**Network Rail: Future-Proofing the Arpley Chord Project (A)**

In the midst of a drizzly morning March in 2010, Ethan Baldwin, a senior Network Rail (NR) project development manager, needed to dash off from NR Square One headquarters to Piccadilly Station in Manchester’s Centre if he was not to miss the 10.05am train heading to Warrington Central. That day he was attending the kick-off value management meeting for the Arpley Chord project with Warrington Borough Council (Council). As an experienced manager, Ethan anticipated some difficulties in explaining the project scope to the client. He also expected the Council people to know very little about railway. But Ethan framed this as an opportunity to educate the client. He actually believed his job was a lot less about routine and process-driven tasks, and more about managing stakeholders’ issues. And he genuinely enjoyed that.

The Arpley Chord project aimed to provide a new rail chord to connect the Arpley Branch Lines to the Up and Down Ditton Goods Lines [**Exhibit 1a,b**]. This chord would give operational flexibility and additional capacity for freight traffic by eliminating the need for freight trains to perform inefficient run-round and turn-back manoeuvres. For DB Schenker, one of the private freight operating companies (FOCs) using the line from the Ellesmere port to carry coal, the new chord would perhaps save around 30 minutes journey time in each direction. For NR, the new chord would also help improve the working environment and safety for the staff working at the Bank Quay Depot. And for the Council, the new chord would enable to close and demolish the old Arpley Junction and associated Latchford sidings[[1]](#footnote-1). This would make the land available for the Council to move forward with the plan to build a new road and develop a commercial/retail park. Provided the project was third-party funded, NR was happy to include it in its capital programme for the Control Period 4 as part of the Strategic Route Plans. We’re the ‘project supplier’, thought Ethan. Within NR, the project was being led by the enhancement team. The scheme was moderately complex from a technical perspective, and NR estimated its anticipated final cost to be around £15m.

Ethan was interested to focus the discussion on a central key NR requirement that was more and more becoming a major issue in NR enhancement schemes. Basically, he wanted to ‘future-proof’ the project to ensure its design would leave open the option to make changes at a reasonable cost and risk in the future. For example, the rail gauge would be designed to cater for W12 envelope potential[[2]](#footnote-2); and a volumetric clearance around the new chord should be designed in to leave enough space to electrify the chord in the future. Both requirements would impact the scheme and increase its cost. But they were aligned with the strategic priorities for NR, a private company set up to operate as a commercial business, but limited by public guarantee.

Whilst Ethan believed future-proofing was the right decision, his team had not developed a detailed study. This concerned Ethan since the people at the Council could think he was asking them to write a blank check. How to tell them into the ‘future-proofing’ idea was part of his job. The journey to Warrington would take less than 30min – still some time left to jot down on paper the key ideas!

**Network Rail**

The British railway system was created by private companies but nationalized by the Transport Act 1947 and ran by British Rail until the mid 1990s. On 1 April 1994, British Rail was privatized and Railtrack took control of the British rail infrastructure. The Railtrack Group plc. was a group of companies that owned the track, signalling, tunnels, bridges, level crossings and all but a handful of the stations of the British railway system, and was floated on the Stock Exchange in May 1996. Railtrack plc. was the group’s track operating division. An industrial dispute in 1994, and fatal accidents in 1997 and 1999, started to raise issues whether the fragmentation of the railway system had put at risk its safety and maintenance procedures. After an investigation of the Hatfield crash in 2000 revealed that inadequate maintenance of the rails was behind the accident, the collapse of Railtrack plc. became inevitable. Regulatory and customer pressure increased, the company’s share price began to fall sharply, and in 2001 the government decided to put the commercially unsuccessful company under railway administration.[[3]](#footnote-3) In 2002, Railtrack business (and its debt) was bought for £500m by Network Rail (NR).[[4]](#footnote-4) Its most prominent subsidiary is Network Rail Infrastructure Ltd which is the owner and operator of most of the rail infrastructure in Great Britain. NR was a company limited by guarantee, a private organisation operating as a commercial business. It did not have a share capital or shareholders, but it had members. These members did not have any financial or economic interest in the company, which meant that they did not receive dividends, share capital or any other form of payment from NR. As a ‘not-for-dividend’ company, all NR profits went straight back for re-investment in the network.

