



Rail Re-opening Toolkit

*A complete guide to the process
of re-opening a disused railway*



Table of Contents

Chapter		Page
	Table of Contents	3
	Acknowledgments	4
	Jaki Bayly Introduction	5
	About the Toolkit	6
	Process	
1	Process Overview	7
	Process Overview Flowcharts	8
2	The Overall Approach	11
3	Assessing Potential Passenger Usage	16
4	Demand Forecasting	17
5	Relationship with Network Rail	18
6	Technical Feasibility	20
7	Planning Procedures	24
	Making the Case	
8	Making the Case	26
9	Identifying Opinion Formers & Stakeholders	32
10	Communication & Promotion	33
	Making it Happen	
11	Opportunity & Timing	35
12	Funding	36
13	Managing Political Influences	38
14	Harnessing Public Opinion	39
15	Maintaining Momentum	40
	Case Studies	
16	Case Study A	41
17	Case Study B	42
18	Case Study C	44
	Appendices	
A	Demand Forecasting	46
B	Guidelines on Engineering Works	59
C	Glossary of terms and abbreviations	61
D	Useful Information Sources and Contacts	62



Acknowledgements

We would wish to acknowledge the assistance of the many organisations and individuals who provided information and reports and gave their time to advise and comment on this Toolkit.

Introduction

Rail Industry Review

At the time of publication the Government has issued a White Paper "The Future of Rail" proposing significant changes to the structure of the UK rail industry. If the proposals become law there may be shifts in responsibility relevant to rail re-opening procedures.

Welcome to the Railway Re opening Toolkit produced by the Countryside Agency and Association of Community Rail Partnerships. This document is the culmination of several months detailed research by the Independent Rail Consultancy Group (IRCG) and should prove invaluable to any organisation which is, or would like to, take forward the opening of a disused rail line.

In April 2003 the Countryside Agency published a Railway Reopenings audit for the Yorkshire and Humber Region. This looked at almost one hundred disused rail lines and assessed their potential for re-opening. A significant number were deemed suitable for further investigation and indeed some already had active campaign groups or local authority policies in place to protect them. However it became apparent that although a few disused lines have been re opened in recent years across the UK there was no researched or agreed method. This Rail Re opening Toolkit is therefore a unique resource which will fill that gap.

The IRCG research demonstrated that the purpose of re-opening disused rail lines should not be based on nostalgia. In fact the Toolkit shows how it is an economically driven process, interacting with the existing rail network, where proof of need has to be established at every stage. However, despite the need to regenerate many areas and relieve the transport problems of overheating economies, many commentators have pointed out that, in England at least, it couldn't be a worse time to be promoting the opening of new rail lines. This is due to the current lack of resources to undertake re openings rather than the lack of need for the transport benefits they can bring.

This Toolkit is written with a vision for the future. It is published in the knowledge that the pressure to meet climate change objectives, projected traffic growth and the overarching policy drive to achieve sustainability will be

increasing drivers within the timescale of re-opening a disused rail line (10 to 15 years for a completely disused line). Rail lines have a particular role to play in tackling social exclusion, access to services, employment, training and education for those who do not have a car and they are also a pleasant way to undertake leisure time activities. With the changes that have taken place over the last decade in the rail industry it is not difficult to see how different things might be in the future.

A point which has come across in the research time and time again is the belief that so many of the disused rail lines in the UK would not be under the threat of closure if they were operational today. It is principally the construction costs not the running costs that are the barrier. It is therefore vital that this Toolkit contributes to the long term thinking that needs to take place now if we are to reinforce and improve our transport networks.

Many organisations and individuals have been involved in producing this Toolkit. Their contribution has allowed this document to provide a clear logic to a complex process and also to illustrate how progress can be made on more than one front at once. The Countryside Agency considers that the re opening of disused rail lines can be viewed as one of the single most important sustainable transport initiatives available. Few other national or regional infrastructure projects can bring such wide social, economic and environmental benefits with so few disbenefits. I hope that you will find this Toolkit of use and that the results ultimately bring prosperity to urban and rural areas for many years to come.

Jaki Bayly
Head of Transport
Countryside Agency
October 2004

About This Toolkit

This **Countryside Agency Rail Re-opening Toolkit** has been created to provide a consistent, and recognised, approach to evaluating the viability of closed rail routes as re-opened rail corridors. It is a guide to developing a structured proposal for re-instating a rail route. It will inform national and local authorities, corporate and community bodies as they examine rail route proposals from inception through to implementation. Whilst primarily intended for projects which will enhance the nation's transport infrastructure much of it will be equally helpful to promoters of free-standing, tourism based and heritage focussed rail re-openings.

Toolkit Structure

This Toolkit has been designed for use in two distinct ways. As a guide to the complete process of re-opening a disused railway it can be read from end to end. However, the name 'toolkit' is deliberate because each chapter is free-standing for use by individuals or sub-teams working on a particular aspect of the process.

The Toolkit is structured with five chapter groupings so as to keep aspects of rail re-openings which relate to each other together. The groupings are:

■ Process

These chapters describe the overall approach to developing and taking forward a rail re-opening proposal. They look at the questions to be addressed and the planning procedures involved as well as providing guidance on sources of support and advice.

■ Making the Case

In the chapters on "Making the Case" you will find the steps required to build a business case in a format recognised by key decision makers and tips on where to find further advice and guidance. There is help on how to identify key opinion formers and ideas on lobbying support for the proposal.

■ Making it Happen

The final chapters discuss events that may influence the timing of your proposal, raising funds for the scheme and how to maintain the support required to see the proposal through to implementation.

■ Case Studies

The case studies provide practical examples of how rail re-opening proposals have been successfully implemented. They also give some indication of possible pitfalls and how they can be overcome.

■ Appendices

The first appendix is a technical guide to recognised methods of forecasting demand on re-opened railways; the second outlines issues which may influence engineering aspects of a re-opening.

Toolkit Application to Freight

The Toolkit focuses primarily on passenger railways. This is deliberate because re-opening proposals usually stem from improving the transport facilities for the communities which live along the rail route under consideration. However, the potential for freight flows should not be discounted. A survey by the Rail Freight Group in December 2003¹ found that 79% of people identified the transfer of heavy freight from road to rail a priority for transport planners. Furthermore, another piece of research² has calculated that one lorry load of freight transferred to rail is the equivalent, in terms of road congestion, to removing 25 average car journeys from the roads. Both are powerful arguments. However, unless there is a significant amount of road-hauled freight generated by industry along the rail corridor planned for re-opening – and which will give serious commitment to convert to rail – demonstrating a demand for freight traffic is much more complex. In many cases the possible traffic flows will be a diversion of existing traffic and the benefits may lie in providing capacity enhancements on the existing rail network. The potential for freight flows needs to be addressed but it may be difficult to quantify the financial effects, at least in the early stages of developing a business case.

Toolkit Application to Passenger Railways

Guidance provided in this Toolkit applies to rail re-openings which might come about in a variety of forms for example, the route might require full reinstatement of track, stations and other infrastructure before services can be introduced. Other schemes might have a route which is closed but the infrastructure still in place and available for re-opening to rail services. In some cases the route is still open for freight traffic but there are no longer passenger services running.

The re-opening proposal might also vary; the Toolkit guidance extends to a full re-opening with passenger services becoming integrated into the national rail network. However, it will also be helpful for self-contained Community Railway re-openings or Heritage Railways where the primary purpose is for leisure or tourist traffic.

The Toolkit is intended to guide the user through the processes required for reopening a completely disused railway. That does not preclude its use for introducing passenger services to 'freight only' lines. In such cases the toolkit will provide all the guidance needed but there will be fewer hurdles to cross; fewer processes to undertake. Some of the advice may also be useful for reopening disused stations on existing rail routes although specific guidance is available for such projects, see "New Stations: A Guide for Promoters" Strategic Rail Authority September 2004.

Chapter 1 Process Overview

Re-opening a disused railway and making it once again into a part of the national transport network, is a long and complex process. That is not meant to discourage but is intended to 'set the scene' and raise awareness that time, commitment and persistence will be essential requirements to complement planning, legal and financial issues.

Furthermore, whilst local aspirations may have initiated the idea for a rail re-opening only hard irrefutable facts will determine whether the scheme is taken seriously by all the regional and national authorities who will have to become involved and whose support is critical.

For all project participants there is the need to be realistic and recognise that 'your' scheme may not succeed as you would wish. However hard it may be it is important to know when to re-consider; when to stop. One of four things will happen to each rail re-opening proposal:

A There is no clear purpose for the line to re-open which cannot be met by existing transport infrastructure and services ~ **scheme not progressed**

B Cost to re-open the line exceeds potential earnings and overall benefits to regional or national transport network ~ **scheme not progressed**

C Case for re-opening the line is justified but funding is not available ~ **scheme 'Put On The Shelf' waiting to take advantage of funding when it is made available**

D Case for re-opening the line is justified and funding is available ~ **scheme goes ahead**

Even if a scheme is not progressed the evaluation effort need not be wasted. The analysis may trigger the consideration of alternative public transport options e.g. bus service enhancements, parking provision at existing rail stations or rail service enhancements on parallel routes. It may also encourage local debate about effectively using the former rail route corridor for some community or recreational use.

The reality is that many former rail lines existed to serve needs that pre-date the era of widespread car ownership and will not readily lend themselves to a clear role within the national transport network of the 21st century. Nevertheless, there are a few examples of rail lines that have successfully re-opened in the last couple of decades. With increasing road congestion and environmental concerns there is scope to selectively expand the existing network. Using former rail routes generally offers a lower cost way of doing this. The challenge is to find these routes among the hundreds of miles of former railway track alignments.

So, the Process Overview for rail re-openings is shown below and expanded in the chapters which follow:

- Identify the core proposition. What transport objective will the re-opened route serve in a local, regional and national context?
- Establish a 'Steering Group' to provide leadership and a credible focus
- Seek start-up funding
- Obtain legal protection for the route
- Ascertain how the proposition relates to the objectives of Local Transport Plans, Regional Development Plans, Local Authority Structure Plans
- Obtain the support of elected members and officers at all levels of local and national government and, of course the communities directly affected
- Consider alternatives to 'heavy rail'
- Undertake Local Needs Surveys and assessments of wider contributions to strengthening the national capacity for transportation
- Obtain high-level cost estimates for re-instatement
- Prepare a high-level business case
- Promote and campaign through all appropriate channels
- Provide the media with positive and informative material
- Include in relevant Local Transport Plans
- Develop a detailed, costed proposition
- Seek funding
- Obtain approval for redevelopment of the rail route to commence
- Construction
- Trains start running!

From the above overview it will be clear that almost any of the stages in the process could determine that the scheme cannot be justified and the only logical step is to withdraw the proposal. However, it is worthwhile to bear in mind that, even though your case may not be justified today, with an increasing demand for travel and growing concern for the environment in ten or twenty years time the case may be stronger. Obtaining legal protection for the route will help to ensure re-opening potential is retained.

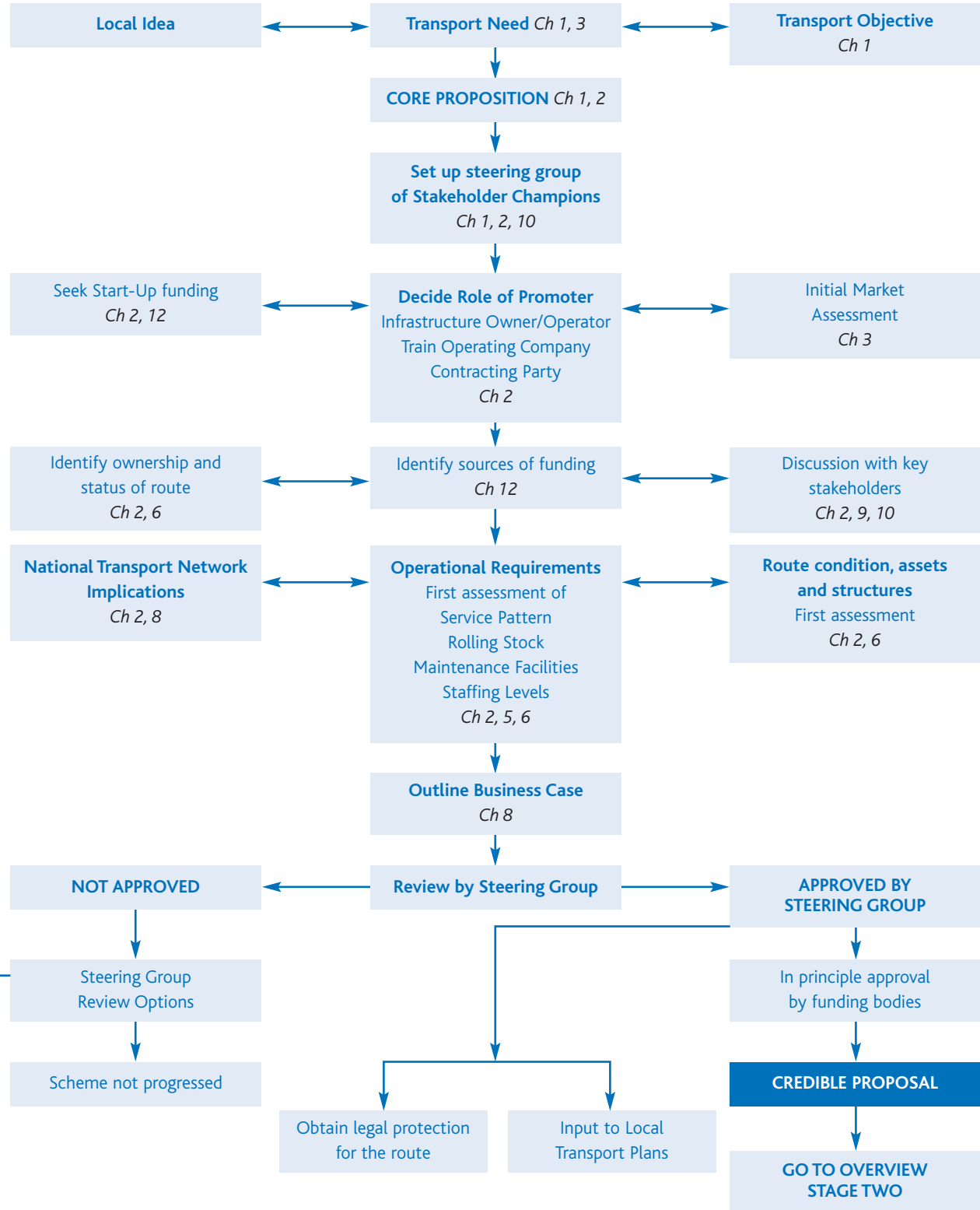
Finally, reopening a railway is dependent on a wide mix of people and professions – local interest groups, local authority planners, local authority transport professionals, engineers, business development professionals and funding bodies. Success will depend on a focussed approach by all concerned with co-operation and an understanding of the common goal between the different interests. To this end the establishment of a Steering Group is proposed as described in chapter 3.

