

- Transport infrastructure
- Heart of Slough
- Skills development
- Economic situation
- Other projects
- General discussion

Great Western Rail links to Heathrow from the west

- Funded by BSTF, undertaken by Atkins on behalf of SBC
- Aims
- Options
- Questions to consider
- Next steps

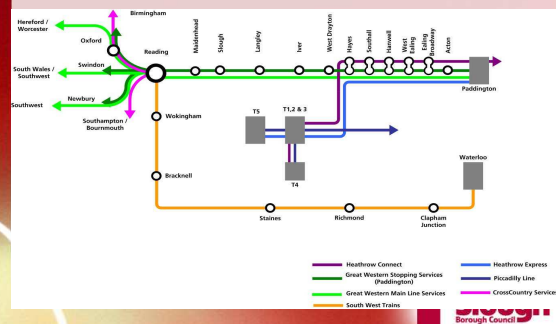
GTWRATH - aims

- Improve business access to Heathrow from Slough and west
- Improve worker access from Slough and area
- Reduce road traffic on M4, M25, A4 and lesser roads
- Complement other proposals
- Meet funding criteria
- Swift delivery

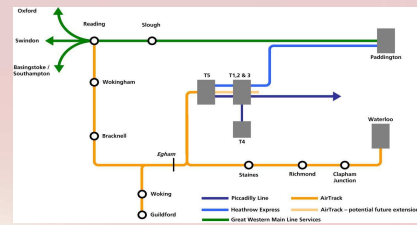
Other Studies

- Deloitte - SEEDA - ongoing
- Network Rail as part of the RUS
- Network Rail for DfT (Heathrow Access)
- Network Rail - GWML electrification beyond Maidenhead
- Crossrail
- 2M
- DfT High Speed 2 Study
- Atkins as part of the Multi-Modal study,
- BAA inc AirTrack (TWA submission),
- Arup (Heathrow Hub proposal),
- Freight

Current Rail Network



Airtrack



Demand

Berkshire Borough	Heathrow Passengers
Newbury	244,346
Reading	749,825
Wokingham	277,521
Bracknell Forest	323,763
Windsor & Maidenhead	732,491
Slough	350,205
Berkshire Unspec	34,641

- 2.7M trips in 2007 is insufficient to justify heavy rail investment on own
- High South-West and West demand
- Options need to target both local and long-distance traffic

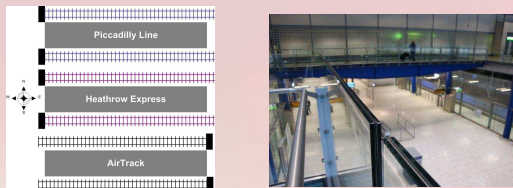
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Options

1. Re-engineering Airport Junction
2. Extending the Piccadilly line to Slough via a direct route
3. Extending the Piccadilly line to Slough via Windsor Lines
4. Heavy-rail extension from T5 to GWML via direct route to Langley
5. Direct, heavy-rail extension from T5 to GWML via Colnbrook branch
6. Modified Heathrow Hub proposal

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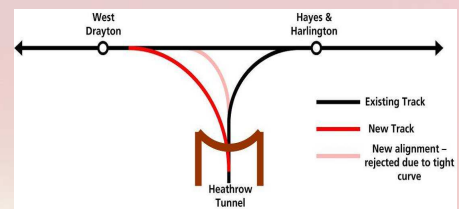
Layout of LHR T5 station



- 6 platform station: 1 structural box
- Significant BAA investment makes western access easier

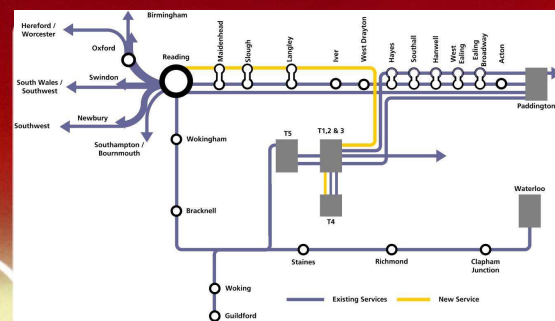
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Re-engineered Airport Junction