NR owned, operated, maintained, and developed the main rail network in Great Britain. This included around 20,000 miles of tracks, 40,000 bridges, tunnels and viaducts, 6,650 level crossings, and 2,500 railway stations mainly leased to mostly private-sector train operating companies (TOCs)[[5]](#footnote-5). With circa 35,000 employees, NR mission was to ‘provide a safe, reliable and efficient railway fit for the 21st century’. Its main customers were the TOCs, responsible for passenger transport, and freight operating companies (FOCs), who provided train services on the NR infrastructure. NR did not itself run passenger or freight services. NR and the TOCs had the shared responsibility of delivering affordable train services that met customers’ expectations in safety, punctuality, and availability, and offered value for money.

NR was funded by a multi-billion annual government grants and income from track access charges - either rail fares or revenue support payments from the government. It could also borrow money which the government guaranteed. This income was essential to pay for its capital investment programme to improve the railway service. For financial and planning purposes, NR worked within 5-year "Control Periods". For the Control Period 4 (CP4) running from 2009/10 to 13/14, the company estimated an overall expenditure of £34 billion, splitting the budget between four main cost centres: operations, maintenances, renewals, and enhancements [**Exhibit 2**].

The renewals cost centre was responsible for the biggest share in the capital expenditure. The CP4 set a plan to invest £11bn to replace older parts of the railway network including signalling, track, and bridges with new infrastructure. In the six years since 2002, NR had already renewed:

* Rail - 1,614km of track
* Sleepers - 4,418km of track
* Ballast - 4,647km of track
* Switches and crossings - 2,627 full units replaced

The CP4 plan for the enhancement projects, in turn, expected a lower investment: £8bn. Enhancement projects were however generally more complex to manage and deliver since they tended to be multidisciplinary and to have a greater number of interfaces and dependencies with external stakeholders. Enhancements to the rail network fell into: performance enhancements (e.g., increase line speed, electrification), technical enhancements (e.g., fencing for security), additions to the network (e.g., new routes), third-party enhancement schemes for commercial gain, and schemes for asset protection. Between April 2007 and March 2009, for instance, NR had carried out £2.44 billion worth of enhancement work which included lengthening hundreds of platforms, adding new platforms, laying new track, raising line speeds, and adding capacity through major re-signalling schemes. In 2007/08 alone, NR had invested £500 million to improve capacity and reduce journey times.

**The NR Project Management Framework**

The capital projects sponsored by NR could vary significantly in size, value, technical and organizational complexity and risk. As part of its strategy for project management, NR developed a flexible framework that provided guidance for project actions, and which allowed for its implementation to be customised to the particular characteristics of each project. Broadly, this Project Management Framework (PMF) consisted of a collection of systems and processes aimed at supporting and guiding the actions of those people governing, controlling and delivering the projects [**Exhibit 3**]. Two procedural elements of the PMF stood out: first, a process establishing the deliverables at each stage of the project lifecycle, termed Guide to Railway Investment Projects (GRIP); and second, a procedure establishing the processes that the teams should adopt throughout the project lifecycle – the Project Control Cycle.

