The Good Viaduct Company Limited

9 September 2014

Dear Colleague,

Charges for use of viaduct and for viaduct development

1. This letter provides an update on the methodologies that we use to set our charges for the development and use of the railway viaduct. This comes in a context where the capacity available on the viaduct is fully used and we know that there is demand from train operators for additional capacity.

How much does it cost to build a viaduct?

2. In recent years there have been many suggestions and plans to upgrade, replace or bypass the viaduct. Table 1 shows the estimates of the investment that different ways of delivering the crossing, or upgrades to the crossing, would require.

Table 1 Budget estimates for efficient reconstruction or upgrade projects

	Investment required (£ million)	Capacity created
Widen the existing viaduct from two tracks to three tracks	800	1 track
Rebuild the two-track viaduct using existing land rights	1,000	2 tracks
Build a three-track viaduct using existing land rights	1,400	3 tracks
Secure new land rights and build a similar viaduct or tunnel	3,000	2 tracks

How much do our users value the viaduct?

3. In order to help us plan our business, we have surveyed the train operators that are using the viaduct. The conclusions from that work are as follows:

   (a) Off-peak fares merely pay for the labour, energy and wear and tear costs associated with running off-peak services. Therefore, all the return on investment needs to come from peak-time services.

   (b) Building an additional two tracks and investing in something like £300 million worth of new trains and other investments would allow an additional 16 peak-time services every weekday morning, each carrying 500 passengers on average, with an average operators per passenger of the order of £50. Thus, the potential income from two more tracks is £100 million a year.

(c) The less ambitious project, of widening the existing viaduct to three tracks, would involve £200 million of rolling stock and other investment, and a new profit opportunity of the order of £50 million a year.

4. We draw the following implications from this survey:

(a) £100 million a year looks like a good return on £1 billion. We should rebuild the viaduct if it was accidentally demolished.

(b) £100 million a year does not look anything like an adequate return on the £3.3 billion investment that would be required for a two-viaduct service. We do not expect that it would be wise to build a new viaduct or tunnel (although of course we would not obstruct the work if someone else wants to try).

(c) £50 million a year might or might not be seen as a good return on £1 billion of investment. We think that widening the existing viaduct is a realistic possibility, but it is not something that we plan to do on our own initiative.

5. We have therefore focused our charging development work on determining:

(a) What to charge now for use of the two-track viaduct.

(b) What we would charge as a one-off development fee for viaduct widening works.

(c) What we would charge for use of the three-track viaduct after any widening.

6. We appreciate that we need to set clear policies and expectations about all three elements in order to allow train operators and potential train operators to plan and manage their businesses effectively.

Principles and methodology for use of viaduct charges

7. We know that we are the stewards of an essential infrastructure. We have a responsibility to make this infrastructure available to everyone on reasonable terms. We must also ensure that sufficient revenues are recovered to pay for the upkeep of the infrastructure and to provide a reasonable return to our investors.

8. The total return to our investors is controlled by a regulatory control, which applies to the total revenue from all our bridges and crossings. Given this, it is important that we should levy reasonable charges on viaduct users to ensure that the users of our other crossings are not unduly penalised. We have estimated that the cost of capital (including the cost of corporation tax) for our viaduct business is 5.5 per cent; this is consistent with the amounts allowed under the wider price control.

9. We have adopted the policy of charging for use of the viaduct on the basis of 7 per cent of the cost of rebuilding the viaduct, where the rebuild cost is estimated on the basis that existing land rights can be used. This figure of 7 per cent is made up of a 5.5 per cent return on capital, plus an allowance of 1.5 per cent of asset value covering business rates and the costs of inspection, maintenance, repairs, component renewal, and our management overheads.

10. For the current two-track viaduct, we are therefore looking to recover £70 million a year. Our charging structure is based on the viaduct capacity modelling system, which analyses the timetable to determine what capacity is used by each train operator during the morning peak period. Outputs from the viaduct capacity modelling system are expressed in microtracks (denoted µt), where a figure of 1,000,000 µt represents the capacity of one track across the viaduct. The current two-track viaduct delivers 2,000,000 µt, and our current tariff is therefore £35/µt/year.

11. If the viaduct is widened, then we estimate that the estimated rebuilding cost will increase to £1.4 billion, and the total capacity will increase to 3,000,000 µt. We therefore anticipate a post-widening charge of about £33/µt/year, a little lower than the current charge of £35/µt/year. On that basis, a three-track viaduct would produce an income of £98 million a year.

12. In the unlikely event that we build a second viaduct, then our charges would be based on the cost of rebuilding two viaducts (on what would then sufficient land rights for two viaducts). The charges would vary a little depending on whether these are two-or three-track viaducts, but we would expect them to remain close to £35/µt/year.

How we mitigate uncertainty about future use of viaduct charges

13. We review the parameters in our use of viaduct charging model every year. There is therefore some uncertainty about future charges, whether the viaduct is widened or not. In order to mitigate the risks to our users, we have taken the following measures:

    (a) We notify final prices for any period at least six weeks before the start of the timetabling conference covering that period.

    (b) We have published details of our viaduct rebuilding cost model, so that you can model the impact of movements key input prices such as metals or labour.

    (c) We have published details of our calculation of the 1.5 per cent allowance for business rates and other costs.

    (d) We commit to give two years notice of any changes to parameters for which it is difficult to make external estimates.

