

# Response to Shaw Report

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## Introduction

John Laing is pleased to provide this response to the scoping report; “The Future Shape and Financing of Network Rail: The Scope” and specifically to those questions raised in Section 5: Financing and funding of the company.

### ***Q23. Do you have any views on how Britain’s railway infrastructure should be funded in the future, regardless of corporate structure?***

John Laing is a longstanding investor in the rail sector in the United Kingdom, North America and Australia, with major rail projects at various stages of construction and operations across these countries. Our experience covers investment in discrete assets such as depots, stations and rolling stock, route enhancement and upgrades, new build railways and stand along train operations.

We believe private investment in Britain’s railway infrastructure should be an important part of the overall funding mix because when appropriately specified and structured, it can deliver sustainable cost savings and/or value enhancement in comparison to publically funded procurement alternatives.

John Laing’s view is that there are two immediate opportunities where private investment may deliver such benefits. The first is in the delivery of major enhancement projects – where the private sector can play a greater role in bringing innovation and robust risk management through the use of a design, build, finance, maintain (DBFM) procurement. The second is in relation to non-core operational assets where sometimes the private sector is better placed to enhance value.

## Private Investment Enhancement Projects

For major enhancement projects we believe Network Rail should be required to consider a range of alternative procurement approaches as outlined below.,

Delivery Model	Why	When
Design, Build, Finance, Maintain	<ul style="list-style-type: none"><li>• Uses competition to drive innovation and deliver savings,</li><li>• The private sector is responsible for project delivery to budget and programme.</li></ul>	<ul style="list-style-type: none"><li>• Enhancement projects of value &gt;£100m,</li><li>• A reasonable degree of separation can be achieved from operational railway.</li></ul>
Alliance	<ul style="list-style-type: none"><li>• Helps to avoid conflict and achieve close coordination between stakeholders.</li></ul>	<ul style="list-style-type: none"><li>• Enhancement projects of value &gt;£100m,</li><li>• Projects which require high levels of detailed “hour-by-hour” coordination between parties (TOC, NR, Contractor)</li></ul>
Traditional	<ul style="list-style-type: none"><li>• Procurement costs associated with other options cannot be justified given the size of the project.</li></ul>	<ul style="list-style-type: none"><li>• Enhancement projects of value &lt;£100m.</li></ul>

The benefit of the DBFM structure is that delivery “on time” and “on budget” is guaranteed by the private sector with the consequences of failure taken by the private sector in the most complete manner available. The benefit of establishing a stand-alone, project specific, delivery organisation is that it helps to ensure an appropriate resourced team is in place within a robust project governance structure.

A DBFM structure encourages innovation on a “whole-of-life” cost basis, aligning investors’ interests with the long-term successful delivery of the project. As has been shown elsewhere in the world, a major PPP project will attract local and international project delivery organisations, competing to deliver innovative proposals to achieve the best value-for-money through innovative approaches.

By ensuring a certain portion of major enhancements are delivered by DBFM we believe this will act as a mechanism to support the incorporation of best international practises in other enhancement projects delivered across the rail industry.

## **Private Investment in Non-Core Operational Assets**

We believe there are a number existing non-core assets owned and managed by Network Rail which would be attractive as long term investments (e.g. stations, depots and electrification assets) and for which private sector investors would be able to deliver a combination of operational savings and enhanced revenues, both resulting in the potential for value enhancement.

A private sector owner of such non-core assets will actively seek to invest in the assets to enhance revenues where as Network Rail tends to be reactive to these opportunities.

With any rail related assets there are important interface and flexibility issues which need to be resolved to ensure the long term interests of the railway are protected. In particular, it is important that arrangements support the continuing development of the assets in response to proposed operational changes.

***Q24. What positive case studies are there (e.g. international examples in the railway sector, other sectors internationally/in the UK), where more affordable and sustainable funding and financing structures have been implemented, with or without private sector capital input? And how do you think the lessons learnt could be applicable to Britain’s railway infrastructure?***

Many other sectors and countries require their delivery agencies/authorities to have considered the various procurement options in a robust manner and for DBFM to be one of these approaches. Funding of projects is typically conditional on considering all procurement options on a value-for-money basis. Three examples are provided below:-

## **UK (Electricity Transmission Network)**

The electricity transmission network in the UK has many of the same characteristics as the national rail network. Ofgem, has been driving new approaches to the procurement of enhancements to the transmission network. Recently, they have announced their intention to adopt a model called “Competitively Appointed Transmission Owners” to deliver new enhancement projects with a capital value greater than £100m which have a sufficient degree of separation from the existing network notwithstanding that ultimately the new assets will become part of the integrated national transmission network. We understand this decision was based on a study which found significant savings could be achieved

through this alternative procurement process and experience with recent offshore transmission procurements.