**The Guide to Railway Investment Projects (GRIP)** The Guide to Railway Investment Projects (GRIP) spelled out the NR lifecycle approach for managing capital projects. It detailed the project deliverables and the stages in the project when they needed to be delivered. GRIP consisted of eight stages in addition to the Pre- and Post-GRIP stages [**Exhibit 4**]. Each stage was detailed as follows:

* Pre-GRIP – Initial planning and preparation to validate the project;
* Stage 1 – Output Definition – Identify what the outputs will be and how they may be achieved;
* Stage 2 – Pre-Feasibility – Detail the strategy of how to deliver the project outputs;
* Stage 3 – Option Selection – Examine different options and select a single option to be developed;
* Stage 4 – Single Option Development – Develop a single option at a high level and initiate the tendering process;
* Stage 5 - Detailed Design – Award contracts and develop a detailed design and implementation plan;
* Stage 6 – Construction, Testing and Commissioning – carry on physical works, ending with completion/commissioning;
* Stage 7 – Scheme Hand Back – Hand back the asset to the asset owner, operator, or maintainer;
* Stage 8 – Project Closeout – Update, finalise and archive all the project documentation and capture the lessons learned;
* Post-GRIP – Demonstrate that the project has delivered its benefits.

Each GRIP stage was expected to deliver a specified set of products. These stages were expected to vary in length and rigour depending on the project type and complexity. Pre- and Post-GRIP stages, for instance, were normally required only for the more complex projects. Evidence suggested that Post-GRIP in particular was hardly followed up, as the project sponsor[[6]](#footnote-6) for the Arpley Chord explained:

“I‘ve never had any experience with Post-GRIP; once project managers have gone through the Project Closeout, it doesn’t make much sense to go through an additional stage. I don’t know what the purpose of this stage is.”

**NR Project Control Cycle**

Whereas the GRIP specified the deliverables at each stage of the project lifecycle, the Project Control Cycle (PCC) controlled and managed the process of delivering on time, cost, scope, and specification. It encompassed all the processes that operated through the GRIP lifecycle. Within the PCC, two main procedures - the NR risk management approach and the NR value management studies – were in some ways related to the question of ‘future-proofing’ the project design.

*The NR Risk Management Approach*

At the core of the NR risk management approach was a process for identifying and assessing risks and opportunities in order to prioritise and develop strategies to manage them. The project team was expected to carry out the steps of the risk management process at the early project stages and then throughout the project as part of the PCC. The key steps of this process were as follows:

1. Define the objectives. Objectives of the project are defined and critical success factors are identified;
2. Identify risks. Risks are identified and recorded in the project risk register;
3. Analyse risks. Risks are assessed using both quantitative and qualitative risk assessment; probability of occurrence and impact are also assessed;
4. Evaluate risks. Effects of risks are evaluated and understood;
5. Treat risks. Risks are addressed by reducing the probability of occurrence, reducing the potential impact, or preparing a fallback plan. As such, risks can be avoided, reduced, transferred, insured/protected, or accepted;
6. Review and monitor. Risks are reviewed, monitored, communicated and managed on an ongoing basis.

Associated to the steps of the risk management approach [**Exhibit 5**], the following products had to be delivered throughout the project lifecycle:

1. Risk plan management. It tailors the risk management strategy for the project and establishes which products are appropriate for the successful management of risks;
2. Strategic Risk identification and management report. It scopes the project and prioritises and puts in place treatment actions for key strategic risks;
3. Risk register report and risk treatment report. It lists the risks associated with a project and details the actions required to treat them;
4. Qualitative risk assessment report. It ranks risks in terms of High, Medium or Low probability of occurrence and impact;
5. Quantitative risk assessment report. It quantifies the risks and identifies uncertainties in costings and timings;
6. Business case risk assessment report. It assesses the effects of risks and uncertainties.

**Value Management Studies**

Utilised across the project life-cycle from inception/feasibility through design up to project completion, the value management studies consisted of a structured, team-oriented approach to define what value meant to a customer as well as to assist in project decision-making. Value was expressed by the ratio of the satisfaction of the customers’ needs by the resources/cost spent to achieve that satisfaction. Four studies formed the value management process, and they had to be delivered at different stages of GRIP. By asking project teams to undertake these four studies, NR expected that value managers were able to identify and establish objectives, identify options that would satisfy those objectives, continuously verify targets to ensure that they were appropriate, and to feedback lessons into future stages of the project.