¹ Rail Freight Group "Freight on Track" Campaign Survey December 2003 (details of the Freight on Track campaign can be found on www.frg.org.uk)

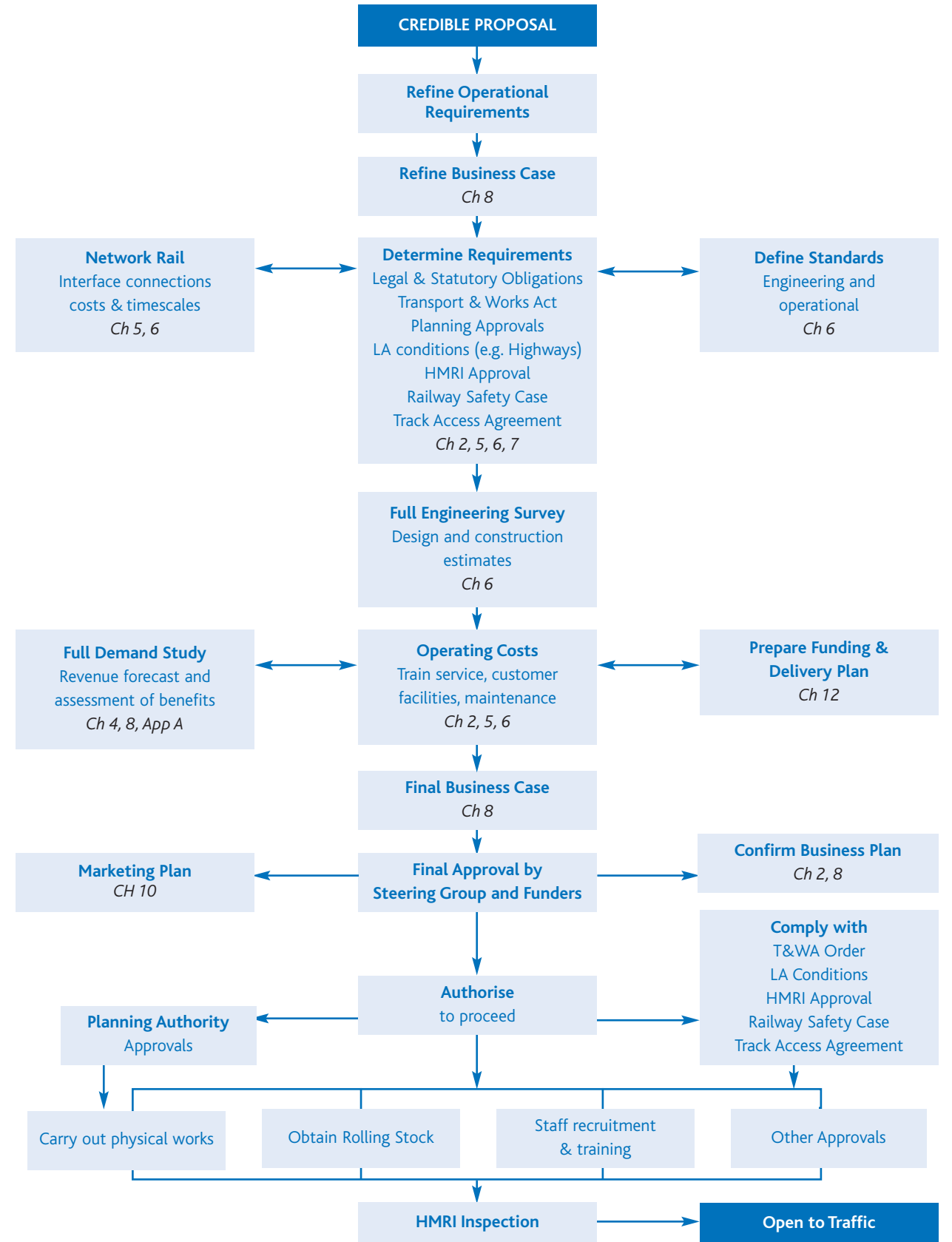
² Yougov Survey commissioned by the Rail Freight Group carried out between 28/11/03 and 01/12/03 from a sample of 2405 people nationwide.

Process Overview – Stage One

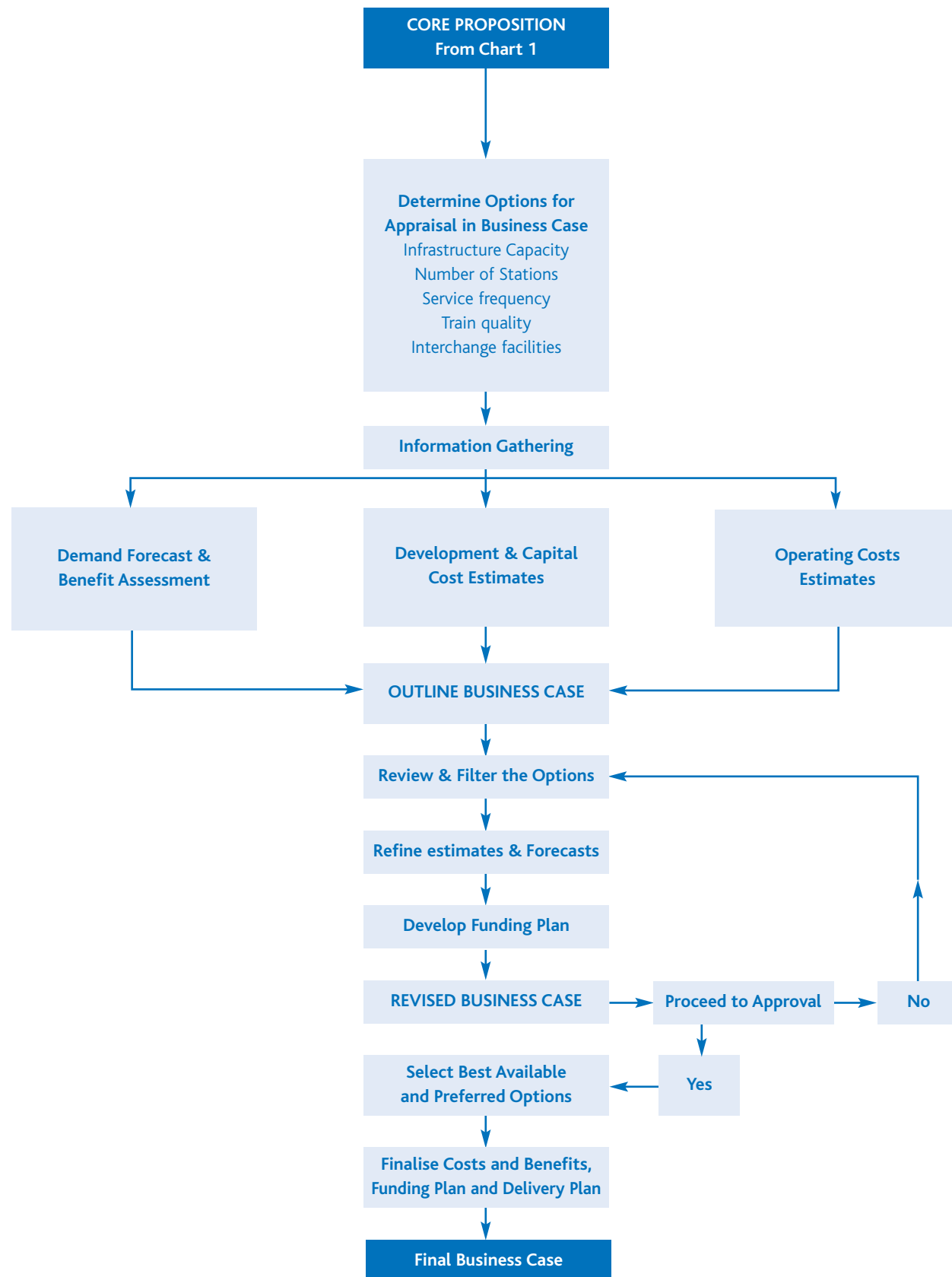
Define Transport Objectives – Review & Re-define
 Consultation with Stakeholders
 Continuous throughout project Ch 1, 3, 4, 8, 9, 10, 11, 13, 14, 15



Process Overview – Stage Two



The Business Case



Chapter 2 The Overall Approach

Introduction

This Chapter of the Toolkit provides guidance on the steps to be taken to reopen the right of way and provide the infrastructure and facilities which will be required for an operational railway on a closed route. The guidance is also applicable to introducing passenger services on routes which are currently open only for freight traffic or diversionary purposes.

BACKGROUND

A public railway for the use of fare paying passengers can only be brought into use with the approval of Parliament. All railways in the UK were authorised for their construction and use by individual Acts of Parliament. Such Acts facilitated, for example, the purchase of land, defined the limits of deviation either side of the proposed centre line, approved the means of crossing public highways and the headroom over navigable waterways and in effect designated a legal right of way for the railway promoter and owner.

The closure of such an authorised public railway was similarly subject to Act of Parliament. In practice, during the widespread closures of the 1960s and 70s following the Beeching Report, closures were authorised by a “blanket” act which provided for a simplified closure procedure, subject only to demonstrating that no hardship would be caused to the travelling public or that alternative means of transport were available or could be provided. However, there was no automatic provision for preserving the alignment and right of way for likely future use.

Certain legal and statutory requirements will have to be met in order to reopen such a closed railway. The only exception to this is the case of a “mothballed” line, which although closed to traffic, is still complete and operable. This exception may also apply if the proposal is to provide passenger services on a route which is currently open, but only for freight traffic.

It is recommended that reference is made to the Flowchart “Overview Stage One” on page 8 which illustrates the process from the Core Proposition to the Credible Proposal. The Credible Proposal is key to demonstrating the viability of the scheme in order to enlist the commitment of the various organisations, commercial and statutory, necessary to taking the project forward.

STAGE ONE – CORE PROPOSITION TO CREDIBLE PROPOSAL

Role of the Promoter

The Promoter of a rail re-opening may be a community group, a campaign group a Local Authority or a consortium of various organisations.

An essential early step for the Promoter is to consider what role it wishes to adopt. The options are summarised below:

- Infrastructure Owner
- Train Operating Company
- A combination of infrastructure owner and train operating company – this “vertically integrated” organisation follows the British Rail approach
- Re-opening Facilitator – on completion the reopened railway is handed over to other organisations to run, such as the local authority, Network Rail or an independent company
- Re-opening Facilitator with hand over at an earlier stage during the re-opening

The following paragraphs briefly explain the responsibilities of each party, using reference to the national railway as an example. It is important to recognise the need to review the Promoters options, as the scale and ultimate responsibilities associated with the re-opened railway become clear during development. The Steering Group (described in the next section) should lead on this.

Whichever role is chosen by the promoter, ultimately the railway will require an Infrastructure Owner and Operator (Network Rail is the Infrastructure Owner & Operator for the national rail network). The Infrastructure Owner and Operator is legal owner of the asset and carries overall and statutory responsibility for the safety of the travelling public. That responsibility is discharged through competent operation of the signalling system and by ensuring the safe working and maintenance of the infrastructure, including the track, signalling, communications, plant and equipment on which the movement of trains depends. The arrangements for this will be set out in the Railway Safety Case (RSC), which the owner will prepare, and which will be subject to acceptance and subsequent monitoring, by Her Majesty’s Railway Inspectorate (HMRI.) There are derogations, or relaxations within the RSC rules for Heritage Railways

The owner is also responsible for ensuring that the Train Operations are carried out safely and these arrangements are also described in its RSC. Train Operations may be carried out by a Train Operating Company (TOC) which will then need its own RSC (GNER, First North Western and EWS are examples of Train Operating Companies).

Alternatively the promoter may, on completion of the reopening wish to hand all railway activities to the Local Authority, which can be the Infrastructure Owner/Operator, or Network Rail and a Train Operating Company. It will also have to be decided to what extent contractors will be employed for maintenance and renewal work. (See also the section on The Railway Industry on page 13)

ORGANISATION

Steering Group

An essential early step is to set up a Steering Group comprising representatives of the stakeholders.

The benefits are:

- Provides a focal point for all those involved
- Provides evidence of credibility
- Provides evidence of professional competence
- Provides leadership
- Provides a permanent address for correspondence
- Monitors progress of the various elements
- Manages the funding arrangements (see Chapter 12)

If the “Start-up” funds will permit, appoint a permanent Chairman or Chief Executive Officer (CEO), even if this is on a part-time basis at the outset.

The Steering Group should include officers from the Local Authorities, through whose area the re-opened route will run AND who have responsibility for the Local Transport Plan, representatives from funding agencies or potential funding agencies and representatives of the re-opening Campaign Group. The Campaign Group is described in Chapter 10. The Steering Group may also include representatives from other organisations depending on the objectives of the reopening for example the Regional Development Agency, Tourist Agencies, Chambers of Trade. It will usually be appropriate to invite railway industry representatives (Strategic Rail Authority, Network Rail, TOC) to take part in the Steering Group although their role may vary at different stages of the project. The above organisations may not necessarily wish to always be represented on the Group throughout the Project, but should be kept informed of progress so that they will be able to respond at the appropriate time.

The Steering Group should also include professional legal and financial advisors. If this is not possible in the early stages then the Group should ensure that they have access to such advice. Also invite onto the Group an experienced senior railway professional Engineer or Operator.

It will be seen that there are two distinct but related Groups – the Campaign Group (see Chapter 10), who initiated the

proposal and will maintain communication and lobbying, and the Steering Group who will lead the professional and technical competence, and manage the development and eventual implementation. This will provide an assurance to the other stakeholders, particularly the statutory authorities who may well be dealing with other transport proposals, that the reopening is being managed by a responsible and professional organisation and team.

At some stage it may be necessary to have a formal legal structure for example by the formation of a Limited Company, a Trust or both. A Group with experience and knowledge of the Project and with professional advisors will be able to take this forward.

Start-Up Funding

Chapter 12 (Funding) and the Flowchart Overview Stage One refer to Project Initiation, or Start-Up funding. It is emphasised here that an early action of the Steering Group is to seek such monies because there will be costs arising right at the outset – for example, publicity material, hire of meeting rooms, search fees, hire of professional assistance to assess the current state of the route

Role of Consultants

There will, inevitably, be occasions when outside professional advice is needed in the absence of the relevant skills on the Steering Group or Campaign Group. In particular such advice may be needed for technical investigations, condition surveys, engineering design, legal advice or to validate work undertaken by lay people in the group. Timely use of consultants with appropriate skills will be essential to the cost-effective development of a viable scheme.

Reputable consultants will ensure your project is progressed using up to date standards, technology and legislation and their contribution, where necessary, will endorse the professional aspect of your work. Employing consultants will, of course, have cost implications but their advice can avoid un-necessary expenditure arising from otherwise uninformed decisions.

When employing consultants a clear remit should be prepared and agreed by the Steering Group. The remit should be specified with enough detail to enable consultancy firms to provide quotes to complete the work. It is recommended that quotes are requested from three suppliers, if possible. You will then be able to compare the tenders on an equal basis.

Project Plan

The Project Plan is the management tool by which the Steering Group can effectively develop and implement the various measures from the Core Proposition (see below) onwards.

Treat the Reopening as a Project and prepare a Project Plan in the form of a bar chart or Gantt chart. This will form the basis for managing all the issues which follow; it will highlight what needs to be done, when and by whom. It is suggested that the first version should be based on the headings in the Overview Flow Chart.

The Project Plan will be broad bush initially, particularly the timescales. It is far better to have a rough plan than no plan at all. The Plan will develop as the investigations and work proceeds and as the various parties to the project clarify their own activities, work content and key events and associated dates. The Steering Group needs to nominate an individual to be responsible for the Project Plan, keeping it up to date and monitoring (and “chasing”) progress. The professional engineers, managers and others in the stakeholder organisations will welcome this approach and the Plan will provide a basis for their own input and management of their contribution to the Project. It will also provide a robust supporting document to the Business Plan.

Finally it is essential to ensure that the latest version is circulated so that everyone is aware of the current state of play and can therefore relate that to their own activities.

The Core Proposition

The Core Proposition describes the basic intention, an indication of potential use, the direct and indirect benefits, even though these cannot yet be properly quantified. If possible include a broad indication of the practical feasibility of reopening the line of route infrastructure. The Proposition will include an outline evaluation as to how far the objectives are met in the current Local Authority transport planning strategies. It should be written down, and “signed off” by the Steering Group.

The Core Proposition may have been as a result of a local idea generated by a campaign group who are concerned about local transport issues such as road congestion, safety of the public from heavy traffic or parking problems for shoppers and commuters in the major towns along or at the ends of the route.

Equally the Core Proposition may be as a result of a Local Authority’s transport aspirations. These may have been identified by one or more of the Transport Planning Strategies at Regional or Local level (See Chapter 7).

It is essential therefore at this stage to ensure that the Core Proposition achieves and satisfies those transport objectives. The initial Demand Assessment will be needed to support the objectives. (see Chapters 3 and 4 and Appendix A) As the Project develops and more information becomes available, these objectives need to be reviewed and if necessary redefined. Alternative solutions should be considered so as to provide evidence to support the final choice.

Where the Core Proposition is based on a local idea, the Steering Group should, as a first action, seek to input those aspirations into the Local Authority’s Transport Plan.

The Railway Industry

This section briefly outlines the relationships between the various bodies in the Railway industry and their roles. It also indicates how to make contact with them, what advice and help is available and what the Promoter may be required to do. The local authorities, especially the County or Unitary Councils will already have established routine contacts with parts of the industry. The extent and familiarity of those contacts will depend on the how far the railway already impacts on transport and transport planning in that Local Authority area.

In summary the TOC (e.g. First North Western, TransPennine Express, GNER) runs the trains and the stations in accordance with a franchise granted by the Strategic Rail Authority. The franchise determines the routes, service patterns and other specifications. The TOCs operate under a licence which is granted by the Rail Regulator. The trains are leased from a rolling stock owner and the stations from Network Rail (NR). (The exceptions to the latter are certain major stations which are owned and operated by Network Rail). A Track Access Agreement between the TOC and Network Rail covers the train paths used by the TOC and reflects the type of traction and rolling stock which the TOC operates. The Association of Train Operating Companies (ATOC) is the umbrella organisation of which all the TOCs are members. The entire National Rail infrastructure is owned, operated and maintained by Network Rail: there are some private and preserved railways which are not part of the national rail network and are not owned by Network Rail. The infrastructure consists of the track, signalling, power supplies for electric traction, supporting structures, earthworks and drainage. All passenger stations are owned by Network Rail except for certain private and preserved railways. Network

Rail is responsible for the timetable and signalling of all train movements. The Strategic Rail Authority (SRA) is the immediate funder of the railway industry, approves franchises and authorises enhancements to the network (e.g. increase in route capacity).