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Re-engineered Airport Junction



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Re-engineered Airport Junction

- Likely to serve Terminals 1,2 & 3, then T4
- Conflicting movements - reduced train frequency - 2 tph ?
- Journey Time - Slough 7 mins plus
- Operating net surplus c. £10m pa (2020)

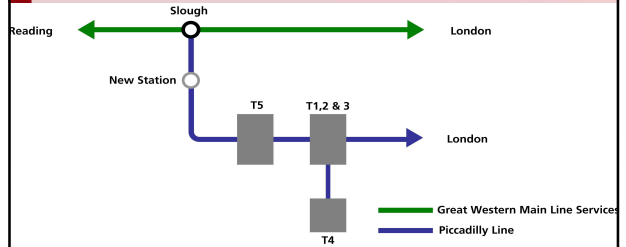
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Re-engineered Airport Junction

- Construction of 1.4 km of new line
- Construction methodology complex
- Significant property take
- Estimated Cost £460 Million



Extended Piccadilly Line - Direct to Slough



Extended Piccadilly Line - Direct to Slough

- Tube extension of Piccadilly line through T5
- Small operating surplus, but excludes GWML revenue loss from extra stops & LUL gain from through journeys
- Serves Terminals 1,2,3 & 5 direct
- 6tph via T5 (currently 6tph terminate at T4)
- Potential for a new station
- 6 mins journey time (no stops)

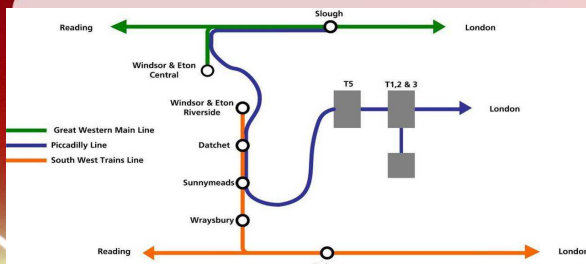


Extended Piccadilly Line - Direct to Slough

- Construction of 8.8 km of new line - nearly all in tunnel
- Multiple intervention shafts required (land implications)
- Slough station construction in congested area
- Estimated Capital Cost - £ 1,190 million



Piccadilly Line - via Windsor Lines



Piccadilly Line - via Windsor Lines

- Tube extension of Piccadilly line through T5
- Minimal operating surplus, but excludes GWML revenue loss from extra stops & LUL gain from through journeys
- Serves Terminals 1,2,3 & 5 direct
- 6tph via T5 (currently 6tph terminate at T4)
- Potential new stations
- 9 mins journey time (no stops)

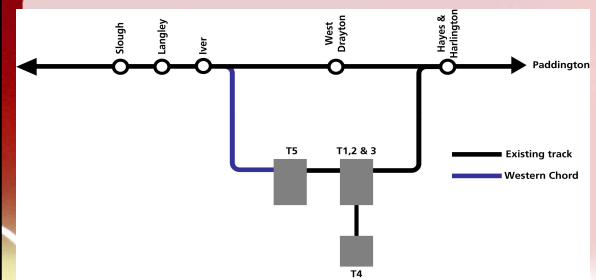


Piccadilly Line - via Windsor Lines

- Construction of 4 km tunnel, 2.5 km of new line & 7.5 upgrade on NR
- Interaction with Mainline services (3 x flat, double junctions)
- Environmental impact in Windsor and Eton,
- Estimated Cost - £ 710 million



Direct Western Access (“Langley connection”)



Direct Western Access (“Langley connection”)

- Heavy rail extension to HEX/Crossrail etc
- T5 and T1,2, & 3
- 4 tph - Reading, Maidenhead, Slough plus others
- Moderate net operating surplus (c.£12 mpa)
- Would use relief lines
- Journey Times - Slough 6 mins