**Warrington Borough Council**

The borough of Warrington covered 182 square kilometres and lied at the centre of the North West region’s communications network. In 2010, the Council had a population of almost 200,000 who lived in approximately 85,000 households. The population had risen rapidly over the last 30 years, and forecasts suggested the population was expected to grow by 3% by 2026. In line with national trends, the proportion of older people was forecasted to increase significantly, and by 2026, 43% of the population in the borough was expected to be over 50. The Council was a borough of dramatic contrasts, encompassing rural, idyllic villages with industrial heritage and landscapes. The town of Warrington in the centre of the borough was the largest and most densely populated. Its vision was to be ‘recognised as one of the best places to live and work in the UK, where everyone enjoys an outstanding quality of life by 2030’. Overall, the Council saw itself was a successful organisation that had experienced significant growth and change over the past 30 years. As its deputy lead put it, ‘We’ve excellent education results, relatively low crime and unemployment levels and a very successful, regionally significant economy.’

From a governance perspective, the Council was responsible for ensuring that ‘its business was conducted in accordance with the law and proper standards, that public money was safeguarded, accounted for and used economically, efficiently and effectively.’ The Council also had a duty under the Local Government Act 1999 to make arrangements to secure continuous improvement in the ways its functions were exercised. In 2008, the Council approved and adopted a local Code of Corporate Governance that was consistent with the principles of the Chartered Institute of Public Finance and Accountancy and Society of Local Authority Chief Executives (SOLACE) Framework Delivering Good Governance in Local Government. [[7]](#footnote-7)

In 2009/10, the Council’s revenue account, known as the General Fund, recorded the net cost of providing day to day services. The account showed that the Council was funded by Government Grants, Council Tax and Business Rates for net revenue expenditure of £129.984m [**Exhibit 6**]. These plans were subsequently revised with the final budget for the year of £125.529m. The Council recorded a breakeven position for 2009/10, but the recession had a major impact on the Council’s budget. It resulted in increased demand for services and falls in the income that it received particularly from areas such as planning, car parking and interest earned on investments. The bad winter that the Country experienced also resulted in additional highway maintenance costs to the Council of £631k. Specifically related to capital items, the Council figures showed a Total Spent of £57.705m in 2009/10 [**Exhibit 7**].

Furthermore, in 2009/10, the Council implemented a Value for Money agenda that was driven largely by the ‘Futures Service Challenge’ process and the need to identify some £30 million in budget savings. A key element of the process was the flow of information from officers to members during the challenge process, allowing the Executive Board to make fully-informed decisions about the future shape of services.

Aware that the budget for the Arpley Chord project was significantly above the conventional capital projects funded by the Council, and that the Council could not afford to pay for the project, the Council succeeded to secure financial support for the first two GRIP stages from the Northwest Regional Development Agency (NWDA), a public body set up to help improve the quality of life and economic prosperity of the North West region. The same funding model had already been successfully adopted for the ‘short-term’ modernization of the Warrington Bank Quay train station near the Arpley Chord scheme, a project concluded in February 2009 [**Exhibit 8**].