The key organisations within the Railway industry for a promoter of a reopening are:

ATOC and the local TOC

- Early discussions
- General advice on train operating and the market
- Advice on sources of funding
- Recommended contacts in LAs and NR

Network Rail

- Early informal discussions
- Identification of issues regarding interface with the National Rail Network
- Track access
- Later, a formal contract for developing the project

The SRA

- Possible funding
- National railway routeing strategy
- Appraisal criteria and advice
- Advice on best practice approaches
- Advice to ensure SRA consultation is handled correctly
- Any planned developments are identified
- Impacts on the wider rail network are understood
- Help is available to identify freight potential

ACoRP (The Association of Community Rail Partnerships).

- Provision of advice and support

Operational Requirements

Whilst it is important that the Project is market led, early indications of costs of rolling stock procurement and day-to-day operating and maintenance are essential inputs to the Outline Business Case.

The initial discussions and investigations with the Local TOC and Network Rail, following the Core Proposition will provide an indication of the service to be provided, number and locations of stations, the train frequency, speeds and type of trains. This will lead to understanding the costs of train provision, train crews and infrastructure maintenance based also on advice of the railway professionals on the Steering Group.

Route Condition, Assets and Structures

Identify the owner of the existing infrastructure and any assets.

Establish the legal status of the existing infrastructure:

- Mothballed – Network Rail (NR) retains all legal responsibilities. The railway is complete and readily made operational
- Open – operational for freight traffic or diversionary purposes only. Will be owned by NR or other infrastructure owner/operator. Various aspects may not be suitable for passenger operations: e.g. signalling.
- Closed but not sold – Would have been removed from NR’s Network Management Statement. Belongs to British Rail Residual Property Board (BRRPB)
- Owned by others, e.g. a local authority or has been sold off piecemeal. The sale process may still be going on and parts may have been sold and others not. The British Rail Residual Property Board (BRRPB) will have records of the first buyer.

Assess the completeness of the old infrastructure and provide a notional cost of repair, reinstatement or the works which would be required to deviate round obstructions. If possible, walk the route and consult the local authority. At this stage it is necessary to identify how many structures will need replacing and the overall condition of those which remain. The earthworks, cuttings and embankments, may have been partially removed or eroded by nature in the absence of maintenance. Identify where the line of route has been obstructed or there are encroachments (official or otherwise) and either a new alignment is required or some repurchase necessary. This will provide the first assessment for input to the Outline Business Case.

Further guidance is provided below in Chapter 6, Technical Feasibility and Appendix B.

National Transport Network Implications

The Outline Business Plan needs to make reference to how the proposal fits with the wider transport situation. Network Rail, the local TOC and the SRA will be able to comment in respect of the Railway industry. The County or Unitary Council(s) will be willing to explain their Local Transport Plans. The relevant Regional Government Office is the custodian of the Regional Transport Strategy and in this respect represents the Department for Transport. The Regional Assembly is responsible for developing the Regional Spatial Strategy.

The important issue is to demonstrate in the Outline Business Case that the promoter is not working in isolation and provide the opportunity to consider feeding the proposal into the Local Authorities’ transport plans.

Consultation with Stakeholders

The consultation process is described in the chapters on “Making it Happen”. It is sufficient to issue a reminder here of the need to maintain the consultation continuously during the development of the project. It is a two-way process and will provide input of emerging information to the Steering Group as well as updating the stakeholders on the present position and progress.

CREDIBLE PROPOSAL

Once the investigations, the Initial Demand Study and notional costings described above have been completed and incorporated into the Outline Business Case the Steering Group is in a position to decide if a case for the re-opening proposal has been made. If there is not a positive case, this is the time to review the inputs already made and consider what further information or consultation is required.

If the case has been made and the funders approve, the Outline Business Case can now be deemed to be the Credible Proposal. This is an important definition, because most of the organisations who will now be called upon to provide information to enable the case to be taken forward to the Final Business Case, will need to commit time and resources to the Project and will, therefore, need the assurance that the project has a reasonable chance of success and, equally, that the promoters have seriously considered all the issues possible up to this point.

The approach and activities needed now are shown on the flow chart Overview Stage Two.

STAGE TWO – CREDIBLE PROPOSAL TO OPENING TO TRAFFIC

The concept of Stage Two is to develop Stage One with more accurate information and prices, incorporating the advice and requirements from the reports commissioned from experts, stakeholders and authorities involved.

The following table shows the key elements and the chapters in this Toolkit where more information and guidance is available.

Although this document describes a two stage process, it may be practical to have more than two stages. If the proposed scheme is particularly large an extra stage of evaluation and reporting will reduce the risk of high levels of abortive development costs.

KEY ELEMENT	CHAPTER IN TOOLKIT	COMMENT
Develop the Business Case and update as the project develops	8	
Update the traffic forecasts with a Full Demand Study, supported by any necessary market research	4	also see Appendix A
Update costings using realistic suppliers prices	6	
Identify and provide cost estimates for stations, facilities and accommodation	6	also see Appendix B
Conduct a full engineering survey, design and construction estimates	6	also see Appendix B
Understand and incorporate the legal requirements	7	
Understand the standards to be applied to operations and engineering and incorporate in the engineering design and costs, and similarly the arrangements and costs for train operations and passenger facilities	6	
Assess the implications of physical and operational effects of connecting into the Network Rail railway	5	
Identify the routine operations and infrastructure maintenance costs which will be incurred once train services start to run	6	
Establish and confirm the funding plan	8 & 12	
Review and if appropriate redefine the Transport Objectives of the proposal	7	
Maintain the two-way consultation with stakeholders	9 & 10	
Develop and approve the Final Business Case	8	
Approve and implement		

Chapter 3

Assessing Potential Passenger Usage

An early requirement in the reopening process is an assessment of the potential market for the route. An initial judgement of the circumstances and travel needs along the route will help to determine the core proposition. Preparation of the business case begins once the core proposition is agreed and will require the development of a properly calculated Passenger Demand Forecast.

There is a hierarchy of procedures for calculating passenger volumes along the route to be re-opened. A unique feature of the process is that, unlike rail or road improvement proposals, there will be no (or few) existing rail trips from which to build the forecast. The following mix of journey types may be included in the forecast:

- those for local trips between stations along the new route
- those which provide new links to the existing national rail network (both outbound and inbound)
- through journeys which start and finish elsewhere and are made possible by the new route
- existing journeys which transfer to the new route because it is faster or cheaper
- short trips where rail happens to provide a means to an end for non-locals such as providing a park and ride facility into a national park

Not every scheme proposal will have all these journey types and, of course, the balance between the various types will vary with local circumstances. Technical Appendix A gives a thorough explanation of the forecasting types, techniques and models and the circumstances for using them.

The forecaster will “model” likely demand for the re-opened service based on data about travel behaviour, travel choices, local conditions, key features of the rail service to be provided, competition and so on. The data may come from a variety of sources for example national statistics, actual records or observations and market research designed to elicit opinions. Simple market research can be prone to overstatement, for example in response to questions like “Would you use a new rail service?” respondents often say “Yes” because they would like to have a positive influence on the decision – they believe the proposal is a “good thing”.

More complex market research techniques can reduce the problem of bias encountered with simple techniques but are very expensive and often it is difficult to determine the right mathematical logic to convert research findings into a numerate forecast.

In the Technical Appendix we have included forecasting methods which use existing data but to produce a more reliable forecast we recommend fresh data is collected for the purpose of the study in question or where appropriate – use of recent, collected data especially for comparative ticket sales.

Data collected specifically for the purpose of forecasting demand for the reopened route will, if properly specified, have greater relevance and help to produce a more robust forecast. If primary market research is to be commissioned it should follow the Market Research Society Code of Conduct. We recommend specialist advice is taken both from market research professionals and from the forecaster to ensure the specification will provide the required data to support the forecasting model.

The Technical Appendix will help the Steering Group determine the most appropriate forecasting procedure for the stage of the project. For example a low cost, simple method to prepare ball-park estimates of likely traffic sufficient to influence the scope for developing a scheme or a more sophisticated approach for inclusion in the final business case.

We recommend that the forecasting method is tailored as closely as possible to the circumstances of the project e.g. mix of journey purposes, service features, competition and local demographics.

However, it will be apparent that demand forecasting for rail re-openings is a complex process and one which should be undertaken by a suitably qualified professional. (ATOC will be able to recommend recognised rail traffic forecasters).

The following chapter provides an overview of demand forecasting and indicates key elements to consider.

Chapter 4

Demand Forecasting

Any rail re-opening appraisal is about comparing costs and benefits. Quantifying benefits is equally as important as quantifying costs and it is usually appropriate that, roughly, equal effort is spent studying both. There are cases where the appraisal has focussed almost exclusively on costs leading to a distorted view of the proposal.

The benefits arising from the regenerated railway will be of two broad types. Firstly, there is the new line, itself, generating ticket sales. Secondly, there are the wider economic impacts such as reduced road congestion, a reduction in road accidents, journey time reductions, more reliable journeys and enhancements to local economies. The second category of benefits follows from the first, therefore, forecasting demand is critical to understanding all the benefits.

The railway industry has a well-developed process for summarising and using the research evidence into how rail demand will be generated. This takes into account various changes such as timetable improvements, better reliability, service quality improvements, changes to fares, new stations and wider economic changes. It is summarised in a document called the Passenger Demand Forecasting Handbook (PDFH). Aspects of PDFH guidance will be relevant in most types of demand forecast for rail re-opening projects. Most Train Operating Companies (TOCs) and a number of consultancy firms hold copies of this restricted circulation document. The Association of Train Operating Companies (ATOC) can provide details of consultants with access to the PDFH.

The railway industry holds a national ticket sales database called “LENNON”. Access to this database can help some of the forecasting methods – for example if one wants to understand the current demand from an existing rail station that is in a similar geographic and demographic context to one proposed for re-opening. The database includes volume and income data between pairs of stations as well as sales at particular stations. Access to the database is usually best arranged through contact with a supporting TOC. If this is not possible contact ATOC for further advice.

Thus the key elements in demand forecasting are:

- Make sure the initial assumptions are valid (e.g. fares, service frequencies, journey times, number and location of stations, competition, local and national economic factors). Judgement, common sense and transparency are critical – this not just about ‘number crunching.’ An expensive, systematic “black box” forecasting process can be fundamentally flawed if key input assumptions are wrong. Sometimes a simple forecasting tool applied with logic and transparency can be very effective. If the forecaster has a good knowledge of local geography and demographics they will be able to select good comparison stations and flows. Technical advice on demand forecasting methods is included at Appendix A.
- Validate the outputs of the forecast. If possible use more than one method (even if one is far more simplistic than the other) and then compare the results and seek to explain reasons for differences.
- Try to develop a good working relationship with a supportive TOC. They can supply invaluable guidance and critical data.

Chapter 5 Relationship with Network Rail

There are three issues which will cause Network Rail (NR), to be involved in the reopening proposal:

Ownership and status:

- The Route is owned by NR and "mothballed" – i.e. the railway is intact and can be made operational by NR. It is still part of the NR national network and will appear in NR's Network Management Statement (NMS).
- The route is open and operational for freight traffic or diversionary purposes only. Will be owned by NR or another infrastructure owner/operator. Various aspects may not be suitable for passenger operations: e.g. signalling.
- The Route is owned by NR but is closed – i.e. "non-operational". It will not appear in the NMS and ownership will have been transferred to the British Rail Residual Property Board (BRRPB).
- The Route has been sold, or is in the process of being sold, probably piecemeal, to various bodies, public and private.

Interface with Network Rail infrastructure:

- A proposed connection to NR railway network will have implications on track, signalling and structures. Alterations and additions which may be required will be regarded as Network Enhancement and would require approval by the Strategic Rail Authority (SRA).
- NR would be responsible for carrying out any alterations or additions to their own infrastructure up to an agreed boundary with the reopened route.

Train Operation:

- The effect of running the proposer's trains on the NR network would impact on the existing rail timetable and NR's Railway Safety Case. A Track Access Agreement would be required.

Under its Licence Conditions NR is obliged to provide advice in respect of railways and facilities on its own land. The NR "Dependent Person's Code of Practice" applies to such high level discussions with organisations which have not yet entered into any formal or contractual relationship with NR.

The Credible Proposal would be the starting point for such a high level discussion on interface issues. These are primarily the physical infrastructure connections (track, signalling and structures), the impact of proposed additional trains on the existing train service timetable and the requirements on the proposer of the safety case regime.

The framework exists for initial dialogue to enable a proposer to develop the credible case. Contact should be made through NR's External Corporate Affairs organisation and

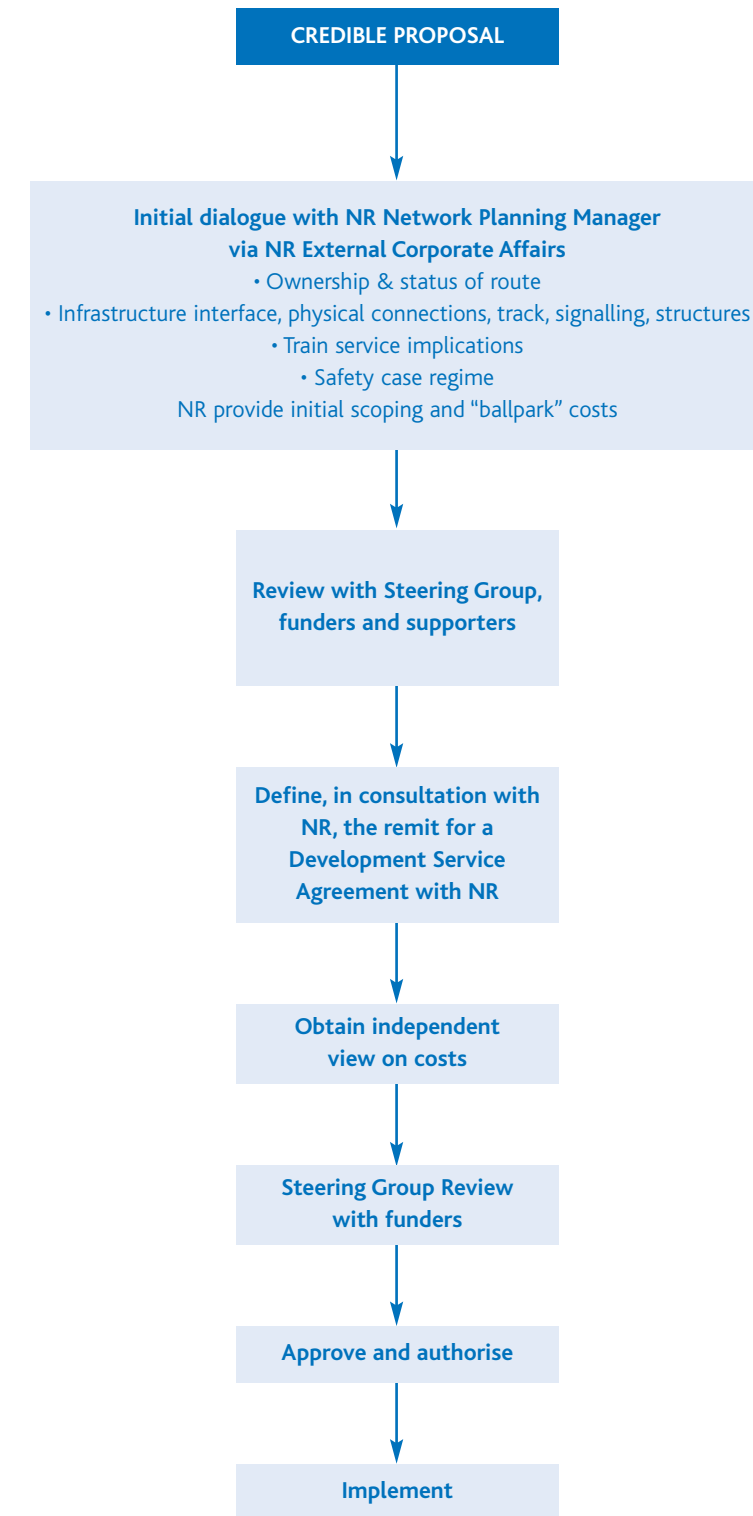
Network Planning Managers in the Regions (subject to the current reorganisation) who are aware of NR's local strategic plans and would be in a position to discuss routeing strategy and other matters affecting train operations. As an initial step, NR would give very general scoping advice free of charge including ballpark costing not requiring investigative or analytical work.