*“Competitively selecting a party to construct, own and operate new, separable and high value transmission assets will create value for consumers by putting competitive pressure on costs, while allowing for innovation by new participants who have strong technical and delivery expertise. Our use of tendering in offshore transmission has resulted in significant cost savings, and brought innovative approaches and solutions to GB transmission.” (Ofgem, “Extending competition in electricity transmission: arrangements to introduce onshore tenders”, Oct 2015, p.6).*

Ofgem will ultimately decide which projects should be delivered under the new model. The model incorporates the role of National Grid as System Operator and there are many other parallels with how private investment could be used to fund enhancement projects within the rail industry.

## **Canada (Ontario)**

In Ontario, the provincial government requires the involvement of its agency, Infrastructure Ontario, when it provides some of the funding to major projects. This includes instances where the province funds or partly funds projects at the municipal level, or indeed where the province’s treasury is funding or partly funding a capital spending program being undertaken by a particular ministry (e.g. Health, Transport). Infrastructure Ontario uses a Value-for-Money analysis to test whether DBFM is the right model, similar to the type of comparative analysis done in other markets.

Recent rail infrastructure projects delivered under a DBFM model include:

- Eglinton Light Rail Infrastructure (10km tunnel, rail infrastructure with a capital value of circa C\$4-5 bil) – Ontario Province provided an element of construction funding and Infrastructure Ontario mandated a DBFM model.
- Ottawa LRT (Confederation Line infrastructure and rolling stock with a capital value of circa C\$2 bil) – Ontario Province provided an element of construction funding and Infrastructure Ontario mandated use of a DBFM model
- Waterloo LRT (Infrastructure with a capital value of circa C\$1 bil) – Ontario Province provided an element of construction funding and Infrastructure Ontario mandated the DBFM model.

## **NSW (Australia)**

The NSW government policy is that for all public infrastructure projects with a total estimated capital value exceeding A\$100m, DBFM must be assessed as a potential procurement method having regard to value for money drivers. Their policy is available on-line (link below)

[http://www.treasury.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0015/22605/NSW\\_PPP\\_Guidelines\\_2012\\_Final\\_Version\\_14\\_August\\_2012\\_dnd.pdf](http://www.treasury.nsw.gov.au/__data/assets/pdf_file/0015/22605/NSW_PPP_Guidelines_2012_Final_Version_14_August_2012_dnd.pdf)

The NSW government has adopted the full range of procurement options for its major rail enhancements. For example;

- Epping to Chatswood Railway – A project specific organisation (TIDIC) was established to manage the delivery of the project outside of the Network Operator (then Railcorp). TIDIC procured the project under fixed price contracts with the private sector.

- North West Rail Link – The civil infrastructure was procured directly by Transport for NSW using fixed price contracts and the rail systems and rolling stock was procured as a DBFM project.
- Kingsgrove to Revesby Quadruplication – An alliance team was established between the private contractors and public authority to deliver the project.

***Q25. What are your views on the enabling factors facilitating a sustainable and affordable capital structure for Britain's railway? What factors would be required specifically for private sector capital introduction?***

See response below to Q26 and Q27.

***Q26. What are the types of investors that may be interested in investing in Network Rail, any of its functions, or in select parts of it? And for these types of investors, can you indicate:***

■ ***key attractions;***

■ ***risk appetite;***

■ ***required enabling factors.***

Investors are attracted to infrastructure as an asset class because it offers diversification benefits. The UK is regarded as having an attractive investment climate (due to its stable political and business environment, transparency and track record in attracting private sector investment) and the rail sector is generally regarded positively because of its continuing strong growth and government support.

Within the Infrastructure Investment market, different investors have a different risk appetites. John Laing Group (listed on the London Stock Exchange) is a primary developer of infrastructure projects and as such it seeks projects pre-construction where it can manage the process of developing an optimal whole-of-life solution, manage construction risk and deliver long term successful operational projects.

Besides “primary” developers/investors, there are also a large number of “secondary” investors who focus on assets which have demonstrated operational performance with an established revenue history. John Laing Infrastructure Fund (separately listed on the London Stock Exchange) is one such investor.