**The Arpley Chord enhancement project**

This project aimed at installing a new chord line to connect the Arpley Branch lines to the Ditton Up and Down Goods lines to the West Side of Slutchers Lane Overbridge 39A. This scheme would eliminate the need for the inefficient run-round and turn-back manoeuvres that trains had to perform to go through Arpley, thereby creating operational flexibility and additional capacity. The new chord would also enable the closure and demolition of the old Arpley Junction as well as of the associated Latchford sidings. The old Arpley Junction had played an important role in the past when it rail linked the Port at Warrington to the West Coast Mainline. A new chord could help reinvigorate plans to reinstate Port activity at the existing wharves and further enhance the use of the Manchester Ship Canal for freight use. The whole scheme was an idea that had been in the works for almost two decades when the British Railway Board first sought powers for compulsory purchase of the land **[Exhibit 9]** as part of a joint effort with the Council to regenerate the waterfront. But the Council had struggled for years to get the scheme off the ground due to lack of funding. By 2009, the scheme was estimated to cost around £5m that would have to be entirely funded by the Council. The actual construction works would take less than a year, but the elapsed project lifecycle was expected to last at least 5 years from the Pre-GRIP stage initiated in 2009 to the GRIP 8 Project Closeout scheduled for 2014 as part of the CP4. The new Arpley Chord would remove the railway that was the barrier between the area and the existing town centre, and would release a lot of land that NR could sell on the market for new developments. The development of the area over the next 20 to 30 years was, however, dependent on a number of factors including the economy and Warrington’s development as a regional growth point.

After negotiations with NR about project outputs and anticipated final cost, the Council issued a client remit[[8]](#footnote-8) in 2008, and agreed to fund the scheme in partnership with the NWDA. On April 1, 2009 the Council received (£27k) from the NWDA for funding the first two GRIP stages. Soon after, NR started the option selection phase. The detailed design would only start in 2012 [**Exhibit 10**]. Since the estimated project costs were less than £50m and the implementation period was inferior to two years, Arpley Chord was characterised as a medium complex project in the world of NR.

**Future-proofing Arpley Chord**

As typical of third-party schemes, the Council had limited understanding of the technical issues around railway projects although it assigned a Strategic Consultation Divisional Manager to be in charge. For instance, the Council wanted to remove the Latchford sidings, but was unclear how this could impact the operability of freight trains and the local maintenance depot. Managing this and other interfaces and solving the issues was part of the remit of the NR project sponsor. Procedurally, the sponsor needed to ensure that the client’s requirements were delivered by conducting stage-gate reviews, identifying benefits, and managing the risks. But ultimately, the Council’s lack of expertise demanded a more active role for the NR project sponsor.

For Ethan, a key issue was the need to educate the Council for the need to make particular capital investments in the new chord. He deemed those provisions were critical to ensure that changes NR could foresee ahead could be undertaken at a reasonable cost in the future. Put differently, Ethan felt it was his obligation to educate the Council for the need to ‘future-proof’ the scheme. The NR team believed that the design should allow for at least two main ‘future-proof’ provisions.

First, the design of the scheme should allow enough space free over the line for potentially installing Overhead Line Equipment (OLE) in the future. The electrification of the railway network was a key strategic priority for NR since it would over time enable lowering the CO2 emissions, as well as improving air quality and reducing noise. Electric trains, on average, emitted 20 to 30 percent less carbon than diesel trains, and their superior performance in terms of breaking and accelerating helped reduce journey times and increase levels of train reliability and availability, as well as lowering operating costs (for passenger vehicles, fuel savings with electric vehicles were estimated between 19 and 26 pence per vehicle mile – a saving of around 50 percent – and maintenance cost savings were approximately 20 pence per vehicle mile – a saving of around 33 percent). Electric trains also provided more seats than diesel trains, therefore increasing capacity of the railway.

The NR team also believed that the design should leave open the option to increase the height, length or width of a train car that could travel on that particular railway line in the future. To enable this, the NR team advocated designing and building the Arpley chord so as to cater for the largest gauging (W12). This meant that the design should ensure minimal lateral clearance to enable construction of appropriate embankments to support the potential additional loads. Although the costs of providing gauging clearance varied significantly according to the particularities of each project, Ethan knew that enabling a railway to cater for a W12 rather than a W10 gauge could increase the cost in the track development up to 50%. According to the breakdown estimate [**Exhibit 11**], around £1.5m was allocated for the track development of the Arpley chord (that would include catering for a W12 gauge). This roughly suggested that the budget that NR was asking the Council to cover included an additional £500,000 to allow for increasing the capacity of the railway in the future. The investment to provide gauge clearance, the NR team reckoned, would also contribute to leave enough space available for the future electrification of the railway.