For anything more significant, Network Rail would wish to enter into a Development Service Agreement (DSA), with the proposer as NR's customer, to enable them to take the matter forward as required by the proposer. The promoter will be in a position to take this step once the Credible Proposal has been finalised. The DSA is a priced contract with NR, specified by the customer, through which NR will provide consultancy advice on the interface issues between the "new" railway and NR's network. The proposer would project manage the Agreement and would be in control. The emphasis is on the importance of the customer being an 'informed buyer'. The advice from NR could include an indication of the work-stream/timescales/costs for NR's infrastructure works and the requirements of any Track Access Agreement. The level of detail of NR's input to the DSA would be specified, in consultation with NR, by the customer/proposer.

An understanding of NR's "Guidance on Railway Investment Projects" (GRIP) will assist the proposer to be an informed buyer of NR's service. It is recommended also that an independent view is obtained on the infrastructure facilities and associated costs proposed by NR. (See also the paragraph "Cost of Works" in Chapter 6.)

The Chart which follows illustrates the processes and steps involved in managing the issues with Network Rail.

Relationship with Network Rail



NOTE – Network Rail publish Guidance on Railway Investment Projects (GRIP)

Chapter 6 Technical Feasibility

Introduction

This Chapter looks at the areas to be considered in respect of the physical reinstatement of an operational railway, starting with the status of the existing route, engineering works required, responsibilities which the promoter will be required to carry, standards and sources of support and advice.

Ownership and Legal Status of the Existing Infrastructure

Irrespective of the condition of the existing infrastructure, it will be owned by someone who will have the relevant responsibilities.

There will be one of five possibilities, which need to be established as quickly as possible. The possibilities are:

Mothballed:

- The railway is intact but not in use
- It can readily be made operational with some notice
- The legal owner is Network Rail (NR) who retains all legal responsibilities
- This status is known as “Mothballed” and will appear in NRs Network Management Statement (NMS)

Closed but not sold:

- The line has been closed and has a “non-operational” status
- It will have been removed from the NMS
- The legal owner is the British Rail Residual Property Board (BRRPB), who carries the legal responsibilities
- BRRPB may be preparing to dispose

Closed and sold:

- Privately owned, e.g. owned entirely by a local authority or has been sold off piecemeal
- There may be some sections still not sold
- BRRPB will have records of the first new owner

Open as a Freight-Only route:

- Will be owned by NR or another infrastructure owner/operator
- Unlikely to be at a standard suitable for use by passenger trains – e.g. signalling, line speeds, track condition, maintenance requirements
- Essential that the steps outlined in this Toolkit are followed in order to establish those which are not required

Other – the closed railway may have been an industrial or tourist railway and has not been part of the national rail network. It is likely that categories similar to the above will apply but the case will have to be treated on its merits. In the absence of immediate knowledge of the owner an initial approach should be made to the local authority.

To Buy or Lease

Having established the ownership and status, it will be necessary to determine whether the strategy for inclusion in the business case will be to buy or lease. In the end this will be a commercial judgement, depending on the values, availability of funds and the views and policy of the existing owner. The promoter’s ability or willingness to discharge any associated statutory responsibilities will impact on the decision.

Buying – the following points should be borne in mind when considering purchase:

- The BRRPB retains responsibility for highway bridges and other statutory obligations - the buyer would have to accept those obligations and demonstrate the competence to meet them
- Identify wayleaves – there will be a rental to receive
- Access rights (occupation/accommodation crossings) across the route will have to be retained and maintained in safe condition for the users and the railway
- Access to adjacent properties
- Parts of the route may be totally or partially obstructed by buildings or other developments. Options in this case include – buy back/terminate the lease/compulsory purchase/alternative alignment
- There may be encroachments – within the boundary but not as far as the line and may restrict clearances to the Line. Their resolution will incur costs which may or may not be recoverable
- Assess the physical state of the infrastructure. It is very important to walk the whole route. This can be done either by the promoter or his competent representative or by commissioning a report prepared by a professional engineer
- Challenge the “scrap” value of any railway equipment included in the sale price – find out if it is the in-situ or recovered value. There may be recovery costs involved in order to realise the value of scrap assets and this can result in major differences in quoted values.
- Be prepared to challenge the value of the land – a railway-wide strip of land may have limited use to a developer and railway land will also be categorised as “contaminated” which will reduce its value

- Identify any liabilities – e.g. listed buildings – the purchaser will be taking on those responsibilities with their associated costs, which will need to be reflected in the purchase price.

Leasing – If the line is mothballed, Network Rail may prefer to lease rather than sell. However this may depend on the ultimate future of the project, for example if the line is to revert to NR when the reopening is complete.

The line may have previously been sold by British Rail (BR) or Railtrack to the Local Authority (County or Unitary Council). Historically, it was a requirement on BR to give the County Council the first option to purchase a closed route, which may therefore still be wholly in the council ownership. In this case, the permanent way and signalling equipment will probably have been recovered. Some underbridges (bridges which carry the railway) will have also been removed to minimise maintenance liabilities.

If the line is still with NR it may be preferable to lease from them rather than incur the additional costs of a transfer to the Local Authority. The exception here would be if the intention were for the Local Authority to be the infrastructure owner.

Summary – The options and considerations outlined above should be recognised in the Core Proposition so that they can be taken forward with supporting information through the Outline Business Case to the Credible Proposal.

Infrastructure Engineering Work for Reinstatement of the Line

An initial inspection of the route will have been carried out (by the promoter or a retained professional) to identify the assets in support of the buying or leasing decision process and for input to the Outline Business Case.

Once the Credible Proposal stage has been reached, a full engineering assessment of the works necessary to reopen the line is required. This will involve a full survey of the line to identify its completeness and condition, reference to records and possibly local knowledge. Costs and designs will be required for replacement structures and any reinstatement of damaged or unstable earthworks. Costs and designs will also be required for any new alignments to take the line around obstructions. Close liaison will be needed with the highways authority to ensure that allowance is made for works to accommodate highways at level crossings and bridges. Similarly NR, or other owner should be consulted if the line crosses an operational railway.

The outputs from the engineering survey and proposed works should be in a form which will enable the ultimate preparation of a Transport and Works Order (see chapter 7, Planning Procedures).

It is recommended that this work is carried out by a competent firm of consulting engineers, if the Steering Group does not otherwise have access to suitably qualified engineers.

Appendix B provides a checklist of issues to look for and resolve. The list is not fully comprehensive but provides an indication of more common issues.

Environmental Impact

Many re-opening projects will require an Environmental Impact Assessment (EIA) under EIA legislation. An EIA examines the effect a development might have on the environment. If an EIA is required a scoping exercise should be undertaken early in the planning stages of the project. The aim of the scoping exercise is to enable the project to be designed to minimise or avoid negative environmental impacts and provide an opportunity to include positive environmental enhancements in the project design.

The Environment Agency publishes detailed guidance on the scoping of projects and recommends project promoters take independent legal advice on compliance with EIA legislation.

Stations

The original station locations may not be appropriate to today’s transport needs. Market assessment will help to determine optimum station location. (Appendix B includes some areas for consideration) Consult the Local Authority in respect of Regional Spatial Strategy and the Local Transport Framework for guidance and support. Housing and industrial development and changes to the road layout could also affect station location. The Local Authority and the Highways Authority will need to be involved in respect of new traffic generated by the station and the siting of the station approach road. Station design should allow for safe pedestrian access, cycle storage, drop-off area, car parking and space for a bus stop. Facilities for the disabled need to be allowed for in accordance with the Disability Discrimination Act 1995.

Facilities

Depending on the scale of the proposed railway allowance should be made for facilities such as:

- Staff accommodation
- Secure stores accommodation – domestic, permanent way materials, building materials
- Train maintenance – cleaning, fuelling, light servicing
- Waste disposal
- Plant and equipment, stores and servicing

Maintenance of the Line

The Infrastructure Owner and Operator is responsible for maintaining the line in a safe condition for the passage of trains. The maintenance work may be let to a competent contractor but the responsibility itself remains with the Infrastructure Owner & Operator. The arrangements for managing this must be described in the Railway Safety Case (RSC), which must also demonstrate how the competence of the contractor is assured and the maintenance performance is monitored. Equally the work can be done “in-house” with appropriate assurances of competence in the RSC.

In order to input maintenance costs to the Outline Business Case a typical cost per mile may be used, based on the type of track material and the anticipated train service pattern, axle load and speed. An experienced Permanent Way Engineer will be able to give advice. The equivalent advice for signalling equipment could be available from a Signal Engineer.

The Final Business Case will require more robust costs for maintenance work and to this end it is recommended that an annual infrastructure inspection and maintenance schedule is drawn up from which can be deduced manpower, materials, plant and therefore costs. At this stage an allowance in the costs must be made for anticipated renewals – of track, structures and signalling equipment – which will arise over the life of the Railway. Again, advice from experienced railway engineers will be appropriate.

Responsibilities of the Infrastructure Owner in Respect of the Infrastructure

We have already outlined above the responsibility to have a maintenance regime in place to ensure the safe running of trains.

In addition there will be other key responsibilities with financial liabilities, including but not limited to:

- Listed buildings. (The local authority can advise)
- Ensuring safe access across the line at public crossings including the warning notices and any signalling protection

- Compliance with Highway Authority conditions at road overbridges and public road level crossings
- Drainage outfalls into water courses
- Security of the line to prevent unauthorised access by the public and livestock
- Safety of infrastructure maintenance staff
- Security of lineside materials against vandalism
- Security of Sites of Special Scientific Interest

Standards

The standards applicable to the construction, maintenance and operation of railways (system safety) on Network Rail controlled infrastructure are set out in Railway Group Standards (RGS) - RGS are published by the Rail Safety and Standards Board (RSSB).

The Railway Group comprises Network Rail, RSSB and the Train and Station Operators who hold Railway Safety Cases for operation on or related to infrastructure controlled by Network Rail.

The promoters of a reopening should recognise that RGS will be applicable to their activities. It should be noted that Network Rail produces its own Company standards, codes of practice and guidance notes all of which describe how NR will apply the requirements of RGS to its own railway.

In order to access these, standards it is recommended that the promoter subscribes to RSSB in respect of RGS and to Technical Indexes Ltd., the publishers of Network Rail Company Standards.

In theory, on that part of their railway which is separate from Network Rail, or if it is totally isolated from the NR network, the promoter could devise his/her own standards. However, this would entail considerable work from first principles, at considerable cost, and would require scrutiny and approval of HMRI. This approach is not recommended.

In circumstances where RGS are seen to be excessive for the operational and engineering requirements of the reopened railway, there is a mechanism of Deviations from Railway Group Standards whereby derogations, with appropriate justification can be sought and approved. It should be noted that NR and the SRA, supported by ACoRP are currently reviewing standards applicable to Community Railways. These have been loosely defined in the SRA's Community Rail Development consultation paper of February 2004. This definition, (max speed 75mph, low frequency, single train operator, local or rural), has not been confirmed but the promoter is advised to check the status of this review.

RGS do not apply to Light Rapid Transit lines.

Costs of the Works

Clearly there is a need to ensure that costs are reliable and realistic. Recreating a disused railway is likely to be expensive. It is appropriate to seek a range of opinions. Network Rail costs, for example, may be related to carrying out work in possessions on the operational railway as opposed to the situation on the closed railway. Seek a contractor's opinion. A railway is a “highway” to formation level so a competent general civil engineering contractor would be appropriate. Trackwork and signalling is specialist and there are a number of suitable contractors to give opinions. Seek advice also from former railway industry engineers.

Sources of Support, Information and Advice

Recommendations are:

- British Rail Residual Property Board.
- BRB (Residuary) Ltd. Whittles House, 14 Pentonville Road, London N1 9RP. Telephone 020 7904 5100
- Network Rail
- Network Rail Infrastructure Ltd, 40 Melton Street, London. NW1 2EE. Telephone 020 7557 8000
- Local External Corporate Affairs Manager and Network Planning Manager (Dependent Persons Code of Practice)
- NR HQ – Development Service Agreement
- Rail Safety and Standards Board
- Enquiry Desk, RSSB., Floor 4, Evergreen House, 160 Euston Road, London NW1 2DX. Telephone 020 7904 7518
- Her Majesty's Railway Inspectorate
- Rose Court, 2 Southwark Bridge, London SE1 9HS. Telephone 020 7717 653
- Former British Rail /RailTrack/Network Rail Engineers
- County Council/Unitary Authority
- District Council
- Parish/Town Council
- Environment Agency
- Highways Agency
- Neighbouring landowners and farmers
- Contractors
 - General civil engineering
 - Railway specific engineering
- Professional institutions
 - Institution of Civil Engineers
 - Institution of Railway Signal Engineers
 - The Permanent Way Institution
 - The Railway Civil Engineers Association
 - Institute of Mechanical and Electrical Engineers
- Other Rail Reopening promoters
- Heritage & private railways
- Technical Indexes Ltd., Willoughby Road, Bracknell, RG12 8DW (for NR Company Standards)
- “Keeping Track”, Keeping Track Publications Ltd., 17-19 West Street, Dunstable, Beds. LU6 15L. (Keeping Track is a directory of railway organisations, including contractors and consultants)

Chapter 7 Planning Procedures

Introduction

This chapter looks at the overall planning hierarchy and the input which the promoter of a railway reopening needs to consider. Reference is also made to planning approval for new structures, Transport & Works Act (T&WA) and the need for Her Majesty's Railway Inspectorate (HMRI) approval to layouts, signalling and train operations.

There is a need to be seen to contribute to and be consistent with transport strategy aspirations. This may not necessarily be the case with a reopening for purely heritage purposes, although even there, an element of public transport may be demonstrable.

National Planning Strategy

The hierarchy is described in "Guidance on Full Local Transport Plans" published by the Department for Environment, Transport and the Regions (now the Department for Transport) and is in three levels :

- National Policy – "New Deal for Transport"
- Regional Policy based on
 - Regional Transport Strategy
 - Regional Planning Guidance
 - Regional Spatial Strategy
- Local Policy – Local Transport Plan

Local Transport Plans (LTP)

The LTPs are developed by the County and Unitary Councils and set out their strategies and plans for transport. They reflect national and regional aspirations and are the bid for government funding.

The LTP is a key stage for a promoter of a reopening. The relevant issues addressed in the LTPs are shown below and a promoter is recommended to consider these in submissions and consultations:

Objectives:

- National objectives 'New Approach to Appraisal' (NATA)
 - Protect & enhance the **environment**
 - Improve **safety**
 - Contribute to **efficient economy**
 - Promote **accessibility** to everyday facilities
 - Provide **integration** of all forms of transport
- Local objectives
- Quantification and timescale

Issues:

- Existing travel patterns
- Level of service currently offered

Current problems:

- Road congestion
- Adequacy or otherwise of public transport
- Poor interchange facilities

- Poor access to everyday services – e.g. employment, shops, schools, health services. The next round of LTPs in 2005 will include an Accessibility Plan
- Adverse impact on the environment of high road traffic levels

Identify opportunities to improve transport services by addressing the above.

Strategy – the LTP is required to demonstrate:

- How the various programmes and policies interrelate and contribute to the objectives
- A prioritisation based on potential value for money in the event that not all funding is available
- That the proposals offer packages of integrated transport arrangements

Rail Investment Projects

The LTP is specifically required to take account of the potential for heavy rail in integrated transport studies. LTP guidance also indicates that the Local Authority will act as a facilitator with the railway industry to progress schemes **which are included in the LTP**. Experience of successful re-openings shows this to be the case.

The work being done by a project Steering Group will therefore make a positive contribution to the LA's development of the LTP.

There are four other elements in the LTP with particular relevance to re-openings:

- **Rural Transport:** The LTP is to show support for Community-based Rural Public Transport.
- **Sustainable Distribution:** The example is given that retention or re-opening of a heavy rail route could contribute to increasing freight on rail.
- **Action on Climate Change, Air Quality and Noise:** The LTP is to further demonstrate the potential to encourage modal shift to public transport for passenger travel and the use of rail for freight.
- **Protection of Routes:** The section in the LTP on Integration with Development Plans makes specific reference to protecting sites and routes when developing infrastructure projects. This is particularly useful to a promoter in seeking to protect the line of the closed route.

Reference should also be made to "Planning Policy Guidance Note 13 on Transport" (PPG 13) which sets out the Government's policy on integration of land use planning and transport policy.

Planning Approvals

Alterations to existing, or building new, structures, car parks and signs will be subject to approval by the local District Council planning department in just the same way as any other development or change of use. Reference should be made to the appropriate council for their conditions; particularly the timescales and documents which will have to be submitted.

If the building is a "Listed Building" there may be further conditions attached to any alterations. Again early reference to the local planning authority for advice is recommended.

In the case of a "mothballed" railway, planning consent will not be needed for restoration of railway operations but will be required for facilities such as car parks and signage.

TRANSPORT AND WORKS ACT

Transport and Works Act Powers are likely to be required where a railway infrastructure change is proposed which extends beyond current railway boundaries. This will be the case for a wholly closed route and for changes to a mothballed route which lies outside the boundaries. It may also apply to alterations to Network Rail's railway at the interface with the re-opened route.

