

# The Windsor Link Railway (WLR)

This is an integrated transport plan for the region around Heathrow, Windsor and the Thames Valley.

WLR would be the first privately-led new railway for over 100 years.

It is a for-profit company but it is not just about profit : its social aims include preserving our heritage, improving our environment, improving standards of living for local residents, increasing social mobility and providing economic growth and employment.

## ***Promoters of the WLR***

- George Bathurst, a Windsor Councillor, by trade an electronic engineer rather than a railway engineer, former marketing director for Hewlett-Packard's software. He has formed the company Windsor Link Railway Ltd.
- Richard Wickerson, with 25 years' experience in corporate and project finance, former partner in upgrading London Underground and with W S Atkins, civil engineers
- Paul Bayly, merchant banker with Citibank and Midland Montague in Britain, Africa and Australia, Fellow of the Institute of Directors, former colonel in the New Zealand Army.

MacAlpines have prepared detailed plans and could complete the work in the 2 years 2018-2020.

## **Phase 1 plan**

It is remarkable that Windsor's two railway stations are only 300 yards apart. They were built by two different railway companies, the Southern Railway (SR) and the Great Western Railway (GWR) at the height of their competition. The same was once true of Reading's two railway stations of the SR and GWR. They were then joined into a single station. Unlike other towns such as Reading the lack of connectivity in Windsor between the two was never corrected and we are left with a historical anomaly. This is what the plan will address.

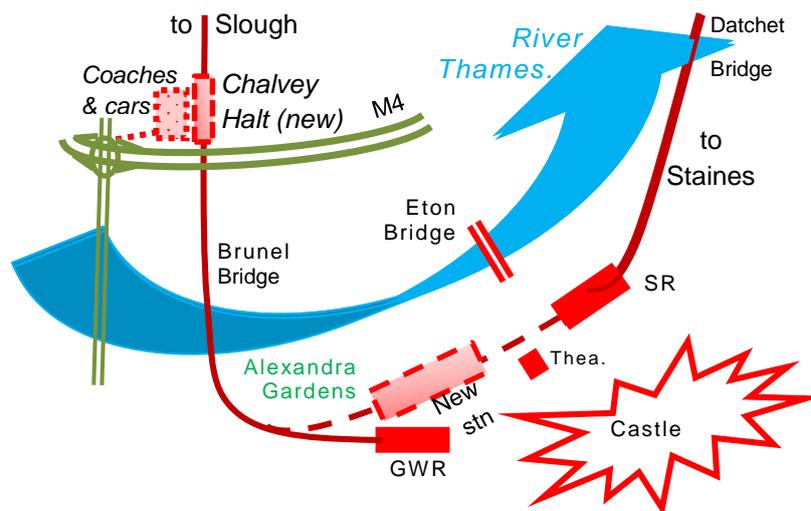
## ***Won't this scheme just benefit Slough and Staines but not Windsor?***

Isn't WLR a fine engineer's solution looking for a problem to solve? Why not just set up a decent park-&-ride system for tourists instead of building a new railway line?

The current park-&-ride at Windsor Racecourse does not lie astride a main artery of traffic into Windsor and is therefore unsuccessful.

When I was on the Windsor & Eton Society's planning committee 20 years ago we prepared a park-&-ride scheme for Windsor, calling for a railway halt and coach park just south of where the M4 crosses the Slough↔Windsor branch railway line. The halt and the coach park would both be on Eton College land and the College was favourable. Berkshire County Council agreed to the scheme. We obtained agreement from the Blue Bell Line in Sussex to let us hire a steam chuff-chuff and rent a couple of antique carriages to shuttle tourists to and from their cars and coaches at the railway halt to Windsor Royal Railway Station.

But the railway halt and coach park would be on green belt land. Park-&-ride schemes for Windsor foundered on this point.



### Planning Phase 1

To correct this historical anomaly, phase 1 of the Windsor Link Railway proposes a new tunnel to connect the two lines. Connecting these had been proposed before but failed to resolve the problem of the two existing stations being at different levels. The Windsor Link Railway resolves this by ignoring the two existing stations and proposing a new, longer (250-yard) station in between the two with a tunnel connecting them. As the two lines enter the town at similar levels this results in less steep gradients than on the existing lines. Also, by providing a cut-&-cover tunnel under an existing road, construction time and cost are minimized, as is the environmental impact. This new tunnel is shown by a dashed red line on the plan above.

