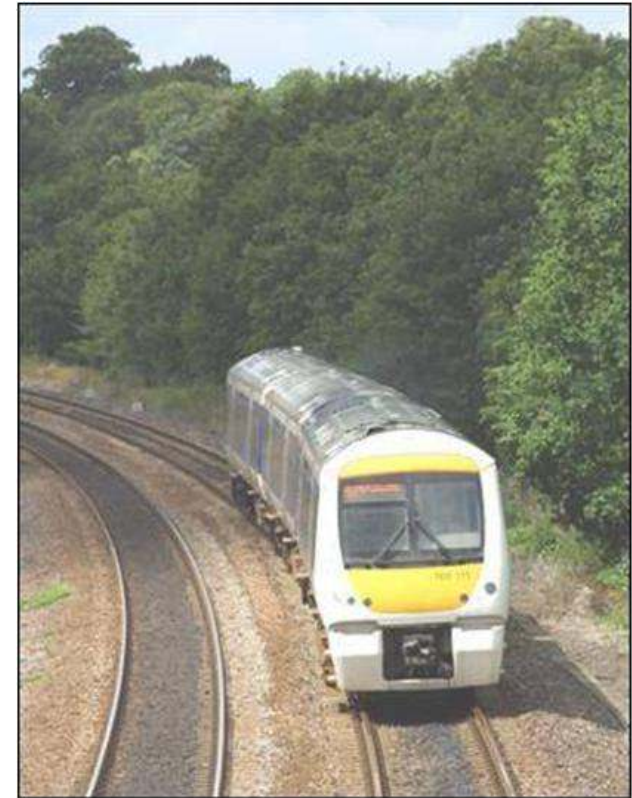


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Phase 2: Train services

- 2 Chiltern trains each hour Oxford-Marylebone
 - 66 minutes Oxford-Marylebone
 - 58 minutes Water Eaton Parkway-Marylebone
 - 38 minutes Oxford-High Wycombe
- Chiltern Class 168 “Clubman” DMUs
- East-West Rail will bring extra passenger and freight services



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Phase 2: Oxford line works

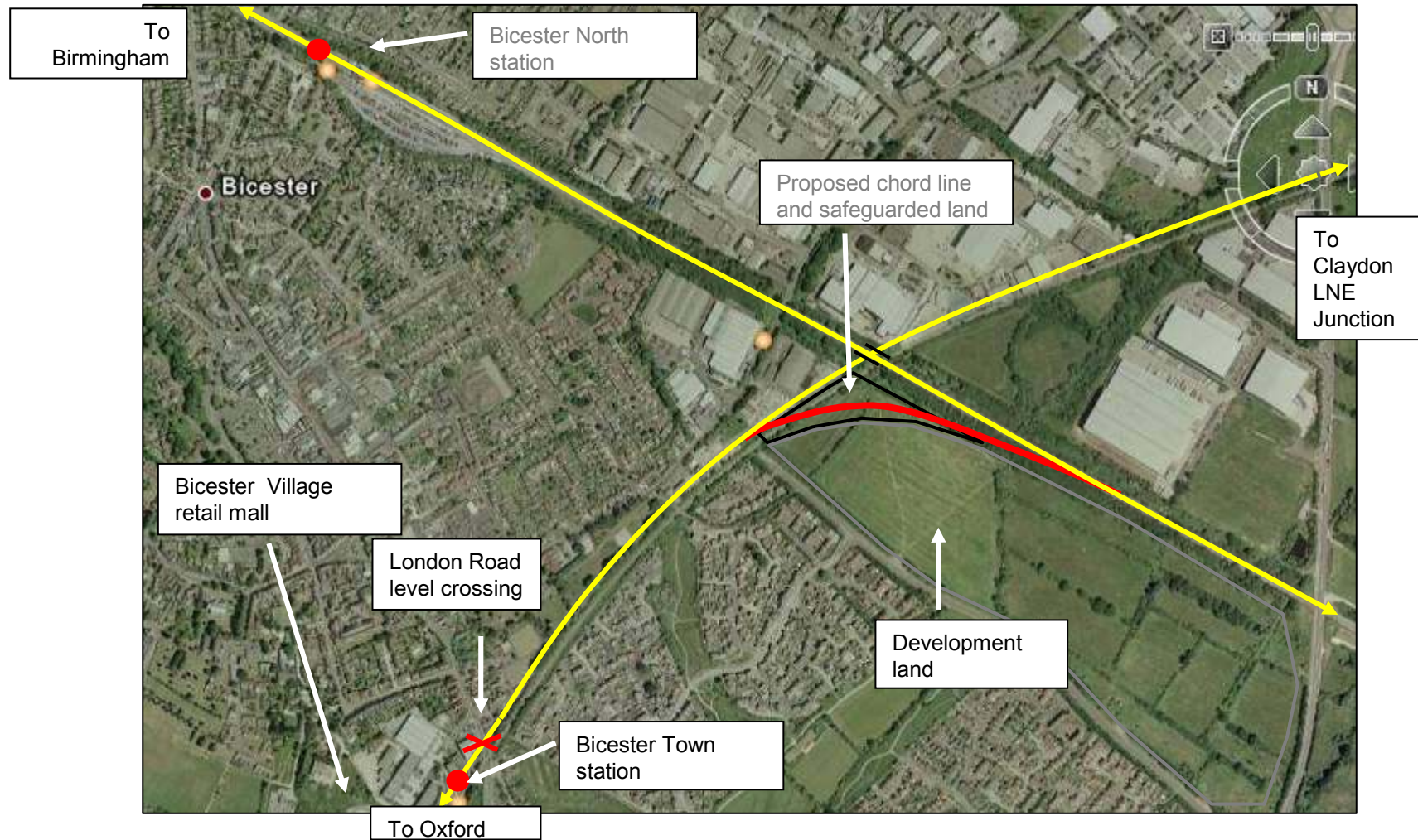


- New chord line at Bicester
- Bicester Town – Oxford North Junction line completely rebuilt
- 37 level crossings abolished
- Bicester Town and Islip stations rebuilt
- New station at Water Eaton Parkway
- Wolvercot tunnel gauge enhancement
- Additional line capacity Oxford North Junction - Oxford
- Extra platforms at Oxford station

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Bicester chord



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