Ethan was unclear whether the Council would challenge these investments. Affordability seemed to be the word of the day in project talks. He felt responsible to provide the Council with an objective assessment of the benefits of future-proofing, and risks of failing to do so, but insisted the Council was accountable for the decision:

“It’s our job to present the information unbiased. We’ve to clearly say: ‘look, these are your two options, this is the advantage of option A and this is the advantage of option B’. And we try to present the information to enable them [Council] make their own decision. This is important because, although they do rely quite heavily on our advice, ultimately the funder is accountable”

If Ethan managed to tell the Council into committing to pay for future-proofing right at the start, the NR team could then build that assumption in the design as opposed to proceed with the design at risk it would have to be reworked later on because the Council could not afford to pay for it. But he didn’t have much information about whether a larger gauge would ever be needed or when the electrification would start. The output definition report, for example, had only just been issued (GRIP 1), and at this stage, even issues such as the adoption of a single or a double line chord were still under analysis. The NR team was also still assessing the potential impact of a single-line chord to the capacity of the route, although the team conjectured that a single-line chord could create a potential bottleneck and also a barrier to the growth of traffic in the future. Furthermore, Ethan’s team had not yet conducted a detailed risk analysis, a task which was only expected to be undertaken at a future GRIP stage.

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Managing risks was Ethan’s top priority. He understood well one rarely has all the information at the early project stages. But procrastinating some conversations with the Council, and leaving NR to assume what to do could lead to bigger problems later down the road. Of course the GRIP process allowed for changes in scope and design as more information became available. Was it too early then to start a conversation about future-proofing? Did he need to mention it at all? Would the Council people be capable to follow him? What would they think? The train started to move, and Ethan had about 30 minutes to jot down a strategy for his meeting with the Council team.

**Exhibit 1a – Layout drawings of the Arpley Chord Infrastructure project**



**Exhibit 1b - West Coast Main Line**

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Arpley Chord

**Exhibit 2 – NR Expenditure Trend (£bn, 2009/10 prices)**

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**Exhibit 3 – The NR Project Management Framework (PMF)**



**Exhibit 4 – The NR GRIP process**



**Exhibit 5 – NR GRIP products associated to the risk management process**



**Exhibit 6 – Warrington Borough Council Revenue Spending (General Fund) in 2009/10 (Statement of Account 2009/10)**

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**Exhibit 7 – Capital Spending 2009/10 (Warrington Borough Council)**

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**Exhibit 8 –Press release about Warrington Bank Quay station (13 February 2009)**

**£1 million welcome for Warrington Bank Quay**

Improvements worth more than £1 million were formally completed at Warrington Bank Quay station in a ceremony led by Helen Southworth MP today (13 Feb). A more appealing and easier-to-use entrance with automatic doors leads to a bigger, brighter concourse with big new windows, a higher ceiling and extra room for customers waiting to buy tickets in a new booking office. There is a more attractive approach to the station. Improved catering also features. The biggest development valued at a total of £700,000 within the station is funded by Virgin Trains, Network Rail, the NWDA and the Department for Transport’s Access for All scheme, in partnership with Warrington Borough Council’s linked £200,000 project to enhance the station forecourt and approach. In addition, Caterleisure has invested £150,000 in catering facilities at the station.

There is improved pedestrian access, a new “Kissing Zone” for passengers to be dropped off or collected by car, an improved area for taxis, a new bus stop adjacent to the forecourt and better arrangements for people with disabilities. Before unveiling a commemorative plaque, Helen Southworth MP, whose Warrington South constituency includes Bank Quay station, said: “I am very pleased that we have secured the investment to make these major improvements to Warrington Bank Quay.  Our main railway station is really important to the thousands of local people, and people from the wider area, who use the trains.  The improvements to access and facilities, as well as the additional trains on the new timetable, are making public transport far easier and more pleasant to use”.