***Q27. What characteristics do you think enhancement projects would need to have to attract private sector investment and to what extent and in what form would public sector support would be needed? What types of financing structure could be brought to bear?***

## **Characteristics Investors Seek**

There are three characteristics John Laing looks for which would make enhancements an attractive opportunity:

**Certainty:** Investors look for a committed public sector Sponsor. The Sponsor will probably have engaged with the private sector well in advance of any procurement and will have completed significant advanced planning/investigation and design work to deliver the procurement to a robust timetable. The use of experienced advisors to support the public sector during the procurement is vital to minimising bid costs for both the public and private parties.

**Scale:** The larger the project or series of opportunities the more attractive because it allows the private sector to balance the significant bid costs with the potential opportunity, whilst not necessarily excluding SMEs from playing a vital role in delivery.

**Risk Allocation:** During the early engagement with the public sector investors like to understand clearly the proposed risk allocation. The private sector is comfortable with most construction related risks. Where there are “unusual” risks it is always best if sufficient background work (e.g. Site investigations) can be done by the public sector to help all the bidders understand the extent of the risk and hence offer innovative proposals. Ridership risk in the context of a new rail project is a risk that the private sector will be very cautious of. This is because there are often many external factors and other areas of government policy which impact ridership.

## **Types of Structure**

There are five different types of structure John Laing has seen in the UK and internationally in which the private sector has invested in new rail projects. The table in Schedule 1 summarises the Pros, Cons and relevance of each of these and provides examples of a project in which John Laing has invested.

### ***Q28. What incentive mechanics or control structures on Network Rail would facilitate third party involvement in the financing of enhancement projects?***

We suggest that there is an important oversight role required to ensure Network Rail considers a balanced approach to the procurement of its larger enhancement projects. Experience suggests this can only be effectively delivered by an external organisation with the skills and experience to challenge the status quo and ensure the best procurement approaches are taken.

## Schedule 1: Financing Structures in the Rail Sector

Pros	Cons	Relevance/Application	John Laing Example
<b>1. Concession (or Design, Build, Finance, Operate, Maintain)</b>			
The concession model drives innovative whole-of-life solutions. The private sector competes to provide the lowest cost solution to deliver the rail service over a substantial portion of the assets life. In developing technical solutions bidders have to optimise the technical solutions (infrastructure vs rolling stock cost, capital cost vs operational cost) and this drives value-for-money. The risk of delay, cost overrun and poor performance are very substantially passed to the private sector to manage.	Ridership risk is typically largely retained by the public sector. It is notoriously difficult to accurately predict ridership of greenfield rail projects/enhancements and therefore financing of a major new development would be more expensive if it included taking full ridership risk.	Operating franchises in the UK are typically between 7-14 years in length and incorporate significant revenue risk. We query whether it would be value-for-money to include the financing of significant, long-life capital investment projects within the scope of such franchises without significant changes to the franchising model.	<b>Denver Fast Tracks (USA):</b> <a href="http://www.laing.com/project_portfolio/31/127/denver-eagle-p3-project-us.html">http://www.laing.com/project_portfolio/31/127/denver-eagle-p3-project-us.html</a> <b>Sydney Light Rail (AUS):</b> <a href="http://www.laing.com/project_portfolio/115/127/sydney-light-rail.html">http://www.laing.com/project_portfolio/115/127/sydney-light-rail.html</a>
<b>2. Design, Build, Finance, Maintain (Infrastructure)</b>			
Similar to the Concession model above:- The private sector competes to provide the lowest cost solution to deliver the rail service over a substantial portion of the assets life. The risk of delay, cost overrun and poor performance are very substantially passed to the private sector to manage.	<p>To attract bidders and support value-for-money bids, the public sector may need to undertake early studies (ground investigations, pre-existing utility studies). For example, we have seen examples where the public sector has completed advanced works to “prove” typical construction conditions to support the procurement process.</p> <p>The public sector will need to be clear about the site access protocol in relation to the existing operational rail corridor. This has been a significant issue on some projects and needs to be dealt with during the development phase.</p>	<p>The extent of suitability depends on the level of interface with the operational railway. Where a reasonable degree of separation can be achieved (e.g. through physical separation or staging of works) this approach offers substantial benefits. Where the works require detailed “hour-by-hour” coordination with the operator a different form of delivery may be more beneficial.</p> <p>This model would deliver significant savings for major enhancement projects (e.g. a new Transpennine Tunnel) and would fit well with existing industry arrangements.</p>	<p><b>North Pole and Stoke Gifford Rail Depots (UK):</b> As part of the Intercity Express Programme, Agility Trains (a special purpose company) is responsible for the DBFM of a new rail depot at Stoke Gifford and remodelling/refurbishing the existing London North Pole depot. Both depots are near completion and will be ready to support the introduction of the new trains. Refer link below.</p> <p><b>Docklands - City Greenwich Link (UK):</b> <a href="http://www.laing.com/project_portfolio/49/127/city-greenwich-lewisham-rail-link-plc-cgl-rail.html">http://www.laing.com/project_portfolio/49/127/city-greenwich-lewisham-rail-link-plc-cgl-rail.html</a></p>