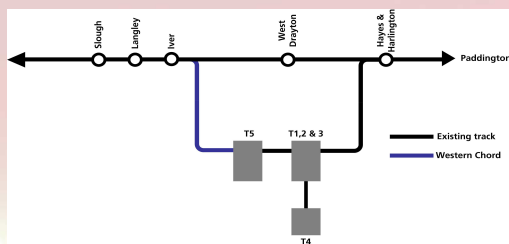


Direct Western Access (“Langley Connection”)

- Construction of 5.9 km of new line - nearly all tunnel
- Green Belt site forces tunnel construction
- Grade separated junction with GWML at Langley
- Estimated Cost - £ 740 million



Direct Western Access Colnbrook

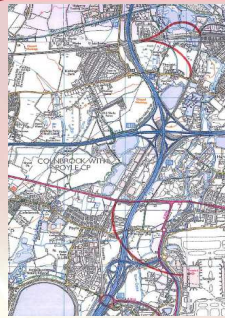


Direct Western Access (Colnbrook)

- Heavy rail extension to HEX/Crossrail etc
- T5 and T1,2, & 3
- 4 tph - Reading, Maidenhead, Slough plus others
- Moderate net operating surplus (c.£12 mpa)
- Would use relief lines
- Journey Times - Slough 7 mins



Direct Western Access (Colnbrook)



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Direct Western Access (Colnbrook)

- Construction of 2.2 km of tunnel, 2.6 km upgrade of freight branch plus grade separated junction
 - Using existing rail underpass beneath M25/M4 intersection
 - Cost subject to underpass being at least 6.7 metres
 - Connection to GWML between M25 and West Drayton
 - More risky - but cheaper than tunnelling
 - Freight still viable
- Estimated Capital Cost £550 million

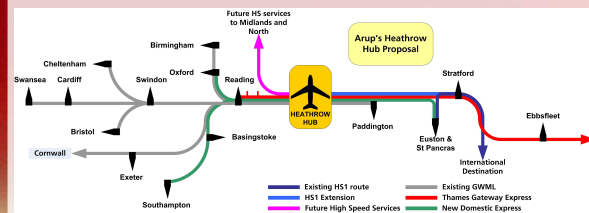
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Heathrow Hub Proposal

- Proposed by Arup
- £4.6 billion including tunnel to Central London
- GWML - Connections to Terminals

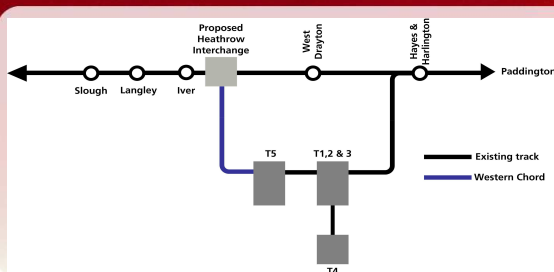
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Heathrow Hub Proposal



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Heathrow Hub - Modified Heathrow Interchange



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Heathrow Hub - Modified Heathrow Interchange

- Extension via Colnbrook branch to new hub
- Piccadilly option (lower cost) but heavy-rail possible
- Small operating surplus, but excludes GWML revenue loss from extra stops & LUL gain from through journeys
- Serve Terminals 1, 2 & 3 and 5.
- Interchange station - rail only? Bus/road access?

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Heathrow Hub - Modified Heathrow Interchange

- Construction of 2.2 km of tunnel and 3.8 km upgrade of freight line
- Constructability improved by no track connection with GWML
- Largest cost is of new station
- 8 GWML platform faces - Realignment of GWML required
- Estimated Capital Cost - £1,120 million

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Programme

Some options require:

- GWML electrification (Maidenhead to Reading)
- Reading (area and station) works

Construction needs to be scheduled with:

- GWML electrification
- Reading works
- Crossrail and
- AirTrack

Target: around 2014?