Consideration of the need for statutory powers is a fundamental issue in the evaluation of the scheme. The cost design and timescale implications can be substantial.

Powers are sought under the TWA procedure in circumstances where the railway works which are to be constructed require:

- Public rights, such as right of way over a highway, to be affected or extinguished
- Compulsory purchase of land or land rights, including instances where the equipment of statutory undertakings would be affected

In addition it is possible to use the mechanism of a TWA Order to obtain the Secretary of State for Transport's determination under other statutory provisions, such as:

- Planning permission for the scheme development, pursuant to the Town and Country Planning Act 1990
- Alteration to or demolition of listed buildings pursuant to the Planning (Listed Buildings and Conservation Areas) Act 1990

It should also be noted that where railway works are to take place within the boundaries of land owned entirely by Network Rail (NR), TWA powers may not be required. Use of "Permitted Development Rights" has been made in such circumstances, although the decision as to whether such an approach is appropriate must only be made in consultation with the company's (NR's) legal advisors. This would be relevant in the case of a mothballed line.

It is worth making reference to closures. This could arise for example where a re-opening makes the third side of a railway "triangle" redundant.

- There are two categories of railway closures – minor and full. The statutory basis for these powers derives from the Railways Act 1993 and the Transport Act 2000. Issues of Minor Closure are determined by the Strategic Rail Authority (SRA), and include any closure of the network which has no material or permanent impact on passengers using the network. Any closure that is not determined to be a Minor Closure by the SRA is a Full Closure
- There is a separate process that covers those parts of the network used only for freight services

It is recommended that the services of a Parliamentary Agent are retained unless the Steering Group has access to the appropriate professional expertise in house.

HER MAJESTY'S RAILWAY INSPECTORATE APPROVAL

HMRI will require to formally approve the "new" railway before it is opened to the public. That approval will cover for example:

- Track layout and signalling plans and arrangements. The Inspector will wish to look at the railway on site and possibly ask for demonstrations of certain movements and safety arrangements
- The arrangements for passengers at stations
- Bridge parapet heights
- Arrangements at level crossings

It is important to establish a close working relationship with the local HMRI office throughout the development of the project, to ensure that their requirements can be discussed and incorporated. Timescales may be critical towards the reopening date and it should be noted that the HMRI require six weeks notification of the Completion of Works.

Reference has been made in the Chapter 2 "The Overall Approach" to the need for a Railway Safety Case (RSC). The liaison established with the local HMRI office will provide helpful advice in preparing that Case.

Chapter 8

Making the Case

Why do we need to make a case? This may seem an obvious question but it is worth taking time to consider as it will help to ensure you present the appropriate facts to the relevant audiences.

Even if you believe your project stands on its own feet you will need to arrange start-up funding at some stage. More typically you will be seeking support, including financial support to take your scheme forward. A professionally compiled business case will be needed and will be an early funding requirement. For the remainder of this chapter we have assumed that your project will require an element of public funding, be it from local government, central government, regional development agency or the EU. Our guidance should ensure your case follows principles they will recognise. (Information on funding can be found in Chapter 12)

It is also important to remember that making the case is not a one-off exercise but an ongoing process. At a very early stage you will need to compile an outline business case with broad assumptions and high level forecasts. Over time this will be refined and developed as more information is gathered and uncertainties reduced. An overview of the Business Case Process is provided in the Flow Chart on page 10.

DEVELOPING A BUSINESS CASE

Context

The business case required to support your rail re-opening project may not be quite what you expect. When applied to transport projects the definition of a business case is much wider than in a conventional enterprise.

All the elements of a conventional business plan, forecasts of demand, estimates of construction costs and ongoing operating costs will need to be included. However, the business case for a rail project considers **all** the benefits and costs associated with the scheme.

This means that wider social and economic benefits, or costs, can be counted against the scheme and will be included when decision makers consider whether the project is justified.

Transport scheme impacts to be included in assessments are set out in the 1998 Government White Paper "A New Deal for Transport: Better for Everyone". The White Paper introduced the **New Approach to Appraisal (NATA)**. The approach collects a wide range of scheme impacts to assess against five objectives:

- Environment
- Safety
- Economy
- Accessibility; and
- Integration.

NATA provides a framework within which rail schemes can be judged against other transport proposals with an increased degree of equality. Take full advantage of the scope NATA offers to capture wider scheme benefits in your business case and the re-opening will stand a significantly greater chance of being achieved. Later sections of this chapter describe how the business case can reflect the five NATA objectives.

Any project which calls on the use of public funds must also undergo assessment compliant with H.M. Treasury guidance published in "The Green Book, Appraisal and Evaluation in Central Government" (January 2003). Its aim is to ensure that a project is adopted only if the following questions have been answered:

- Are there better ways to achieve this objective?
- Are there better uses for these resources?

The Green Book sets out the techniques and issues to be considered in an appraisal. Its guidance should be followed during the business case development.

The Strategic Rail Authority has encompassed both the NATA principles and Green Book guidance in its Appraisal Criteria, published in 2003, describing appraisal methodology and business case development for rail schemes which fall within its remit.

Preparation

The case will only be as good as the information used in its development. To ensure you have access to relevant information when you need it start planning the content of the business case at the earliest opportunity. Build up a list of information requirements and begin to collect data.

The core proposition will have identified the objectives you are seeking to achieve through the re-opening project. These objectives will help determine some of the information needs. For example if your project is to serve a transport corridor with parallel road routes you will need information on traffic levels (freight and private car) and passenger

volumes on bus or coach services along the corridor. Such information may already be available but if it is not the relevant Local Authority/ies could begin to collect the data as part of the project development.

Projects which have social or economic objectives alongside their transport objectives will have additional information requirements. For example a re-opening which will support the tourist industry by bringing visitors into an area will have information needs such as visitor spend levels and home locations.

Conclusions from the initial market assessment and early reviews of route condition will lead to the next strand of work, deciding on the options to be appraised in the business case.

It is likely that there will be a range of options for your project based on various permutations of key features. These will include infrastructure specification e.g. single or double track, line speed, signalling; number and location of stations; service frequency; train quality and interchange facilities.

It is important to keep a number of options open as each feature has the potential to make a significant difference to the business case. As time goes on options may be eliminated, or added, and your final business case should appraise the best available options.

Once the options have been defined you can begin to gather specific information related to each option.

Levels of detail and degree of accuracy of the information you collect will change as the project progresses. In the early stages, when information is being collected for the outline business case, the estimates may be quite simple and unsophisticated. As development work progresses more facts will emerge reducing the levels of uncertainty and allowing for more accurate estimates.

BUSINESS CASE ELEMENTS

The business case should begin with a clear statement of the **project objectives**, how they relate to national, regional and local development and transport plans or policies. The objectives should be expressed in terms of the outcomes or outputs expected to be achieved. Start with a simple narrative and expand in the more detailed sections of the case.

Describe the **options** included in the assessment, the projected **time scales** and the **appraisal period** over which

the project is being assessed. When considering time scales you should take into account the development phase i.e. consultation, detailed feasibility studies, planning processes, Transport and Works Order processes; construction phase; implementation and operational phases.

The **economic appraisal** will form the major element of the business case and is where the costs and benefits of each option are calculated and compared.

Costs will be incurred from the very earliest stages of the project for example fees for engineering assessments, professional advice or the costs of stakeholder consultation. Such items fall into the category of **development costs** and will appear in the outline and early revisions of the business case. However, once these costs have been incurred or substantially committed they are "sunk costs" and should be removed from the business case.

Capital costs include the costs of construction or restoration of the route infrastructure, purchase of rolling stock and purchase of plant and equipment. In the outline business case estimates of these costs might be based on comparisons with similar projects, for example, and will not be very accurate. As the project progresses estimates will be refined and based on more specific information such as supplier quotes and detailed feasibility studies.

A high proportion of the capital costs will be incurred before transport services begin to operate although, over a thirty year appraisal period, assets will need to be renewed and the capital cost of renewal included in the scheme.

Capital items which have an asset life beyond the appraisal period will have a **residual value**. Any residual asset values can be counted as scheme benefits.

Operating costs are the ongoing day to day expenses of running the services proposed in your scheme. They include staff costs for train crew, stations, operating, administration, infrastructure and rolling stock maintenance; fuel; track access costs (if Network Rail owns the track this will replace items such as signalling operating staff and infrastructure maintenance); asset lease charges, which might replace capital purchase of rolling stock. All costs (supplied or calculated) should be tested to ensure that they are relevant to the nature of the core business proposition.

It is likely that there will be some one-off costs prior to introduction of proposed services. Route safety inspections and staff training are items which could fall into this category.

In general **scheme benefits** will accrue once transport services begin to operate. An exception to this would be if, for example, complementary trading (e.g. shops on stations, car park charges) commences prior to services being introduced.

The **demand** for travel satisfied by the re-opened railway is the primary benefit to consider. It is important that forecasts of demand are soundly based as they are used as the foundation for forecasting other benefits covered later in this chapter. The principles of rail passenger demand forecasting are described in Chapter 4. Technical Appendix A provides a fuller explanation of the various techniques that can be employed to create forecasts.

We suggest that simple forecasting techniques are used to evaluate options in the outline business case and early iterations. It can be very costly to undertake a sophisticated demand forecast and it may be inappropriate to use complex techniques at this stage when there will be high levels of uncertainty within the options being assessed. More sophisticated techniques should be employed at the later stages and for inclusion in the final business case. If possible validate the forecasts by using more than one technique.

Whichever forecasting technique is used it will provide information on the expected volume of passenger demand measured in trips and passenger kilometres or miles. The volume forecasts are converted into financial values for the economic case by reference to fares data.

The resulting passenger revenue forecast represents the benefits users of the new service gain and are willing to pay for; this is known as **"priced user benefits"**.

Your project may also provide **"unpriced user benefits"** these are dealt with in more detail in the section below describing benefits against the economy objective.

NATA allows for a range of wider benefits to be included in the case. They relate to transport impacts and generally derive from the reduction in road vehicle traffic made possible by the improvement to rail services. Because of this important relationship between reduction in road traffic and wider benefits it is vital that demand forecasts estimate the proportion of demand transferred from road.

Many of the wider benefits can be quantified in monetary terms but for others it may only be possible to give qualitative measures. It is important to include all benefits gained by the scheme as decision makers will take qualitative information into account when reviewing whether the project is justified. It is common practice for qualitative assessments

to be measured on a seven point scale (slight, moderate or large beneficial; neutral; slight, moderate or large adverse) with a supporting narrative.

The following paragraphs provide outline guidance on the type of benefits and how they can be measured. They are grouped together in relation to the relevant NATA objective. The advice is accurate at the time of publication but research into the benefits delivered by rail is ongoing and readers are advised to check for updated guidance with HM Treasury, Department for Transport and the Strategic Rail Authority. It should be noted that many of the wider benefits considered in the business case will also be reviewed in the Environmental Impact Assessment (EIA). It is worthwhile using the information collected for the EIA to inform the business case development.

Environment

The **environmental impacts** are further subdivided into the following categories:

- Noise and vibration
- Local air quality
- Global atmospheric emissions
- Land and water pollution
- Landscape
- Biodiversity
- Heritage.

A re-opened railway will increase the levels of **noise and vibration** for properties adjacent to the line but will reduce levels of road traffic noise relative to the passenger demand or freight movements which have transferred from road. Research³ has found that rail has lower noise and vibration impacts per passenger mile than road and monetary values have been calculated for each freight tonne mile or passenger mile diverted from road. Other measures might include the number of residential properties affected or specific noise level (decibel) calculations for particular properties.

When measured in units per freight tonne or passenger mile, rail has a lower impact on air pollution than road transport. Research⁴ studies have calculated monetary values for **local air quality** benefits from each passenger or tonne mile diverted from road. There are also comparative rail and road measures for the amounts of different pollutants released into the air by each mode.

The release of carbon dioxide and other greenhouse gasses into the atmosphere and their impact on climate change is assessed as **global atmospheric emissions**. Rail transport, on average, releases less carbon dioxide than road transport and monetary values have been derived for passenger or tonne

miles diverted from road. Forecasts of the change in volumes of greenhouse gasses released may also be included in the assessment.

Both local air pollutants and greenhouse gasses will vary with the age and type of rolling stock and the benefits will vary with the expected train load factors.

Transport also has the potential to cause other pollution to land and water. Re-opening proposals will need to pay particular attention to ensuring risks of fuel or chemical spills are managed. The impact on **land and water pollution** is likely to be included in the business case as a qualitative measure.

The impact on the **landscape** is also likely to be measured qualitatively and may have more impact in the case of a re-opening than other rail projects. Landscape impacts will have greater importance for routes which run through sensitive areas such as national parks.

Information from the EIA will be helpful in assessing the impact on **biodiversity** along the route. The extent to which important ecological features, habitats or species are affected will need to be included in the case using qualitative measures.

The final environmental objective is that of **heritage** and is concerned with historic buildings and structures in the environment. Re-opening projects have the potential to create a positive impact by restoring railway buildings and structures to their original use.

Safety

Within the **safety** objective the benefits of rail as a safer mode of travel are likely to be the largest. These benefits are assessed in terms of the net reduction in **accidents** resulting from road traffic transferring to rail. The Department for Transport publishes accident rates and values for the benefits to society from prevention of accidents. Separate values are provided by degree of severity of the accident.

Personal security is the other safety objective to consider in the case. Much of the benefit will be captured in the demand forecast as personal security is a factor influencing individual's choice of travel mode. However, it is difficult to separate out this influence on the overall demand particularly for rail re-openings and the business case should include a qualitative assessment of the impact on personal security. For example an option which does not include security cameras on stations may have a more negative assessment than one which includes cameras.

Economy

In transport scheme appraisal the **economy** objective is principally concerned with transport economic efficiency, that is the direct economic impact of the transport scheme. We will describe these benefits first; the treatment of the wider economic benefits of the re-opening will be discussed later.

Passengers are the primary beneficiaries of a rail re-opening and, as we mentioned above, the benefit they gain from the service is captured, to a large extent, in the fares paid. In some circumstances the fare may not represent the full value of the service to the passenger and it may be possible to calculate the value of this "consumer surplus". For example if fares are regulated and do not reflect market prices an adjustment could be made to allow for this; or if the re-opening offers significant journey time savings compared with the same journey by road a value could be calculated using values of time published by the Department for Transport (DfT) or Association of Train Operating Companies (ATOC) adjusted to take account of the fare paid. Care should be taken to avoid double counting when calculating such unpriced user benefits.

Passengers who switch from private car or rail freight switching from road haulage to the new rail service will also benefit from savings in **vehicle operating costs**. This benefit is related to the vehicle miles / kilometres diverted from road and values are published by the DfT. Passengers switching from private car may also save **parking costs** particularly if the route serves congested centres.

A re-opening scheme will also provide **road user benefits** by reducing **congestion** and lowering **road maintenance** requirements particularly if goods traffic is removed from the road network. The value of these benefits will depend on the volume of vehicle miles / kilometres diverted and the levels of congestion on the affected roads. Appraisers should refer to both DfT and SRA guidance on valuing these benefits.

There may be some negative impacts on road users which will also need to be valued for example traffic delays during construction or ongoing traffic delays at re-opened level crossings which would be assessed using published values of time.

Re-opening a disused railway can create **wider economic impacts** these are indirect impacts such as enhancing land values, encouraging tourism, supporting or creating employment. The impacts can be complex in nature and difficult to determine for example they may have a positive effect in one area and an opposite negative effect in another. If your proposal affects a regeneration area you will need to

³ Studies include – The Royal Commission on Environmental Pollution – 18th and 20th reports (1994, 1997) Transport and the Environment, HMSO; European Conference of Ministers of Transport (ECMT – 1998) Efficient Transport for Europe: Policies for Internalisation of External Costs, OECD; and others.

⁴ Studies include – The Royal Commission on Environmental Pollution – 18th and 20th reports (1994, 1997) Transport and the Environment, HMSO; European Conference of Ministers of Transport (ECMT – 1998) Efficient Transport for Europe: Policies for Internalisation of External Costs, OECD; and others

prepare an Economic Impact Report to support your transport appraisal. DfT provides guidance on preparing an Economic Impact Report. If the reopening does not affect a regeneration area wider economic benefits may not be accepted for inclusion in the transport appraisal. However, funding bodies seeking to support economic objectives through the reopening will have an interest in wider economic impacts regardless of the regeneration status and therefore they should be included within the business case.

Accessibility

Most reopening projects will offer benefits by **reducing barriers to travel**. These benefits, which are within the **accessibility** objective, may have a greater impact on certain sections of the community for example rural communities, the disabled or those without access to a car and will support social inclusion for these groups. Although it may not be possible to place a monetary value on these benefits they can be given a quantitative assessment for example the population within 800 metres of a station on the route.