14. The parameters to which the commitment of two years notice apply are the 5.5 per cent rate of return, the engineering design and the overhead percentage in the viaduct rebuilding cost model, and all the rules and the data in our 1.5 per cent other cost calculation with the exception of rules or parameters related to business rates and specified by law or the Valuation Office.

Principles and methodology for viaduct development charges

15. Whilst the structure of our use of viaduct charges ensure that we would receive significant additional revenue if we grow the viaduct business, these additional revenues are not sufficient to give us an adequate return on the investment that would actually be required to increase the capacity of the viaduct.

16. Specifically, the viaduct widening project, which delivers an additional 1,000,000 µt, would bring an additional £28 million in annual revenue (from £70 million to £98 million). This would fall short of the return that we would expect to earn on the £800 million of investment required to widen the viaduct. The reasons for this discrepancy are two-fold:

    (a) Widening an existing viaduct is more expensive per microtrack delivered than rebuilding existing viaducts. Specifically, the incremental cost of the widening is £800/µt, compared to the average cost of £500/µt for building a two-track viaduct or the average cost of £467/µt for building a three-track viaduct.

    (b) There are economies of scale in notional viaduct rebuilding costs, which under our use of viaduct charging methodology lead us to charge less per microtrack for a three-track viaduct than for a two-track viaduct. Specifically, whilst the additional 1,000,000 µt released by the widening would earn us £35 million at the two-track price, this is partially offset by the £7 million impact of the price reduction resulting from using a three-tract viaduct rebuilding cost to set prices.

17. To plug the gap, we will require the person or people requesting viaduct widening to make a capital contribution of £400 million. This is calculated as the difference between the investment required (£800 million) and the increase in rebuilding cost associated with the upgrade (£400 million, from £1 billion to £1.4 billion). The latter element is a tariff support discount, which implements the principle that we do not charge through development charges for elements of investment over which we expect to earn a reasonable return through use of viaduct charges. (We have of course ensured that, under our wider price control, changes in revenues from use of viaduct charges resulting from a capacity increase are excluded from revenue limits.)

18. In exchange for the capital contribution, the requester(s) of any update works will have right of first refusal over the use of the additional capital created by the widening. This capacity right can be traded (please tell us about any transfer of ownership before the relevant timetable conference).

19. Subject to appropriate safety accreditation and agreement over site working arrangements and possessions, we are willing to consider an arrangement whereby the widening works are performed by a third party appointed by those requesting viaduct widening, for us to adopt when complete. We will make an asset adoption payment of £400 million (equivalent to the tariff support discount) on completion of the works.

20. We recognise that this approach has the effect of forcing those who request a capacity upgrade to pay for the reduction in use of viaduct charges that other users get as a result of the viaduct widening. We might well have preferred it if the use of viaduct charge would remain at £35/µt/year after the upgrade, and if the tariff support amount was increased to £500 million: this would reflect a notional asset value of £1.5 billion for the three-track viaduct, retaining the two-track notional asset value per unit of capacity of £500/µt even after the viaduct had been widened. However, we have been unable to develop a workable charging methodology that would deliver that outcome. The difficulty is that this would require breaking the link between the notional asset value that we use for charging and reality on the ground. Whilst it might seem easy enough to price a three-track viaduct on the basis of a two-track unit costs, things

could get much more difficult if the same principle was used to price other methods of capacity enhancement such as advanced signalling technologies. We did not want the risk of a use of viaduct charging methodology that would, over time, become unduly complex, unjustifiable and unpredictable because of ad hoc discrepancy between the costing basis and reality; and we did not want to discriminate in our viaduct development charges between a widening projects and other more complex ways of increasing capacity. For these reasons we have concluded that the arrangement set out above, whereby the calculation of tariff support payments takes account of foreseeable price changes, is the best available approach.

21. We would use the approach illustrated above in the case of widening for all user-led proposals for capacity increases. For example, if we were asked to build a second two-track viaduct, we would expect to charge a development contribution of £2 billion (the £3 billion development cost less the £1 million increase in the notional asset value on which use of viaduct charges are based).

22. There is one more element of our development arrangement that I need to mention. In cases where we are not confident that there is sufficient market demand to ensure that the capacity created by a development will actually be used, we will need to agree and receive a user commitment deposit equivalent to the tariff support amount from the sponsor(s) of any development before starting work. We will repay the deposit in full once the new capacity is used on a basis that we judge sustainable; unless and until this occurs, and will refund the deposit in 30 annual instalments.

Our commitment to continued engagement and assistance

23. This letter is not confidential. It has been placed on our public website, and sent to each holder of a viaduct capacity agreement, and to everyone who has, in the past three years, expressed an interest in the viaduct's management or in the possibility of using the viaduct.

24. We are keen to engage with from all interested parties. Please feel free to contact me if you have any questions about our approach.

25. Whilst we know that our customers value the predictability of a stable methodology, we also recognise that there is always likely to be scope for improvement in our principles or in the way in which we put them into practice.

26. If you would like to suggest an improvement to our charging practices, we would prefer this to be in the form of a detailed proposal for change that specifies a clear and workable alternative methodology. I appreciate that this can be difficult to develop: please do contact me if you need any data or technical assistance that might help you investigate or develop possible alternative approaches.

Yours sincerely,

Good Franck
Commercial Director
The Good Viaduct Company Limited