For Phase 1 WLR proposes a new railway in Windsor connecting the GWR and SR branch lines. There would then be just one station, underground, with 250-yard platforms for longer trains. This new route would then be a major addition to the rail infrastructure of the region and allow many more journeys and more frequent services. It would be possible to have Slough↔Windsor↔Waterloo direct services, doubled to 4 an hour, with a second platform at Slough for these trains.

The line would go into a tunnel underneath Alexandra Gardens and River Street (which leads to Eton Bridge). The new station would be built under Alexandra Gardens and could easily be reached from them and from the old Windsor Royal Station which would be preserved.

WLR would build a park-&-ride halt on the railway line from Slough at Chalvey on a brown-field land-fill site just north of the M4 which is currently a rubbish tip (Ⓜ on the Geographical Map below). A high-rise car-&-coach park would be built adjacent to it to take cars and coaches straight off the M4. Coaches may then park there rather than at Alexandra Gardens. Cars and coaches would no longer need to come into Windsor.

The new railway station would be built alongside the existing Windsor Royal Station at a slightly lower level. The line would then pass into a short tunnel thru central Windsor to just south of (or possibly underneath) the existing Riverside Station. The tunnel could be built either by cut-&-covering or by boring. The existing Royal and Riverside stations would be preserved, listed, and available for other uses such as boutiques or offices. The Railway Arches would also be reserved for small businesses.

Currently trains run to and from Windsor only every ½ hour and are slow, presumably because NR finds the Windsor branch line from Staines unprofitable. The scheme envisages faster and longer modern trains every ¼ hour.

**The capital cost** of this phase has been assessed by Network Rail and found to be in-line with WLR's estimate, putting the cost at between £75–£150 million, excluding contingency and property returns.

**Q:** where would the money come from? – **A:** the scheme would be entirely privately financed and initiated, raised mainly from pension companies, which are thirsting for places to invest but would of course not commit themselves to such expenditure until complete plans are available. Network Rail and South West Trains, which together comprise a formal alliance for train operating in this region, have formally supported the project.

**Q:** the two existing stations are at different levels – **A:** but their railway lines are at the same levels where they cross the Thames at the Brunel and Datchet bridges! There would be a gradient of 4½% down from the Brunel Bridge and a gradient of 4% up to the Potts bridge. Both would be sustainable to modern trains which are happy to cope with gradients up to 5%.

**Q:** how about flooding where trains run underground near the Thames? – **A:** no problem to modern engineers! (Cf London Underground)

**Q:** isn't this an archaeologically-rich area? – **A:** the law decrees that archaeologists examine any such sites beforehand.

**Q:** compulsory purchases of private property? – **A:** Most of the necessary land is already owned by the council.

**Q:** the Queen might be upset? – **A:** No, the railway would run in a tunnel past her Castle!

**Q:** what of Alexandra Gardens? – **A:** Bathurst showed me a photograph of Alexandra Gardens in Edwardian times (1900s) when it was a fine park opening out onto the River and offering magnificent views of the Castle. Today the gardens are largely cut off from Windsor and its river and sunk below the river level. The scheme envisages raising them to river level again and restoring Barry Avenue to the riverside path it used to be. There might be a car park under the Gardens (Cf enormous car parks under Hyde Park off Park Lane in London).