		For example, deductions that would normally apply to Network Rail under Track Access Agreements would “flow-down” to the DBFM Company. Network Rail’s responsibility could apply as normal (via an Asset Protection Agreement) ensuring that the interfaces with the network are appropriately managed and the infrastructure meets all requirements.	
<b>3. Design, Build, Finance, Maintain (Depots and Trains)</b>			
<p>Bidders optimise train and depot solutions to achieve a specific performance requirement (normally fleet availability and reliability) on a whole-of-life basis. The Operator only pays for the trains if they are made available and are reliable and hence there is a very strong incentive to deliver and maintain a very high level of performance.</p> <p>Very efficient financing as the public sector guarantees the trains will be used (i.e. no residual value risk).</p>	<p>The public sector guarantees usage for an agreed period and this allows the funders to provide the most cost effective financing terms (i.e. with no premium for residual value risk).</p> <p>There are risks that need to be managed if the public sector (or another party) is delivering the other new systems (e.g. signalling, power supplies) required for the new rolling stock to perform.</p>	<p>The model is fully compatible with franchise operations as the Operator is free to use the trains as they desire within an agreed set of “fleet parameters” to ensure the maintainer has sufficient access at depot to carry out the maintenance and repairs.</p> <p>This model delivers significant savings for major fleet and depot projects (e.g. HS2) and is being utilised for many such projects internationally.</p>	<p><b>Intercity Express Programme (UK):</b>  <a href="http://www.laing.com/project_portfolio/2/127/intercity-express-programme.html">http://www.laing.com/project_portfolio/2/127/intercity-express-programme.html</a></p> <p><b>New Generation Rolling stock (AUS):</b>  <a href="http://www.laing.com/project_portfolio/104/127/new-generation-rollingstock.html">http://www.laing.com/project_portfolio/104/127/new-generation-rollingstock.html</a></p>
<b>4. Station Developments</b>			
Private sector shares the revenue risk associated with the development and manages all the delivery and operational risks.	John Laing is one of the few investors who has developed such schemes in the UK because of the very significant development costs for quite small projects.	To attract investor interest we suggest a number of schemes be “packaged together” and that Network Rail take a greater role in supporting the developments.	<p><b>Warwick Parkway:</b></p> <p>The first station privately delivered in the UK, was initiated, funded, owned and operated by John Laing. John Laing invested in the facilities and associated highway modifications. Warwickshire council provided funds for the land purchase and integrated transport measures. The facility is leased to the Train Operating Company under a 40-year concession. This station opened successfully on time and to budget in Oct 2001.</p>



			<b>Aylesbury Vale Parkway:</b> <a href="http://www.laing.com/project_portfolio/33/127/aylesbury-vale-parkway.html">http://www.laing.com/project_portfolio/33/127/aylesbury-vale-parkway.html</a> <b>Coleshill Parkway:</b> <a href="http://www.laing.com/project_portfolio/51/127/coleshill-parkway.html">http://www.laing.com/project_portfolio/51/127/coleshill-parkway.html</a>
<b>5. Design, Build, Finance, Transfer (DBFT)</b>			
<p>Private sector can manage the delivery of mainline works to ensure delivery to budget and time.</p>	<p>The ability to deliver innovative value-for-money whole-of-life solutions is constrained as Network Rail must approve handover of all assets at the end of construction and the maintenance and lifecycle risk is retained by Network Rail.</p> <p>There is little incentive on the private sector to deliver the most efficient whole-of-life solution under this model as the asset risk reverts to the public sector at the end of construction.</p>	<p>John Laing utilised this model as then franchise operator of the Chiltern Railway franchise. It allowed Chiltern Railways to deliver and manage a major new capital programme while utilising Network Rail's Regulated Asset Base funding model post construction. We do not believe this model delivers significant savings compared with alternative procurement approaches.</p>	<p><b>Project Evergreen 2:</b>          John Laing led the design, construction, delivery and operation of Project Evergreen 2. The project, implemented in a live rail environment, was completed on time and on budget and accepted into operation by Network Rail.</p>