Helen Jones MP (Warrington North) said: “I hope that the refurbishment of Bank Quay will make life easier for regular travellers as well as giving a much better impression of the town to business people coming here.“ Steven Broomhead, Chief Executive of the NWDA, said: “As a major business centre, it is important for Warrington to provide first-class transport facilities. I am delighted with the transformation at the station which will provide a positive first impression for commuters and for visitors coming into Warrington, and will encourage greater use of public transport. A high-quality public transport system is an important part of driving economic growth and these improvements will benefit both Warrington and the Northwest region.”

Diana Terris, Chief Executive of Warrington Borough Council said: "It is only fitting that a town of Warrington’s size and location has a truly modern gateway to encourage people to visit, work and invest in the town. "This redevelopment together with those of the bus interchange and Golden Square shopping centre in recent times are transforming the look and feel of the town by bringing it well and truly into the 21st century." The booking office has been refurbished to create a new ticket shop and hall with more space and new counters to make it more user-friendly. In addition to the staffed counters there are also three self-service ticket machines compared to one previously. The larger concourse is laid out to make it easier for people to gain access and move around.

Caterleisure Services Ltd have opened a new Cafexpresshop on platform 2 serving hot and cold snacks, pastries, soft drinks, alcohol and coffee, following an investment of £150,000.  The shop is a welcome addition to Platform 2 and serves both takeaway and into the adjacent waiting room.  The company are also considering a WIFI service for this area.  On the concourse a Travelines Kiosk has opened supplying confectionery, news, magazines, tobacco, soft drinks, coffee and sandwiches on a takeaway basis. Warrington Borough Council’s work has delivered: a new forecourt layout; new paving and surfacing; improved taxi facilities; a new drop-off area; new ramp to car park; improved pedestrian links and disabled access; and better provision for buses and coaches.

The improvements complement the timetable of faster trains on the West Coast Main Line introduced by Virgin Trains in December, involving shorter journey times to Warrington from London, Glasgow and Edinburgh. Arriva Trains Wales amended the timetable of its hourly Manchester/Warrington/Chester/Llandudno trains to connect with Virgin Trains from and to Scotland for Chester and North Wales passengers. The station is also served by Northern Rail on its route to Liverpool.

**Exhibit 9 – Statutory Instruments 1994 No. 1039 TRANSPORT AND WORKS TRANSPORT**

The British Railways Act 1990 (Arpley Chord) (Extension of Time) Order 1994 Made30th March 1994 Coming into force 20th April 1994

The Secretary of State for Transport, in exercise of the powers conferred by sections 1and 5 of the Transport and Works Act 1992(1)and on the application of the British Railways Board, hereby makes the following Order:

Citation and commencement1. This Order may be cited as the British Railways Act 1990 (Arpley Chord) (Extension of Time) Order 1994 and shall come into force on 20th April 1994.

Extension of time for the compulsory purchase of certain land.— (1) The period now limited by section 28 of the British Railways Act 1990(2)(“the 1990 Act”) for the compulsory purchase of the land mentioned in paragraph (2) below is hereby extended until and including 31st December 1999.

(2) The land referred to in paragraph (1) above is the land authorised to be purchased by section 25 (purchase of land) or 26 (purchase of rights over land) of the 1990 Act for the purposes of Work No. 5 (Railway at Warrington) authorised by section 5 of the 1990 Act.

Signed by authority of the Secretary of State for Transport

J. R. Coates An Under Secretary,Department of Transport30th March 1994Explanatory Note(This note is not part of the Order)

 **The British Railways Act 1990 (“the 1990 Act”) authorised the construction of a railway at Warrington (“the Arpley Chord”). Under section 28 of the 1990 Act the powers of compulsory purchase for the acquisition of land for the construction of the Arpley Chord cease on 31st December 1994.**

 This Order extends to 31st December 1999 the time within which the British Railways Board may exercise the powers of compulsory purchase in the 1990 Ac so far as they relate to the Arpley Chord.

