

CROSSRAIL AND THE GREAT WESTERN WORLD HERITAGE SITE

To: Buckinghamshire Historic Environment Forum (and copied to
Bucks Historic Buildings Trust

Date: 20th September 2006

Author: Report by the Senior Archaeological Officer

A. PURPOSE OF THE REPORT

- 1 To update the Forum on negotiations relating to Brunel bridges affected by the London Crossrail scheme and to formulate a response to English Heritage's consultation on proposed World Heritage Site designation.

B. PROPOSED ACTION

- 2 **The Forum is invited to:**

a) NOTE the current position with regard to Crossrail

b) CONSIDER the attached proposed submission to the World Heritage Site consultation

C. RESOURCES

There is a significant cost implication to presenting a case to a parliamentary select committee since we are advised that a barrister and possibly other expert witnesses must be instructed. This has restricted the County Council's ability to pursue this difficult case.

D. SUPPORTING INFORMATION

- 4 The Crossrail scheme affects nine historic railway over-bridges along the London to Maidenhead section of the Great Western Railway (GWR), two in South Buckinghamshire, two in the London Borough of Hillingdon and the remainder in the Borough of Slough. Dog Kennel Bridge was listed at grade II on 18th April 2006 (background paper 3). Thorney Lane Bridge has not been listed. Both lie in Iver parish.

- 5 The GWR was designed and built by Isambard Kingdom Brunel between 1835 and 1841 and is regarded as the most complete early railway in the world. Selected parts of the GWR, (including Maidenhead Bridge over the River Thames but not this section east of it) have been included in Britain's Tentative List of World Heritage Sites, the proposals for which are currently out to consultation. Four of

the nine bridges have recently been listed at grade II as a result of information collected to inform Crossrail's Environmental Impact Assessment. Although the other bridges are not considered listable they are nevertheless significant elements of an internationally important industrial heritage site.

Technical Studies

6 Crossrail originally proposed that all nine surviving Brunel bridges in the London to Maidenhead section of the GWR were to be demolished despite the demonstrable survival of substantial 19th century fabric relating both to the work of Brunel himself and later work in the same style by the GWR. The reason for the proposed demolitions was given as the need to obtain sufficient clearance beneath each bridge to enable overhead line electrification (OHLE) to European standards. Initial estimates were that the amount of additional clearance required varied between 350mm and over 1m with most bridges requiring c 600 - 700mm. Therefore, at the request of Buckinghamshire County Council and English Heritage, Crossrail commissioned a technical study of possible alternative ways of accommodating the OHLE under the bridges while retaining as much of the fabric of the Brunel era structure as possible (background papers 4 and 5). The detailed studies considered 6 scenarios involving various combinations of:

- options for OHLE configuration to reduce the required clearance
- options for slewing of existing track position under the bridge arch to maximise clearance
- options reduction in ballast to lower the track
- jacking up the bridge
- dismantling and rebuilding the bridge at a higher level

Other options – e.g. alternative electrification technologies, had been rejected as unviable at an early stage on wider railway engineering grounds.

7 The technical studies concluded that it is feasible to retain all but one of the bridges, including Dog Kennel and Thorney Lane, substantially intact, by a combination of reduced OHLE tolerances, track slewing and lowering. The amount of lowering required under the Brunel arch is minimal varying from nil to 60mm dependant on other factors. *It is worth reflecting that the existing ballast is not original having been imported over the last century raising the track beneath the bridge – it is therefore probable that Brunel's original design could have accommodated electrification to the highest modern European standard!* The estimated costs of the preferred conservation options have been compared to the hybrid bill "baseline", i.e. replacement by a modern bridge in the same location except at Dog Kennel where no replacement is proposed and Thorney Lane a realignment of the road had been agreed with BCC. The difference, the estimated so-called "cost of conservation" varies tremendously from bridge to bridge: in

some cases there savings (upto £2.45 million), in other extra costs (upto £5.23 million), although these are broad ranges these are not precise figures. At Dog Kennel the conservation scheme is estimated at £3.24 to £4.54 million compared to only £0.31m - £0.66m for demolition without replacement; giving a cost of conservation of £2.86 to £4.16 million. At Thorney Lane the conservation scheme would be £0.95 to £2.45 million cheaper. To place these figures in context the estimated cost of the whole scheme is understood to be £7 billion.

Current Position – Crossrail

- 8 The Hybrid Bill overrides normal planning and listed building legislation and originally provided for the demolition of Dog Kennel and Thorney Lane Bridges. In order press for consideration of retention options the County Council included a heritage objection in its parliamentary petition. Having secured four listings and receiving the favourable technical assessment English Heritage were set to join this petition contributing to costs and providing an invaluable expert witness. However, just a week before the hearing (set for Tuesday 27th June) we were informed that English Heritage and Crossrail had come to an agreement endorsed by the responsible Minister that four bridges would be saved, including Thorney Lane but not Dog Kennel. We understand that the decision over which bridges to save was made principally on the grounds of “no cost” to the scheme i.e. only bridges where conservation was cost neutral or delivered a saving would be retained. Furthermore it is understood that Crossrail would not entertain transferring cost savings from one bridge (e.g. Thorney Lane) to help offset increased costs elsewhere (e.g. Dog Kennel). There is clearly a concern that this “no cost” principle would not be recognised in any normal planning situation and yet passed unexamined on the Crossrail scheme as there was insufficient time and information for the Council to prepare a revised case. The decision to demolish Dog Kennel Bridge also severs a right of way link whilst the retention of Thorney Lane Bridge has been described as “sub-optimal” from a highways perspective. The County Council is now trying to establish whether a statement could be read to the House of Lords committee to bring this matter to their attention as it appears to be “below the radar screen” at present. The position of English Heritage with regard to Dog Kennel Bridge is unclear.