Severance is another accessibility impact and has particular relevance to re-openings where the track has been removed and reinstatement may for example cut-off access to local services for communities at the “wrong” side of the tracks. The quantitative impact may be the number of households or size of population affected by the severance.

Integration

Integration is the final objective and includes both transport integration and integration between transport policy and other policies. The business case should include a description of how the project achieves policy on integration. For example, as well as satisfying a transport objective the reopening may also support development in areas targeted in Regional Plans or improve access to health or education services in accordance with government policy.

Transport integration may include opportunities which the reopening provides for bus-rail, cycle-rail or car-rail interchange. The business case should include a qualitative assessment of these benefits. It may also be possible to quantify the benefit for example in terms of the forecast number of interchanging passengers or the number of interchange facilities to be provided (bus stops, cycle or car parking spaces).

Costs and Benefits

Costs and benefits that have been quantified with a monetary value can be compared and will provide an indicator of the strength of the case. To ensure that values can be compared on a consistent basis they should be expressed at a constant price base. Calculating the present

value (PV) of costs and benefits will ensure they are comparable regardless of the timing throughout the appraisal period. The **net present value** (NPV) is the difference between the present value of costs and benefits. A positive net present value indicates a strong business case with benefits that exceed costs, the higher the NPV the stronger the case. The comparison of costs and benefits can also be expressed as a **ratio**, PV of benefits to PV of costs. A ratio of 1 or more indicates benefits in excess of costs.

The **financial case** considers only those costs and benefits that represent revenue and cost streams to the project (for example income from passengers, expenditure on construction and day to day operations). The gap between these two streams represents the project funding requirement which is the start point for the **funding plan** element of the business case. Proposals for closing the funding gap (e.g. grants, loans, revenue support subsidy) will complete the funding plan. However, when compiling the plan take care to research whether proposed funding agencies have particular requirements, for example there may be a requirement to achieve certain benefit / cost ratios or to raise match funding. Ensure achievement of such conditions is included in the funding plan.

Although it may not appear in full until the later iterations of the business case a **delivery plan** should be prepared. This will describe how the project will be implemented including such things as planning processes; construction method and time scales; procurement of rolling stock; staff training and so on. The Project Plan prepared by the Steering Group may contain most or all of the information required for the delivery plan.

Business Case Presentation

How the business case is presented depends on the audience and the stage reached. There may be many versions between outline and final business case and the appropriate presentation will require judgement. If the case is being presented to transport authorities there is a recognised format for transport appraisals and specific guidance is available from both SRA and DfT. The various agencies you might approach for funding may also have a standard format for submissions which you will need to research in advance.

To ensure the case has maximum impact draw attention to the elements which are of concern to the audience, this might be achieved by summarising the results in a way which emphasises certain benefits or by arranging face to face presentations to accompany a written submission. These techniques can be used even if the submission is required to follow a standard format.

A great deal of effort will have gone into developing the business case it is worth expending a little more to make sure it does its job.

Business Case Stages

It is important to remember that **business case development is an iterative process**. The first stage culminates in the production of an outline business case. This will provide the Steering Group with an early assessment of the selected options using basic estimates of costs and the initial demand forecast. The review of the outline business case may identify options that represent a Credible Proposal. If this is not the case, the options should be reviewed to ensure that all avenues have been explored. If it is not possible to improve the case the project should be withdrawn.

If the outline case gives a Credible Proposal the project can proceed. Now work should begin to refine the detail in the business case. Filter out the weakest options and any that prove not to be feasible. Strengthen the detail in the remaining options and, as more information is collected about the key features of the project, check whether other options should be assessed.

As resources are made available studies will be commissioned which will provide business case information e.g. market research, engineering feasibility or demand forecasts. Discussions with stakeholders will also bring forward more information. As significant new data is obtained the business case should be revised for review by the Steering Group. After each revision the options should be filtered.

When the Steering Group are confident that demand and cost forecasts are sufficiently accurate, the best available and preferred options can be selected. From there, the Steering Group will give approval to proceed to final business case.

Once the project is approved the business case will take on a complexion closer to that of the traditional business plan. Forecasts and estimates of items in the financial case will continue to be updated as the project progresses and actual performance closely monitored. New elements should be added such as detailed cash flow forecasts and a full marketing plan.

Formal **project evaluation** monitors achievement of the scheme objectives and whether forecasts of costs and benefits have been achieved. It may be a requirement of funding agencies and could continue for some time post implementation.

Sources of Advice and Guidance

The list of publications provided below represents advice and guidance available at the time that this Toolkit is published. We recommend that you search for updated guidance which may be introduced as a result of policy changes or research findings. Web sites of the relevant organisation usually contain details of the most recent publications which are often available as a download; the publications list indicates web site availability.

- A New Deal for Transport: Better for Everyone, DETR 1998 (www.dft.gov.uk)
- Planning Policy Guidance 13: Transport (Office of the Deputy Prime Minister web site www.odpm.gov.uk)
- The Railway Planning Framework: Regional Planning Assessments, SRA 2003 (www.sra.gov.uk)
- Appraisal Criteria, SRA 2003 (www.sra.gov.uk)
- The Green Book, Appraisal and Evaluation in Central Government, HM Treasury 2003 (www.hm-treasury.gov.uk)
- Guidance on the Methodology for Multi Modal Studies, DfT 2000 (www.dft.gov.uk)
- Guidance on Full Local Transport Plans, DfT 2000 (www.dft.gov.uk)
- Transport Economics Note, DfT 2001 (www.dft.gov.uk)
- Highways Economics Note 1, DfT 2002 (www.dft.gov.uk)
- Railtrack Enhancement Schemes – Notes on Social & Environmental Benefit Appraisal (June 2000)
- Handbook for Scoping Projects – Environmental Impact Assessment, Environment Agency 2002 (www.environment-agency.gov.uk – summary)
- Scoping guidelines (K5) environmental impact of railways & railway stations, Environment Agency 2002

Internet searches, local libraries or direct contact with relevant organisations will help with advice and information gathering. Here are a few suggestions:

- Central Government Departments: e.g. Department for Transport, Office of The Deputy Prime Minister
- Scottish Executive
- Welsh Assembly Government
- Regional Government Offices, Regional Assemblies, Regional Development Agencies
- Local Authorities: County and Unitary Authorities
- Railway Industry Bodies; SRA, Network Rail, Association of Train Operating Companies, local Train Operating Companies
- Highways Agency
- Tourist Boards
- Office of National Statistics
- District Councils; Town and Parish Councils
- Chambers of Commerce

Chapter 9

Identifying Opinion Formers and Stakeholders

For a rail re-opening proposal to succeed it is important for the scheme sponsors to identify and enlist a strong body of opinion formers and stakeholders. This is a high-profile matter for campaign groups and a case of providing solid backing for local authorities and other statutory bodies. But, how to identify them?

A prime consideration is that they have a close interest in the area in which the railway is to be regenerated. Ultimately, traffic may be generated from any part of the country but this is more difficult to calculate and distant supporters are much harder to activate. Therefore, the list of targets for opinion formers and stakeholders will include:

- The elected MP (all of them if the route crosses parliamentary boundaries)
- The elected MEP (all of them if the route crosses European parliamentary boundaries)
- Current members of the House of Lords
- Elected members of all applicable tiers of Local Government along the line of route

Those listed above will, to a greater or lesser extent, have the opportunity to debate the project and endorse steps in its development. Their support is essential. Furthermore, MPs and members of the upper chamber have access to Ministers and government departments. Elected members of the Local Authority with transportation responsibilities have access to the officers in those authorities.

- Regional Development Agencies
- The Countryside Agency regional offices

These two bodies have a direct interest in viable developments within their region and their support should be enlisted. If economic and community regeneration or social inclusion is an issue their interest will be stronger. Also, they have budgets which may be available for start-up funds in the early days of the scheme being developed.

- Local Authority officers with transportation responsibilities

This is the group of people who will have the statutory responsibility to develop and progress rail re-opening schemes, within the context of their transport strategies, other than those which are of a largely 'heritage' nature. Their stakeholding and interest is different from all the other groups listed in this chapter and their involvement is particularly important.

- Industries and businesses which could benefit from the re-opening – whether through passenger or freight services

This group will form a part of the justification for re-opening so their interest in the scheme affects the long-term business plan. A further consideration is that they may be prepared to contribute small sums to the start-up funds budget and/or provide facilities for campaigners.

- Residents of the communities affected who are prepared to work voluntarily to help take the proposal forward

Positive and calculated community involvement will be seen as a reason for supporting the scheme by elected representatives and helps to find a core of potential users. Their reasons for supporting the scheme may influence evaluation of alternative options. At campaign group level, local residents are the 'foot soldiers' for local awareness raising.

Of course not all opinions and opinion-formers will be in favour of the rail route being re-opened. Their reasons for opposing the scheme will be many and varied but they have to be recognised as being potentially valid and issues which have to be addressed in a positive and proactive manner. At an early stage consider the likely causes for opposition – environmental – where the route has become something of a nature reserve; houses and businesses adjacent to the line who have enjoyed years of peace and privacy; preference for alternative transport solutions; concerns regarding planning blight. Or has the route become – officially or unofficially – a walking route, cycleway, bridleway; how will people react to a place of leisure becoming a transport corridor once again.

Each scheme will be different so it is important to look closely at the people, the industries, the businesses and the strategic needs along the rail corridor in question to ensure that the potential benefits of all opportunities are maximised.

Finally, help with forming opinions may be available from respected national organisations including:

- Transport 2000, a national organisation which campaigns for sustainable transport
- Rail Future, an organisation with branches across Great Britain campaigning for the development of the rail network
- Sustrans, the sustainable transport charity that works on projects to encourage people to cycle, walk and use public transport
- ACoRP, an organisation established to support community rail partnerships
- Rail Passenger Committees, who champion the cause of the rail traveller and rail travel

Chapter 10

Communication and Promotion

Communicating and promoting the reasons and justifications for any rail re-opening proposal will be a key ingredient in raising awareness of the scheme, giving it a positive profile and influencing the opinions of all the statutory and funding bodies on whom success depends.

There are a number of ways in which a rail re-opening scheme comes to be initiated but under-pinning all but the heritage schemes will be a need for greater capacity on the transport network. It may be that the Regional Assembly (Welsh Assembly in Wales, Scottish Executive in Scotland) has given an overview in its Regional Spatial Strategy that, within a certain number of years, transport capacity between two major places, or along a strategic corridor needs to be increased to accommodate traffic levels, particular traffic flows or specific commodities. This 'directive' is likely to be taken forward into Local Transport Plans and possible options included. Options which involve significant roads construction – especially in rural areas – will attract opposition in the communities affected and lead to rail options being proposed if the former infrastructure exists. Thus a high level transport proposal which is not modal-specific creates interest in a rail re-opening through all levels of administration. The sponsoring authority may undertake a programme of public information and consultation which clarifies the issues, makes the case for the proposal and invites public comment into the debate.

The opposite of the above scenario will be a 'local' need for more effective transport along a corridor to one or more places of employment or education and this will drive a local proposal which gets raised up to Local Authority levels and ultimately becomes a part of the Regional Spatial Strategy.

All enhanced transport proposals which are adopted for more detailed examination or high level development will be subject to public examination. In the case of rail proposals it is not for the Strategic Rail Authority or Network Rail to decide whether a scheme is subjected to more detailed evaluation. Those bodies may make their contributions to the debate but so may everyone else with an interest. Public scrutiny of any scheme is likely to be undertaken by the County or Unitary authority who will maintain an impartial interest. However, at this stage it is necessary that the scheme is clearly seen to be tentative to avoid the risk of unnecessary and premature 'planning blight.' In this latter context it is recommended not to show the line of route on a map for publication and also to use the word "route" rather than "old railway line".

Making the case for a rail re-opening and, communicating it, is therefore likely to be initiated at 'community' level.

Whether this means an initiative by an elected representative, an issue in an election campaign or a small group of community-minded people, individuals will have little success in isolation. The stages are:

- Form a Campaign Group. This will comprise like-minded people along the corridor including those at the end(s) still rail-connected who are keen to see rail reinstatement. They should represent a cross-section of the people in the communities to maximise support and be business orientated to the point where they can develop a balanced overview of the case for re-opening. Communication and promotion plans cost money to implement. Therefore, the first action will be to create a simple constitution (it will evolve in line with the scheme's development) and elect officers before developing a 'start-up budget' through group subscriptions. Then an approach can be made to possible funding agencies (see Chapter 12 on Funding) for some small priming funds and, perhaps, some technical help.
- Early stages of 'lobbying' will include:
 - producing an outline rationale to substantiate the proposal
 - getting the media to take an interest (local newspapers, radio and television welcome new local stories; nationals will take an interest if there is a strong national perspective). The first stage is to make contact with the 'news desk' at each branch of the media. Appoint one or more 'media contacts' who are comfortable talking to the Press.
 - writing to all the elected representatives for the corridor. This should be a personal letter (not an e mail) which identifies why they should take an interest. Include a copy of the rationale.
 - making a similar approach to the Chair and Chief Executive if the Regional Assembly (Assemblies), Regional Development Association(s), Local Authorities
 - writing targeted letters, which highlight the benefits to them, to industries along the corridor
 - producing a simple but informative leaflet for 'door-dropping' or display at as many outlets as possible
 - holding one or more public meetings

Holding public meetings is deliberately left to the end of that first phase for two reasons. Firstly, time has to be allowed for communities to become interested in a proposal. Secondly, the rail re-opening proposal will, inevitably, generate some opposition and awareness of the 'issues against' helps the planning of an effective public meeting.

Assuming that the proposal does not fall at this stage it will be necessary to form a Steering Group of interested parties to manage the development of the re-opening proposal as

described in Chapter 2. This Group should include officers of the affected Local Authorities, the Campaign Group and the agencies providing start-up funding. The Steering Group will develop a Project Plan, one element of which will be the Communications Plan. Each member of the Steering Group will have a role to play and, once a plan for progression has been agreed, each should take their elements forward within an appropriate timescale. However, most of the high-level communication will be undertaken by an enhanced Campaign Group who are best placed for this work. Behind the scenes professional advice, practical support and guidance should be sought from the Local Authorities but they have to remain impartial and the Campaign Group must not expect anything which would compromise a statutory body's position. Once the re-opening proposal has been adopted in Local Transport Plans the Local Authorities will be supportive and may take an active role in communication and promotion.

Actual activities will be similar to those at the inception and an information programme will be needed right through to the proposal being terminated (for whatever reason) or services being launched. What will change with each iteration is the level of information and data and the quality of production.

When developing the content for all communications material – printed or verbal – a number of criteria need to be taken into account. Those criteria fall into two categories – **'must'** and **'preferable'**.

The material **must** be:

- Factual
- Factually consistent
- Progressive – so as to avoid information gaps
- Positive – negativity and 'knocking' is to be avoided at all times

Preferably it will:

- be well presented
- quick to read
- easy to assimilate
- include pictures or diagrams which help to explain the issues
- cross-refer to parallel examples which underpin the benefits being sought

Timing the communication activities needs to be the subject of very careful consideration. Unless the line of route is under immediate threat of being lost to some other use, take time to prepare the communications plan and for one-to-one discussions with key figures so that they are 'on side' before the campaign goes public. Also, it is very important to have reasoned answers to questions from both supporters and objectors and to demonstrate that alternative solutions have not been discarded but will form a part of the more detailed evaluations which will follow.

Chapter 11 Opportunity and Timing

Whilst the maxim *'there is no time like the present'* is an important one for all the parties who will be involved in a rail re-opening proposal it has to be recognised that a number of constraints will, inevitably, be applied from time to time. In preparing the Project Plan a key element will be a timeline or flow chart of key milestones. This will introduce a realistic approach at the beginning and will help to ensure that the risks of over promising and under achievement are minimised.

At the earliest possible date identify timeframes and events which will be instrumental in determining the how a rail re-opening proposal is developed and progressed. Issues which will drive progress include :

- Drafting, consultation and adoption of national, regional and local plans and their subsequent review phases
- The Local Transport Plans cycle
- Government commitment to public transport
- Drafting, review and implementation of Government transport policies and legislation
- Opportunities and resources for protecting the route
- The franchise cycle for TOC(s) in whose area the route lies
- Central government Public Spending Reviews
- Redefinition of EU Objective Areas
- Planning Authorities procedures and meeting schedules
- HSE and HMRI processes
- Contractual lead times – e.g. rolling stock procurement, construction works

Timing and levels of detail will vary for each of the above from year to year so it is for the proposer to research and prepare a schedule of events as it affects their particular scheme. However, for each of the above, there will be a need to be ready to read draft or consultative documents and make timely, relevant responses.

In addition to these the human resources available will have a considerable effect on the speed of progress. Local authorities and other statutory bodies have limited resources and have to prioritise workloads in a way which best delivers their obligations. Volunteer campaigners will have jobs or other commitments – activities need to be tailored to what it is reasonable to expect of this unpaid workforce.