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Great Western Rail links to Heathrow from the west

- Issues to consider
 - Benefits
 - Risks
 - Heavy v light rail
 - Cost, demand and deliverability
 - Preferred option
 - Further involvement
- Questions and discussion

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Deloitte's study of western access to Heathrow

- Seeking solutions to congestion and access problems to Heathrow - major risks to TV economy
- High level analysis
- Road construction and enhancement, light rail, heavy rail
- Baseline assessment of the Thames Valley economy*
- Long list of options
- High level evaluation
- High level funding options

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Deloitte's study of western access to Heathrow

- About 30 options identified
- Reducing to <10
- GW links provisionally in top 10
- Key messages from Slough
 - Slough's economic importance to UK and TV economy
 - Accessibility is key to Slough's contribution
 - Accessibility enables clusters of high value sectors

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Heart of Slough

- Objectives
- Deliverables
- Quality public realm
- Bus station
- New library
- Timetable

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Heart of Slough - Objectives

- The physical regeneration of the area
- To challenge and change the perception of Slough
- A commitment to high quality design
- All development to meet high levels of sustainability and energy efficiency
- The creation of new open spaces and high quality public realm
- Improvement in public transport and the creation of an improved transport hub
- Improve the links for pedestrians between the bus and train stations and the town centre



Heart of Slough - Scheme Deliverables

- Up to 1,500 new homes on the TVU site
- New accommodation for Thames Valley University of 26,900 sq ft.
- Approximately 340,000 sq ft (net) of new offices on the existing Brunel Bus Station site
- A new bus station, on the existing site of Compair House
- A new library/adult education and civic building



Heart of Slough - Scheme Deliverables (Continued)

- New homes and/or hotel on the existing library site
- New restaurants/cafes/shops
- New open spaces/squares
- Improved north-south connections for pedestrians with enhanced links between the train and bus stations and the town centre



Heart of Slough - Development Partners

- Slough Borough Council (major landowner and local authority)
- Homes and Communities Agency (HCA) formerly English Partnerships (regeneration agency leading on planning application and roadworks)
- Development Securities (commercial developer)
- TVU are other major land owner for residential developer



Heart of Slough

Quality public realm

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Heart of Slough

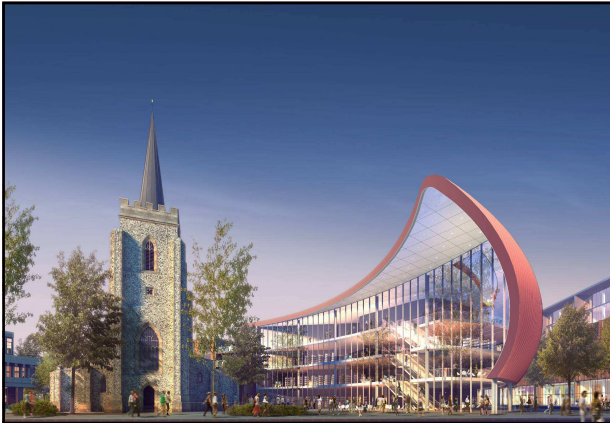
Proposed new library

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Heart of Slough - Masterplan




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Heart of Slough

Proposed bus station



Heart of Slough - Masterplan




Heart of Slough Bus Station View from South West



Heart of Slough: indicative programme

May 2009	Approval of Pre Heart of Slough Master Plan
July 2009	Planning Permission granted for main application
Oct 2009	Commencement of Bus Station by site demolition
Jan 2010	Commencement of Public Realm Works
Summer 2010	Commencement of Infrastructure works
Winter 2010	Completion of Bus Station
Autumn 2011	Completion of Public Realm
Autumn 2011	Commencement of Learning Curve
Summer 2012	Completion of Infrastructure
Winter 2012	Completion of Learning Curve



Heart of Slough

QUESTIONS?