The World Heritage Site consultation

- 9 English Heritage is currently consulting on proposals for designation of the Great Western World Heritage Site. The proposals envisage only the designation of selected parts of the GWR – Paddington Station; Wharncliffe Viaduct; Maidenhead Bridge; Swindon Railway Works and Village; Box Tunnel and Middle Hill Tunnel; City of Bath (GWR route through); Temple Meads Station (Bristol) and the Great Western Dock with *SS Great Britain* (Bristol). Most of these sites are already protected by listing or (at Bath) World Heritage Site status. The

proposed designation treats the remainder of Brunel's GWR as the World Heritage Site's "context".

- 10 It is suggested that the proposed designation is fundamentally flawed because the GWR is not being treated as an integral whole, the concept of "context" is poignant with ambiguity and existing designations are demonstrably unable to protect the railway's special interest. A draft consultation response is attached for consideration.

E. BACKGROUND PAPERS

Crossrail. Technical Assessment of Historic Railway Bridges. RPS Planning and Environment, 2005.

Crossrail Western Surface Route. Historic Bridges Report. Dog Kennel Bridge. Revision R2. Scott Wilson, April 2006.

Crossrail. Brunel Overbridges. Report on their historic significance and the impact of them on the Crossrail proposals. Alan Baxter and Associates, June 2006.

Planning (Listed Buildings and Conservation Areas) Act 1990. Buildings of Special Architectural or Historic Interest. Dog Kennel Railway Bridge, Iver, South Bucks. DCMS, 18 April 2006.

The Great Western World Heritage Site: The genesis of modern transport. Justification for Inscription. A consultation July 2006. English Heritage. World Heritage Sites. The Tentative List of the United Kingdom of Great Britain and Northern Ireland. DCMS, 1999.

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DRAFT

Dear Mr Falconer

Great Western World Heritage Sites: Consultation on Proposed Nomination

I am writing on behalf of Buckinghamshire County Council and the Buckinghamshire Historic Environment Forum to comment on this proposal as the Great Western Railway runs through South Buckinghamshire, and includes the eastern end of Maidenhead Bridge. Over the past year, we have become aware of a major threat to the historic railway in our area posed by the London Crossrail scheme and believe that this experience provides wider lessons, which have a bearing on the proposed WHS designation.

We believe that a strong case has been made for the GWR's international significance as the most complete early main line railway in the world and one of the major works of Britain's foremost engineering genius, I K Brunel. We therefore wish to register our support for the principle of the nomination of the GWR as a World Heritage Site.

However, we believe that the proposed selection of elements is fundamentally flawed. The intention to nominate only eight discrete elements fails to recognise the key point that it is the completeness of the line as a whole that makes the GWR pre-eminently of world importance – a point that is well made on page 3 of the consultation which refers to the Site as a “....a string of pearls loosely linked by the line of the railway containing further beads which provide a context but are not formally part of the Site itself”. Most of the individual elements proposed for WHS designation are already protected by listing (often at grades II* and I) so it might be questioned what additional benefit might accrue from another tier of designation which is largely restricted to these assets. In stark contrast, the experience of Crossrail in Buckinghamshire has demonstrated that the remainder of the GWR line contains numerous structures of the Brunel era which are unrecognised, unprotected and at risk from modern railway “improvements”. For example, in the section of the line between Heathrow and Maidenhead, nine Brunel road overbridges survive but until this year none were listed and all faced demolition as part of the London Crossrail Scheme. As a result of studies undertaken to inform that scheme four of the bridges were listed but it is still proposed to completely or partially demolish five of the bridges (including the complete demolition of the grade II Dog Kennel Bridge in Bucks). This situation has come about because of the challenges of meeting European electrification standards and has highlighted the total inadequacy of current designations along the GWR and the lack of weight given to heritage protection in considering major rail schemes as only those bridges with a cost neutral conservation option are to be saved. It can surely only be a matter of time before electrification, or other major works, pose similar threats along the rest of the line. The proposed designation would leave the situation with regard to these “further beads” completely unclear: they would still lack statutory protection or any formal designation and yet would be seen as the “context” of the WHS. This would not provide clarity and would in practice be a recipe for ongoing confusion and conflict. More fundamentally for the WHS, the progressive loss of Brunel fabric along the undesignated sections of the railway would erode the very attributes that justified the WHS designation in the first place. We therefore contend that the proposed selection is fundamentally flawed because it fails to protect the complete historic railway and will not halt

the loss of elements outside the designated Site, a process which could eventually call the designation into question.

Instead, we recommend that the WHS should include all the surviving Brunel era railway, including structures and track-bed. The Management Plan would then become the vehicle through which statutory designations would be updated and appropriate management prescriptions provided for significant assets, whether designated or not. This would be much more in keeping with the proposed new system for heritage designation in England and provide the clarity needed for future management. It would also provide a clear signal that the uncritical and literal application of international engineering standards to the historic railway will not always be appropriate and that extra heritage costs are justifiable to retain Brunel era structures, whether listed or not. Whilst not denying that this is a challenging aspiration, we believe that the consultation document's reference to the more sympathetic treatment of Brunel structures (page 26) and the more positive aspects of the Crossrail experience shows that with the right approach and resources the continued operation of the modern railway can be reconciled with heritage protection.

We therefore commend a bolder vision.

Yours sincerely,