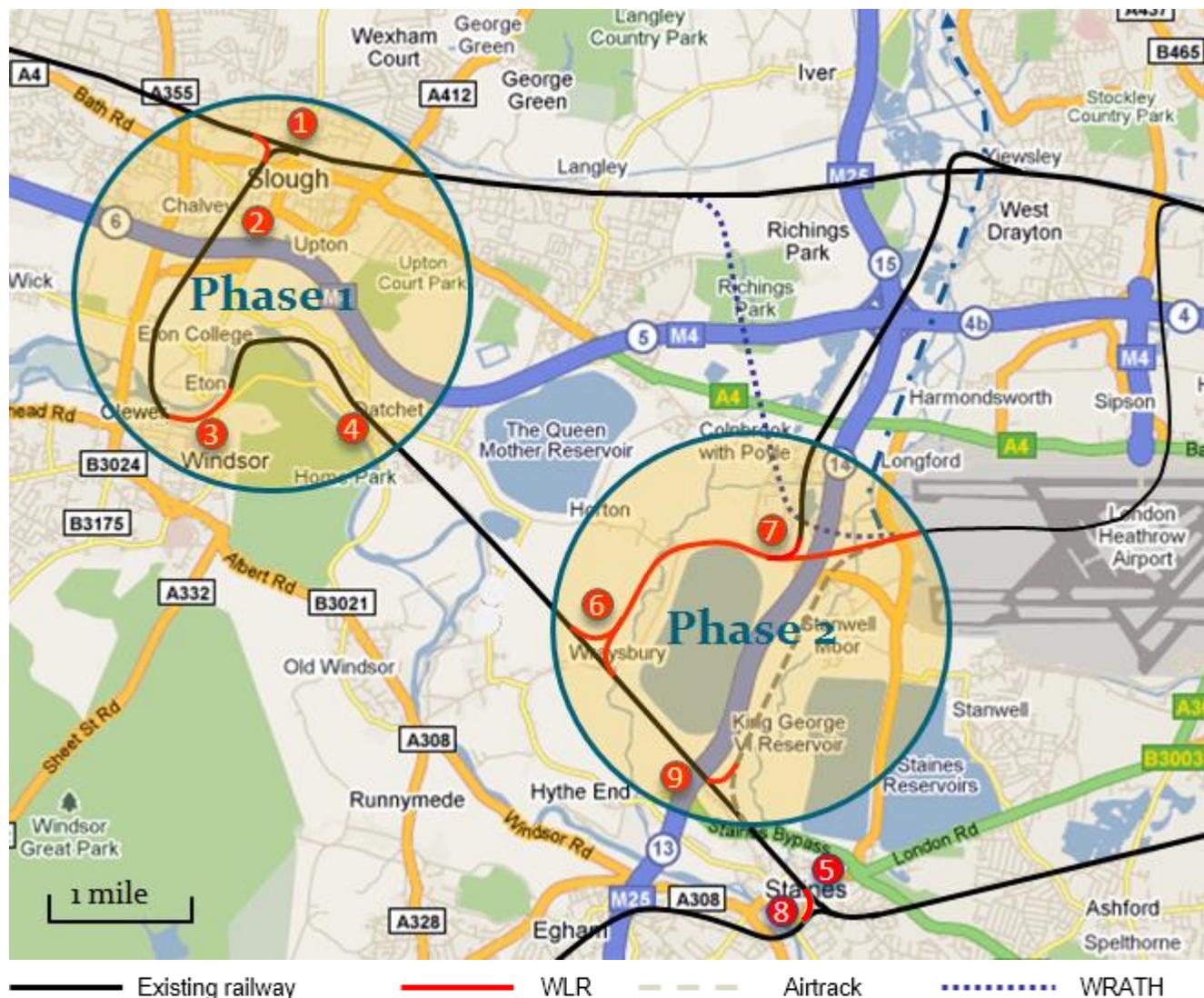
**Q:** planning restrictions? – **A:** Windsor is no longer part of Berkshire which has largely ceased to exist at its eastern end and this may facilitate negotiations. On the other hand, Windsor lies between three counties and two railway systems (the former SR and the former GWR) which might increase the complexity of negotiations.

**Q:** what are the prospects for this scheme being realised? – **A:** Windsor Council is reputed locally to be "the finest in the country at filling in potholes, keeping the roads clean and exacting parking fines but quite lacking in vision". It is freely said that Windsor is "on the edge of losing sustainability as a town unless it can get its act together". But WLR would be a wholly private operation. It only asks Windsor Council to let it get on with the job.

## Phase 2 plans

### Geographical map

to HS2



The map above draws together both phases 1 and 2 of the Windsor Link Railway scheme and also hints at future phases. Existing rail links are in black and proposed new ones are in red. The link to Heathrow is shown in red in the phase 2 circle on the map at ⑥–⑦.

It takes advantage of the fact that the existing Windsor line (shown in black) goes within a few miles of Heathrow Terminal 5. It is therefore a relatively simple engineering challenge to connect the two. Rather than use an expensive tunnel, as proposed by Slough Borough Council (the blue dotted line to the north, called WRAtH) or by BAA (the grey dotted line to the south), the WLR preferred solution is for an alignment that exits the station under Heathrow's Terminal 5 and then climbs to a bridge over the M25. There are several route options to the west of the motorway that could be designed to minimize the environmental impact, for example by hugging the side of the reservoir and following

the route of an existing quarry. The red line shows one such possibility although the precise route is to be finalized.