Chapter 12 Funding

Funding a rail re-opening can be expensive. This is especially so if the line has been long closed, the track lifted and basic infrastructure removed or only subjected to minimal maintenance. At each phase of the project costs will be incurred and this needs to be recognised and addressed from the outset. The phases, each of which will require a budget plan matched with funding streams are:

- Project Initiation
- Outline Business Case development
- Development of a Final Business Case
- Construction
- Equipment and Resources
- Creating the first Marketing Plan
- Implementation

These aspects are covered in more detail on the Flow Charts (see pages 8-10) and in specific chapters. Obviously, as the scheme develops the process becomes more complex and more detailed; information will progressively be needed from professionals in their particular disciplines which in itself creates a need for a fees budget.

Creation of the budget for each phase will require:

- Identification and clarification of what has to be funded
- A cost identified for each element
- Those costs validated
- Making provision for contingencies (an initial allowance of 30% may be reasonable at early stages when estimates are uncertain but this can be reduced as the project develops)
- Identification of potential funding sources
- Applications for funding
- (If necessary) adjusting the work plan to the budget available
- Delivering the work plan within timescales dictated by the funding bodies
- Possible bridging loans to cover the period between expenditure and receipt of grants

Whilst the statutory bodies will be aware of this, a fact of which campaigners need to take into account is that grants do not usually apply retrospectively so do not start to spend until they have been authorised. Also, it is usually the case that grants are awarded on a 'matched funding' basis.

Project funding may come from a number of sources, as shown below. All the significant sums from public funds will be applied for and managed through the Local Authority with transportation responsibilities. If you intend to raise private funds through share or bond issues seek professional and legal advice. The table on the opposite page includes potential funding sources and indicates the individual project phases for which they may be applicable.

Finally, it is important to recognise that it is unlikely that there will be any financial assistance from the 'local' Train Operating Company (TOC). TOC budgets are determined by the SRA and are directed at the sole purpose of delivering the agreed level of services and facilities. TOCs do have a statutory responsibility to provide certain information to (usually) the County/Unitary authority but will not do so to local campaign groups. However, try to include the TOC in the debate and sometimes they may be able to provide low-key facilitation.

	Project Initiation	Business Case Development		Construction	Equip & Resource	Primary Marketing	Implementation
		Outline	Final				
Fundraising	*						
Parish/Town Council	*	*				*	
District Council	*	*				*	
County/Unitary	*	*	*	*	*	*	*
Rural Development Programmes	*	*	*			*	
Urban Development Programmes	*	*	*			*	
Regional Devel. Agency		*	*	*	*	*	*
Regional Assembly		*	*	*	*		*
SRA			*				*
PTE's	*	*	*	*	*	*	*
Scottish Executive	*	*	*	*	*	*	*
Welsh Assembly	*	*	*	*	*	*	*
Bank Loans				*	*	*	*
Share Issues		*	*	*	*	*	*
Bond Issues		*	*	*	*	*	*
Complementary Trading	*	*	*	*	*	*	*
Passenger Fares						*	*
ERDF*				*	*		*
Railway Heritage Trust			*	*	*		
Charitable Trusts	*	*		*	*		*

* European Regional Development Fund

Chapter 13

Managing Political Influences

Throughout the stages of assessing the potential for re-opening a railway line, developing a firm business case and – if the business case is sufficiently strong – taking the project forward to reconstruction and commencing train services, the team appointed to progress each phase must have firm control over all events. This is as true for opinion formers as it is for consultants and contractors.

Local authority officers, and those of other statutory bodies, have to be politically impartial and it is likely to be beneficial to campaign groups if they maintain a similar stance. The proposed railway will be there to serve the whole community. Therefore, from first concepts to conclusion all the parties involved in the project should be cross-party and multi-cultural in the widest sense of these terms.

With those caveats in mind, recognise that tremendous good can come out of developing strong relationships with those who have 'political' influence at all levels of the country's administration. To maximise the positive impact political lobbying can deliver there is an early, twofold task to be carried out:

- Identify the people who can promote your project publicly
- Develop a programme of lobbying opportunities tailored to the project timeline and the likely needs of the 'politicians' concerned

The programme of lobbying opportunities will be particular to each individual proposal but, for all levels of elected representatives, the cycle of elections will be highly valuable. At these times politicians make particular efforts to include – in print and in speeches – issues of importance to the community they hope to serve. Monitor when transport items are to be debated and endeavour to ensure that the debate includes a question or statement about 'your project.' Needless to say, it is positive coverage which is being sought.

If the newspapers – local, regional or national – take up the cause of a re-opening proposal they will seek the views of politicians. Make sure the editor understands the questions which should be being asked and that the politician has a fact sheet which enables them to give the 'right' answer. Make use of the fact that newspapers need to sell papers, and therefore need new and interesting stories, and elected representatives need to be seen as pro-community.

Remembering the impartiality constraints placed on public servants, managing political influences is largely the responsibility of the campaign group elements of the development team. Also, the target will not just be the elected person. Strong working relationships need to be maintained with the support teams – local agents, local party activists and so on.

Chapter 14

Harnessing Public Opinion

Getting – and keeping – the support of the communities along the line of route is an important aspect of developing and implementing a re-opened railway. Public interest and public pressure will influence elected members and officers within all the bodies on which the success of the scheme depends.

The principles which underpin successful public opinion forming are:

- Regular releases of information
- Positive stories related to relevant issues
- Not 'knocking' the alternative options but ensuring fair positioning and valid comparisons
- Timing for maximum impact
- Remembering that public transport is compared with the personal freedoms given by the car
- Being rational and not fanatical

The various options for raising awareness of the scheme have been discussed in previous chapters. In terms of public opinion the best opportunities lie in public meetings, public consultations, having a campaigning presence at community shows and events, local newspapers, community newsletters and punchy 'update' facts sheets.

Take into account some of the following for topics to be aired and discussed:

- There is growing environmental awareness in the country – relate land-take for the re-opened railway to that for the road alternatives
- Long queues of slow moving traffic are a frustration for car drivers and costly for road hauliers – position the benefits the proposed railway offers by way of alternatives
- Parking is becoming more expensive and parking spaces more elusive – what are the benefits the train offers
- Approximately 10 people die on the roads of Britain every day – what are the safer options presented by the railway? **But** do not relate to a specific fatal road incident. It will upset the people directly involved and probably lead to a negative public reaction
- What will be the benefits for the significant numbers in the community without private transport? Relate to employment, education and training, health and leisure for all age groups above 16. Consider whether there are opportunities for the railway to provide school transport
- Alternative public transport – the bus. The bus often gets closer to the people, especially if it is a hail-and-ride service, but suffers exactly the same problems as the private motorist in terms of traffic congestion
- Realism. To use the railway, the public will have to walk, cycle or drive to the station, wait for the train and share the seating space with other people. Ask (and answer) the question "why should I swap from the car to the train?"

Chapter 15

Maintaining Momentum

Any rail re-opening is going to take a considerable length of time and this needs to be recognised within the communications strategy. National, regional and local planning and development process are necessarily extensive and protracted. The rail re-opening scheme will have to fight its corner for the limited resources within statutory organisations and will have to maintain a position of interest in the hearts and minds of communities.

From start to completion of a scheme maintaining momentum will depend heavily on realism being combined with perseverance. Therefore, from a campaigning point of view the following should be taken into account:

- Start by knowing that the way will be long and not always easy
- Recognise that some of the team will change as the years pass – do not become a 'closed shop' but always be a body newcomers want to join
- Start with a plan which relates to the stages shown on the flow charts on page 8 and 9
- Amend the plan to reflect changing circumstances or new data
- Keep it fresh
- The underlying reasons for re-opening the railway are unlikely to change completely. This gives the opportunity for core themes to run throughout the campaign but they will expand and improve as the project progresses

Realism coupled with perseverance will win the day!

Chapter 16

Case Study 'A'

The railway in this Case Study was originally a major rail corridor carrying a heavy volume of passenger and freight traffic.

Over the years as traffic fell away the line was progressively closed. The stage was reached where the line was severed from the then British Rail system at one end, but remained connected at the other from which a passenger service operates for about 13 miles beyond which a freight only service continued for a further 18 miles to serve one major customer. Passenger services had ceased over this latter section but the line was intact.

In view of the scenic nature of the route a group, including some former senior BR engineers and managers and others, had formed to consider the possibility of reopening the line to passengers as a heritage line and initial discussions were held with BR to consider purchasing or leasing the route.

It became apparent that this would be no small task and that significant funding would be required.

At this time the freight service also ceased to operate as the one major customer closed its works.

In the course of the Group's consultations with Parish Councils and other local groups, there was much support for the reopening of all or part of the route for regular passenger services, as a public railway, as opposed to a heritage line.

To progress this further it was recognised that two parallel streams of action were going to be required. First a group was needed to lead in fund raising and also to provide volunteers to begin refurbishment and repairs and for this a Trust was established. Secondly, in order to act as a legal entity to manage operations and trading, a Limited Company was formed.

The Railway Trust is a Registered Charity and the members are the volunteers. The Trust provides support to the Limited Company in terms of money from fund raising and volunteers to work on the line. This arrangement enabled work to proceed to a certain extent while the Limited Company entered into the various activities necessary to secure the re-opening and these activities included:

- Negotiations with BR/Railtrack/Network Rail
- Identifying the works required to restore the infrastructure
- Carrying out demand studies
- Discussions with the local County Council regarding funding and legal aspects such as highway authority conditions
- Establishing contact with potential funders and their criteria

- Development of a robust and comprehensive Business Plan
- Development of a Railway Safety Case
- Investigations into the procurement of passenger rolling stock
- Developing maintenance programmes
- Liaison with HMRI (Her Majesty's Railway Inspectorate)
- Developing the Company team to include professional legal and financial advisors, particularly in view of the large amounts of money that were likely to be involved
- Retaining professional support from outside where this was not available within the company
- Making provision for training of staff and volunteers
- Preparation of the Transport and Works Act Order

The outcome is that the railway has been acquired and will be reopened in stages starting in 2004.

Engineering works are in hand, agreement has been reached in regard to the legal aspects of, for example, highway conditions and access across the line. The Railway Safety Case has been approved. Rolling stock provision is in hand as is the establishment of maintenance and staff facilities.

The most important elements, which the promoters have emphasised, are:

- Ensure clarity as to the type of railway and role of the promoter
- Consultation
 - Maintain close relationships with the statutory authorities along the route, businesses and residents
 - Enlist and maintain the support of elected representatives
 - Maintain good and regular dialogue with all stakeholders
- Provide a robust and comprehensive Business Plan
- Obtain second opinions, particularly in respect of infrastructure costs
- Recognise and allow for long lead times for purchase and approvals
- Consult the local people about future demand
- Timescales can be protracted – do not give up!

All activities were essential but the three key issues to moving forward were the introductions to funders, legal advice and the TWA and the support of the County Council.

The details of this case study have been drawn from experiences of various rail re-opening schemes or proposals related to the Toolkit research team including: Beverley – York, Burton – Leicester, Harrogate – Ripon – Northallerton, Malton – Pickering, Matlock – Buxton, Ribble Valley Line, Robin Hood Line, Skipton – Colne Railway, Stirling – Alloa – Kincardine, Weardale Railway, Wensleydale Railway.

Chapter 17

Case Study 'B'

Despite being located in a well populated corridor with an important regional centre at one end, passenger services on route B, our next case study, were withdrawn in the early 60's. Some of the route was retained for freight use but a significant stretch of track was lifted and railway structures removed.

Decline in heavy industry along the corridor saw a gradual fall in freight use of the line which eventually ceased completely in the early 1990's.

Within a decade of passenger service withdrawal some locals were regretting the loss of the railways from their area and re-opening began to be discussed. However, with local services throughout the national rail network experiencing falling passenger numbers and tough investment criteria a case could not be made. The idea was shelved but it had raised interest with local councillors and Local Authority transport officers.

Throughout the late 1970's and 1980's road traffic through the corridor was increasing and a number of investment schemes to improve transport between the main population centres were approved. Each time a scheme was proposed the Local Authority reviewed the case for re-opening the railway as an alternative way to address the problems. Increasing costs, particularly associated with reinstating the removed track and structures, made the case compare poorly with road alternatives.

By the time the last freight train ran on the line the corridor was suffering serious economic problems. Traditionally dependant on heavy industry, communities along the route were experiencing high levels of unemployment and the consequent social problems. People with transferable skills were migrating from the area and road congestion in the regional centre was becoming worse as those who were able to commute by road to service sector jobs in the town did so. Access to training and job opportunities was a growing problem for large sections of the community without access to a car.

Despite previous problems justifying the investment for rail re-opening, the Local Authorities along the route saw the potential for the line to support economic recovery in the corridor. They formed a steering group and obtained funding to conduct market research, technical studies and public consultation for re-introducing passenger services.

The consultation exercise identified widespread public support. Where objections were raised the Local Authorities had a process in place actively to seek solutions or

compromises to the objectors' issues. This was done by maintaining an active dialogue, keeping options open and through statutory planning application procedures.

Market research found levels of demand that would sustain a regular local service but raising the funds to reinstate the missing track was still proving to be a problem. The steering group decided on a phased approach to re-opening and a project plan was drawn up which would see an early introduction of services on one section of the retained track. This section gave access into the regional centre and connections to the rest of the railway network. Funding for the first stage was raised from Local Transport Plans, Central Government and EU regeneration budgets.

Through pressure from the Local Authorities the track had been kept in reasonable condition even after withdrawal from freight use but stations had been out of use for almost thirty years and would need much more work. Market research found that some of the old station locations were no longer appropriate to serve the local community and changes to the road network meant access and integration with other transport were no longer practical. The planners decided to start with a "clean sheet of paper" and ultimately only one of the four old station sites was restored on the Phase 1 re-opening, but four additional new stations were constructed with good access and convenient for local residents.

The steering group worked closely with the local train operator and found that by linking with other services through the regional centre to the re-opened line the requirement for extra trains and crew could be reduced. They reached an agreement for the operator to run the service with revenue support from the Local Authority budget. A joint marketing plan was developed and awareness campaigns began even before the services started to run.

On launch day, two years after approval was given for the go ahead, passengers turned up in large numbers. Of course after the novelty of the first few days calmed down, passenger numbers were lower, but after the first six months numbers had reached the levels which forecasts had predicted would take twelve months to achieve.

In the meantime work had continued to solve the engineering and funding issues for re-instatement of the missing section of the route. An engineer, new to the project suggested abandoning the old alignment for a more direct and cheaper alternative through nearby farmland. Initially this idea was dismissed as the only feasible route would take the line directly through a farmhouse. Nevertheless, the option was discussed with the steering group and a Local Authority

officer who had been conducting public consultation proposed a visit to the farm owner. This turned out to be a successful proposal, the farmer was nearing retirement, his son and daughter had no desire to keep the farm and he was looking for a way to dispose of the land and property. Neighbouring farmers showed an interest in expanding but didn't want the farmhouse. Agreement was reached for the farm to be acquired by the Local Authority and things started moving again.

The project plan and business case was revised with the new alignment as preferred option. A new demand forecast was prepared taking into account the stronger than expected performance on the phase one services but also recognising that some Phase 1 passengers would switch to more convenient Phase 2 stations. The combination of lower construction cost estimates, higher demand and shorter construction timescales gave an improved business case. The project gained approval from funding bodies.

The project team now began the process to gain a Transport and Works Act Order. This would give the parliamentary powers required to build the new railway which would link Phase 1 to the retained track at the other end of the route. Advice from experienced staff in the railway industry and highways departments of the Local Authorities helped ensure this stage of the project ran smoothly.

Throughout the approvals and construction stages contact with the community continued with regular news releases on progress and visits to parish / town councils, schools, community groups etc. by steering group members and officers involved in the project.

When eventually, five years later, the first train ran the full length of the route the commitment of those closely involved with the project was rewarded. Again passengers turned up in large numbers and communities now linked to the railway organised their own events to celebrate the occasion.

Now, five years further on, the Local Authorities continue to evaluate the route. Passenger numbers are matching the predictions and the transfer from road has relieved congestion and reduced parking pressure. The highways authorities have calculated that the route has avoided the need for significant investment in highway improvement and town centre parking provision.

Surveys show that a high proportion of passengers are using the line to access jobs and training, this is supported by business surveys indicating that the local labour market is providing the skills they need. Evidence suggests that

businesses relocating to the area have been influenced by the existence of the rail line and the changes it has made. Residential development has also been attracted to the corridor and some of those who left the area are now returning.

The Local Authorities have continued their involvement with marketing activity and investment, particularly in station improvements and integration schemes. Proposals are now being progressed for freight traffic to use the route which will bring further benefit to the area.