 The applicants for the Order are the British Railways Board.

**Exhibit 10 - Original NR Timescale for the Arpley Chord Project**

2002/03

Discussions about the scheme were held with the former Railtrack

2006

Further talks (now with NR) were held. These and the previous talks did not progress as the Council was not able to secure funding

Oct 2008

Project negotiations restart as NWDA endorses the scheme

Jan 2014

Project close out

Jan 2013

Construction start

Sep 2013

Test and commissioning

Aug 2009

Output definition

Apr 2012

Detailed design start

Dec 2009

Option selection

**Exhibit 11 – Estimated Budget Breakdown for the Arpley Chord Project**

|  |  |
| --- | --- |
| **Contractor's Direct Costs** | £ |
| Signalling | 305,831 |
| Lighting to sidings | 45,349 |
| Track | 1,518,635 |
| Telecoms | - |
| Operational Property | 326,634 |
| Structures | 385,248 |
| General Civils | 220,508 |
| Utilities | 58,500 |
| Sub-total | 2,860,705 |
| **Contractor's indirect costs** |   |
| Preliminaries | 720,007 |
| Design  | 325,428 |
| Testing & Commissioning  | 158,075 |
| Training  |   |
| Spares  |   |
| Other  |   |
| Sub-total | 1,203,509 |
| **Network Rail's indirect & other costs** |   |
| Network Rail Project Management | 27,000 |
| Network Rail Project Management, (forecasted remaining costs)  | 429,106 |
| Compensation charges (TOC & FOC) |   |
| TWA Charges |   |
| Land / Property Costs & compensation | 500,000 |
| Other (see note 1) | 5,000,000 |
| Sub-total | 5,956,106 |
| Project Budget  | 10,020,320 |
| Adjustment for residual factors (40%) (see note 2) | 4,008,128 |
| Project Anticipated Final Cost (AFC) | 14,028,448 |
| Allowance for Network Rail Fee Fund 5% | 501,016 |
| Allowance for Industry Risk Fund 2% | 280,569 |
| Cost to Customer  | 14,810,033 |

Note 1: Costs due to move of the infrastructure maintenance depot. The scheme would affect the depots and therefore the scheme should develop acceptable solutions for the depot which maintain at least the equivalent of current available functionality and capacity.

Note 2: Residual factors are factors expected to affect cost and scope certainty. To be advised by the risk and value manager according to the GRIP stage of the project.

1. A siding is a low-speed track section that generally serves an auxiliary or unspecified usage. When run-round and turn-back manoeuvres are eliminated, the sidings can generally be also removed. [↑](#footnote-ref-1)
2. The rail gauge is the distance between the inner sides of the heads of the two load bearing rails that make up a railway line. The loading gauge defines the maximum height and width for railway cars and their loads. NR uses a gauge classification system that ranges from W6a (smallest) to W12 (largest). [↑](#footnote-ref-2)
3. Crompton, G. and Jupe, R. (2007) 'Network Rail - forward or backward? Not-for-profit in British transport', *Business History*, 49 (6) 908 - 928 [↑](#footnote-ref-3)
4. [Railtrack suggests bigger payout](http://news.bbc.co.uk/1/low/business/2270228.stm) BBC News, 20 September 2002 [↑](#footnote-ref-4)
5. NR owned and operated 18 of the larger stations; the remaining stations, whilst mostly owned by NR, were usually operated by franchised TOCs such as Virgin, Arriva, or Northern Rail. [↑](#footnote-ref-5)
6. The Sponsor’s role was to act as a representative of NR at the interface with the client; the central task of the role was managing the external stakeholders. [↑](#footnote-ref-6)
7. Annual Governance Statement 2009/10 [↑](#footnote-ref-7)
8. Detailed document in which client’s requirements are specified [↑](#footnote-ref-8)