Another option is a modification of BAA's rejected Airtrack proposal (see the grey dotted line in the Phase 2 circle on the map above) with a small additional chord (in red at ⑨) allowing trains via Windsor to reach Heathrow direct. This is more expensive but has the advantage that it has been through a detailed design and is therefore less risky at this stage ; and it would also benefit the proposed freight depot at Colnbrook. WLR doesn't expect to use this route but it would be a useful fall-back if for any reason the bridge route is not possible or turns out to be more expensive than expected.

**The costs** of the northerly and southerly direct connections are estimated at about £500 million each by Slough Council and BAA respectively ; whereas the cost of the bridge option over the M25 is estimated by WLR to be about £250 million excluding contingency. This cheaper price combined with many more journey options provided by phase 1 and future phases means that although the slightly longer route will add a few more minutes to journey times (an extra 6 minutes from Slough for example) the business case is many times stronger. That is, it will bring more net profit to many more people.

## Future phases

Whilst the radial lines in and out of London in the area are quite good, orbital links are almost non-existent. Yet it may mostly cost remarkably little to rectify this.

### ***Integration with Crossrail***

This phase would also allow the Crossrail from Maidenhead to East London to be easily extended to both Slough and Staines (and beyond) bringing the advantages of this massive investment to millions more people in this economically important area.

### ***Integration with HS2, etc.***

The Windsor Link Railway improves connectivity throughout the region. One of the nice results of this is that it makes HS2 accessible to many more people. Without the WLR, people from south-west London wishing to travel on HS2 would have to go via London using already overcrowded trains and tubes. With the WLR, they can go via the new track to Heathrow to connect with HS2 at Old Oak Common. This would reduce journey times from this important economic area by over one hour.

**Additional links** are also planned, such as

- reactivating the curve at Staines to allow trains Maidenhead↔Windsor↔Staines↔Heathrow or Waterloo (shown at ⑩ on the map above).
- allowing direct connections from Heathrow to Ascot and the south (by restoring the curve to Ascot at Staines, as shown at number ⑪ on the map)
- Another possibility is a direct connection Maidenhead↔High Wycombe by re-opening the Bourne End↔High Wycombe line, whose permanent way remains, only the track needs restoring.
- A fourth possibility is to rebuild the chord at Farnborough, which would allow direct trains from Basingstoke and the south to Heathrow

These future phases also enable further better integration with the road network. Just as phase 1 enable park-&-ride and a parkway station on the M4, future phases could allow similar parkway facilities off the M3 and M40.

Each new link gives cumulative returns, building on the advantage of the previous additions. The individual links are relatively small compared with some of the other engineering projects undertaken by Network Rail. Taken as a whole, however, they would have very substantial economic benefits.

### **Merits**

The Windsor Link Railway achieves the same purposes as all the alternatives combined but at less than half the cost. In fact, the WLR achieves more because it not only connects more local towns to Heathrow but it also connects them to each other. The WLR is thus a solution not just for linking to Heathrow but also for less congestion throughout the region.

One could look forward to further advantages, such as –

easier commuting • a better gateway to Heathrow • increased tourist revenue • increased property prices • restoration of Alexandra Gardens to their Edwardian glory • a new generation of fast trains to Windsor • removal of traffic bottleneck at the Windsor coach park • removal of traffic bottleneck at Datchet by replacing its level crossing by an underpass and lowering the platforms.

Prince Charles is believed to favour the scheme and our local MP Adam Afriye has given public support.

South West Trains supports the scheme and Network Rail gave the green light in June 2013 to go ahead on the next phases of development and to seek private investment.

Agreement would have to be sought with the Department of Transport in London. The Department indicates the scheme would be approved provided it meets the criteria of the Transport & Works Act.

Bear in mind that this information is **preliminary** and may change as plans are developed : particularly if HAL proceeds to implement one of its three proposals to extend Heathrow westwards, which it presented at a public meeting in Windsor on 22 November 2013.

**For further details** as the scheme develops you may wish to Google “Windsor Link Railway”.

– Roy Proctor Edwards,  
– Windsor, 2014.1.12.