The details of this case study have been drawn from experiences of various rail re-opening schemes or proposals related to the Toolkit research team including: Beverley – York, Burton – Leicester, Harrogate – Ripon – Northallerton, Malton – Pickering, Matlock – Buxton, Ribble Valley Line, Robin Hood Line, Skipton – Colne Railway, Stirling – Alloa – Kincardine, Weardale Railway, Wensleydale Railway.

Chapter 18

Case Study 'C'

Case Study 'C' is both complex and interesting. The wholly rural route had lost its passenger services in the 1950's after which passenger 'needs' were met by a poorly coordinated network of occasional buses and post buses. Following this, one end of the line was abandoned and subsequently absorbed into a road improvement scheme. On the part of the line which remained open a daily bulk freight train continued to run until the contract was lost in the mid 1990's. Then the line was mothballed. There was no interest in re-opening the line by British Rail, and subsequently the Strategic Rail Authority, and the line was not seen by the Local Authority as having potential for improving the – at times strained – rural transport which included giving access to a National Park.

The initiative for this scheme came from the local communities who had a history of working together where it was in the best interests of their combined populations. They saw this disused rail line as a solution to a number of the problems they faced. These included:

- Providing public transport links (effectively there were none at the time) to major centres for shopping, hospitals, higher education and to the national railway network
- Providing in-bound public transport to the tourism and leisure facilities along the route
- Providing inter-community links for junior and secondary education, basic health services and leisure
- Reducing use of the road network with the consequential environmental, health and safety benefits
- Creating a stronger economy

and, longer term:

- Re-introducing a viable link between two trunk routes on the national railway network

Despite the National Park's published opposition there was a road development scheme in the Local Transport Plan.

Just six interested, local people in two of the larger communities initiated the re-opening campaign. They made an overview of the benefits which might accrue from re-joining the rail network and started to prepare a list of the negative points. One point of importance was that the line should be a genuine public transport facility and not a seasonal, heritage operation. On these relatively simple foundations for an outline proposition this small core of people based their campaign.

Their first step was to make contacts in all the other communities and identify people who were 'pro re-opening.' This gave a strong, representative and multi-skilled steering group of unpaid volunteers. Each of the Town and Parish

Councils were approached for their support – including priming money for the campaign or free use of public facilities. All gave something. Public meetings were planned and prepared for. Part of the preparation was production of a simple but informative A5 sized leaflet which was 'door dropped' to every house which was within the line's catchment area. This aroused both interest and opposition within the communities concerned. MP's and would-be MP's were invited to attend the meetings as were the relevant County, District and Town/Parish councillors. Local and national newspapers, radio and television were alerted to what was taking place. The meetings were well attended – the nature of the proposal meant that they were events people could not afford to miss!

There was a large majority in favour of the concept. As far as community residents were concerned opposition was limited to people whose houses were adjacent to the rail route and to people who had purchased lengths of the abandoned section of line. Both of these had been anticipated and were understood. A formal campaign group, with an elected committee, was established and a membership fee introduced to provide funds for the next steps of campaigning. This group was converted into a Charitable Trust at the earliest possible opportunity.

With the support received there was justification for a formal meeting with officers and councillors of the County Council, in whose area the line lay and who sponsored the Local Transport Plan, with British Rail and with the National Park Authority. The results of these meetings were :

- The County Council acknowledged the strength of public opinion but gave it as their opinion that the costs would far outweigh the benefits. Their highways division was concerned about the re-opening of level crossings and the loss of opportunity for road improvements using the track bed. The education department welcomed the greater flexibility for scholars' transport. The strategic planners offered to recruit a suitable consultancy to undertake a low-cost, high level assessment of the costs and benefits of the scheme. They would not include the project in the LTP nor would they create planning blight by protecting the route for public transportation initiatives at this stage.
- British Rail re-stated their position. However, they did grant walking access to the campaign group so that a visual inspection could take place.
- The National Park Authority were keen to see and would support re-opening of the line still in situ but had serious concerns about re-instating the abandoned route which was reverting to nature.

The Campaign Group met with all the District, Town and Parish Councils along the route. All agreed to adopt the rail re-opening proposal and to include it in their Structure Plans and Town or Parish Plans. These documents are always communicated to County/Unitary authorities and serve to influence their strategic development planning.

The consultants' report to the County Council demonstrated a nett benefit would arise from re-opening based on the needs of the rail corridor itself and further benefits occurring in the immediate regions at each end of the line. As a result the proposed road scheme was downgraded in the LTP and the rail scheme put in its place.

Leadership of the scheme as a development project now moved to the County Council, through their statutory obligations. This included finding a diversionary alignment around the piece of track bed now under a road. However, campaigning remained with the original group who also worked with the County to identify sources of funding and prepare the case for investment. A formal business case was created and it was strengthened by the emergence of a daily freight movement arising from a rural industry initiative.

Subject to the production of a proven business case, funding for the project was obtained (through the County Council) from the European Regional Development Fund, Regional Assembly, Regional Development Agency and County Council. From presenting an outline proposal to these bodies through to confirmation of grants took two years. The grants were for expenditure starting two years later.

By now privatisation had seen British Rail replaced by Network Rail (NR) and the Strategic Rail Authority (SRA). Neither body was interested in the re-opening but was prepared to consider a private company being formed who would be licensed to be the operator. The SRA's view was that – if opened end to end – the line would not relieve capacity problems on the trunk rail network despite evidence to the contrary. As a result the SRA did not make any financial contribution to the re-opening.

The campaign group formed a limited company to be the lessee of the part of the route owned by Network Rail, the purchaser and land owner of the reacquired abandoned section and the licensed train operator for when the scheme came to fruition. A manager was appointed (funded by the Regional Development Agency). Bankers and lawyers were appointed and this enabled a Share Issue to take place to fund development of the business plan and secure property which would be essential to the scheme. The Share Issue was fully subscribed. The County Council continued to develop the

case for re-opening through detailed demand and revenue assessments, undertaking a full engineering survey and obtaining reliable costings. This led to production of the Final Business Case. This saw development in two phases – regeneration of the line still in situ came first; when that was complete rebuilding the abandoned part of the route would commence.

The Final Business Case was confirmed. As a result of this the grants were confirmed and were financially matched through a second Share Issue. The HMRI reviewed the proposals and made detailed alterations. Railway civil engineering and signalling contractors were commissioned, rolling stock was sourced, recruitment and training of responsible staff commenced. A network operator's licence was obtained from Network Rail.

When the works were complete, the HMRI inspected the route and the proposed operating procedures. When these were approved the trains began to run a public service – thirteen years after six people got together to consider re-opening their local railway.

The details of this case study have been drawn from experiences of various rail re-opening schemes or proposals related to the Toolkit research team including: Beverley – York, Burton – Leicester, Harrogate – Ripon – Northallerton, Malton – Pickering, Matlock – Buxton, Ribble Valley Line, Robin Hood Line, Skipton – Colne Railway, Stirling – Alloa – Kincardine, Weardale Railway, Wensleydale Railway.

Appendix 'A'

Demand Forecasting

1. INTRODUCTION

This Appendix sets out a hierarchy of procedures for forecasting the demand for rail travel after the opening of new railway passenger services.

These new railway services can come about through the provision of passenger services on freight routes or the reinstatement of infrastructure on closed former routes. They can also come about on existing routes where the service is so poor that the provision of a regular service can effectively be regarded as a reopening. We are not here concerned with new purpose built pieces of major infrastructure.

The unique feature of demand forecasting in the context of rail re-openings is that much greater reliance is placed upon forecasting the absolute number of trips rather than changes to current trips simply because there are no existing rail trips to be incremented or because they are so few that they would not provide a firm basis for the forecasts of likely new demand. In only comparatively rare instances would the incremental forecasting procedures widely use in the railways in Great Britain and set out in the Passenger Demand Forecasting Handbook (ATOC, 2002) be appropriate.

In this context, there are six different types of flow for which forecasts would be required. These are:

- Local travel (L)
- Feeder travel (F)
- Attraction travel (A)
- Through travel (T)
- Existing travel (E)
- Remote travel (R)

Local travel is that between the stations on the reopened line. The features of this traffic are that it will tend to be short distance, where rail tends to be relatively unattractive in the absence of road congestion problems. There may, however, be opportunities for commuting where rail tends to perform relatively well, and particularly for rail heading when a reopening provides a new link into a congested urban centre. An example of local travel here would be travel between Wetherby and Leeds if this line were to be reinstated.

Feeder travel is that which originates on the reopened line but destines at stations beyond the new line, thereby providing contributory revenue for the rest of the rail network. This tends to be longer distance traffic but could be existing rail traffic which makes use of the new local service to access a railhead rather than access it by road. In the context of rural reopenings, much of this travel would be for

leisure purposes. An example of feeder travel would be trips between Ripon and London if the Harrogate to Northallerton line were to be reopened.

Attraction travel is that which travels from beyond the new line to a new station on the line. In the context of rural re-openings, this will largely be leisure traffic, with a particular feature the possibility of newly generated tourist traffic. There will also be an element of existing rail travel that would use the new service to travel to the destination rather than using a more remote station and egressing by road. An example of attraction travel would be trips to Hawes if the Northallerton to Garsdale line were to be reopened. Attraction travel does not include trips taken on the railway for the experience itself. These trips are outside the scope of this appendix and are best forecast in the context of visitor numbers as with other tourist attractions.

Through travel is that which travels between stations which are not on the new line. If there are any current possibilities, they are so poor that effectively a new service is being provided as a result of the reopening. An example of *through* travel would be trips between Barnsley and Doncaster if the Wath Valley line were reopened.

Existing travel is that which is now offered additional options which will increase demand for those who would regard the new route to be superior to the *existing* route. The unique feature here is the issue of abstraction from current services that would be retained. An example of existing travel would be between Hull and York if the former rail route between Beverley and York via Pocklington were reinstated. *Existing* travel might also include situations where there is improved frequency of service on part of the existing rail network. In the Hull to York example this might be the extra demand generated between Hull and Beverley resulting from extra trains over this section.

Remote travel is that which uses rail for only the final and relatively small portion of a journey to access a destination in a 'park and ride' fashion. Although existing examples are rare, with the St Ives branch being a notable example, it is not inconceivable that new rail services might perform this role in rural areas in the light of growing environmental concerns and congestion problems. Reopening of the line to Grassington could serve this purpose if it were to be marketed as a 'park and ride' method of access to the National Park.

The balance of traffic will differ across different types of reopening. For example, re-opening the line between Matlock and Buxton would require: forecasts of trips between stations

on the line (*Local*); forecasts of trips to the rest of the rail network originating at the new stations on the line (*Feeder*); forecast of trips to the Peak District (*Attraction*); and forecasts of the increased demand as a result of an improved service for those travelling between, say, Derby and Manchester (*Through*) and Nottingham and Manchester (*Existing*). It might also be able to serve a role in providing access to environmentally sensitive areas of the Peak District (*Remote*). For other re-openings, some categories of traffic would dominate, such as *local* traffic on the Wetherby to Leeds line or *attraction traffic* on the Wensleydale line.

There are some differences in the extent to which the different available forecasting methods can deal with these various types of travel. These different methods are listed in Table 1. There are variants of some approaches to the extent that it is feasible to conduct fresh research rather than rely on past findings and the extent to which the approach can be enhanced by tailoring the results more closely to the forecasting situation in hand.

See Table 1 opposite: Available Forecasting Methods

2. TRIP RATE METHODS: EXISTING EVIDENCE

2.1 Method

The simplest but also crudest approach to demand forecasting is to use the trip rate method. Trip rate methods operate at the level of the station. They represent the number of rail trips generated or attracted by a station or more commonly the number of rail trips per head of population.

No attempt is made to explain the number of trips in any formal statistical manner as a function of the characteristics of the rail service and competing modes, the socio-economic features of the local population or the attractiveness of the main destinations that would be served.

There is no reason why a distinction cannot be made between the number of trips generated by a station as an origin and the number of trips attracted by a station as a destination. This is useful because the trips generated can be related to the local population that determines them whilst there are some stations which for, say, tourist reasons will attract a disproportionate amount of traffic. Nonetheless, in some situations the total amount of generated and attracted will be sufficient. In any case, care needs to be taken to ensure that the appropriate units are being used.

2.2 Sources of Evidence

The Passenger Demand Forecasting Handbook (PDFH) is a source of trip rate evidence. Typical trip rates are given for

new stations in various contexts. These are: prime commuter belt on the outskirts of the urban centre; village areas surrounding urban centres; built-up areas close to urban centres and free-standing towns. The recommended trip rates are related to distance bands around the stations. Further detail is given on trip rate variation for new local rail services for inner suburban, intermediate/industrial and outer suburban contexts.

The PDFH recommends that, "For the initial 'feasibility' evaluation of new stations, where detailed modelling is not felt to be justified, this approach would provide a reasonable basis for forecasting".

It should be noted, however, that the evidence is rather dated and that attraction flows are not covered.

At a very aggregate level, trip rates per head of population can be obtained from published statistics of rail travel and tabulations obtained from the National Travel Survey⁵ (NTS).

2.3 Coverage

This approach, based on existing evidence, covers *local* and *feeder* traffic. There is no reason why, in principle, it cannot handle *attraction* and *remote* trips, but evidence is not available. It is not suited to forecasting *existing* and *through* trips.

3. TRIP RATE METHODS: NEW EVIDENCE

One of the advantages of the trip rate approach is that it is possible to acquire trip rate or flow data. This serves three purposes:

- Trip rates can be more closely tailored to the situation being forecast
- More up-to-date evidence can be obtained
- Trip rates can be obtained for *attraction* and *remote* traffic which are not covered by current evidence

3.1 Sources of Evidence

There are two sources of fresh evidence on rail trip rates. One is to obtain LENNON ticket sales data which records the volume of rail trips and associated revenue. This is available on a station-to-station basis but it is the totals that are here of interest. The other is to conduct surveys at suitable stations.

As far as trip rates are concerned, it makes sense to obtain evidence from stations similar to those being forecast in terms of socio-economic features, the broad level of rail service offered and ideally the sorts of destinations being considered. Thus if we are forecasting trips from Wetherby on the newly opened line to Leeds, trip rates from stations such as Ilkley, Harrogate, Skipton and Selby might be examined.

⁵ The SRA web site provides details of rail demand whilst Transport Statistics Great Britain and other material on the Department for Transport web site provides other evidence including that obtained from the National Travel Survey.

Table 1: Available Forecasting Methods

Method	Unit	Coverage	Complexity	Cost	Accuracy	Comments
Trip Rate: Existing	Station	L, F	L	VL	L	
Trip Rate: New Evidence	Station	L, F, A, R	L	L-M	L-M	No allowance for attractiveness of rail service.
Trip Rate: Enhanced	Station	L, F, A, R	L-M	M	M	
Diversion Rates	Flow	All	L-H	L	L-M	Need existing origin-destination data. Need to add generation.
Trip End Models: Existing	Station	L, F, A	M	L	L-M	Dated evidence
Trip End Models: New Evidence	Station	L, F, A, R	M-H	L-M	M	Appropriate if demand data is available only at station level.
Stated Intentions	Indiv	All	M	M	M	Subject to response bias
Comparable Flow	Flow	All	L	L	M	Requires ticket sales data. Can enhance station specific demand forecasts. Requires aggregation.
Enhanced Comparable Flow	Flow	All	L-M	M	M-H	
Cross Sectional Demand Models: Existing	Flow	All	M	L	L-M	Some of evidence is dated
Cross Sectional Demand Models: New Evidence	Flow	All	H	H	M-H	Preferred if station-station ticket data is available. Requires specialist advice and large amount of data on explanatory factors
Incremental Demand Models	Flow	E	M	L	H-VH	Limited application to reopenings
Choice Modelling	Indiv	All	VH	VH	L-H	Detailed but expensive. Requires specialist advice. Benefits are lost if the origin-destination data is poor. Need to add generation.

Note: Complexity, cost and accuracy are rated as very low (VL), low (L), medium (M), high (H) and very high (VH)
 Coverage codes are L local, F feeder, A attraction, R remote, E existing

LENNON ticket sales data can be obtained from co-operative train operating companies or the Strategic Rail Authority. A shortcoming of LENNON ticket sales data is that the true origin of trips is not known yet the distribution of the population around the station will determine the number of rail trips per head from a locality. There is also the issue of how to define the catchment area so that trip rates can be determined per head of population whilst attention needs to be paid to overlapping catchments of nearby stations.

There are three possible ways forward. One is to select trips for stations with population distributions similar to the stations being forecast. The second is to obtain evidence from such as postcode origin survey data which indicates how rail trips decline with distance from the station. The third is to acquire data for a large number of stations and to determine, in some more or less quantitative fashion, how trips rates vary with the population and its distribution.

The survey based approach to obtaining trip rate data would be more expensive compared with easily acquired ticket sales data, but there can also be problems conducting surveys if the relevant parties are uncooperative. However, it can readily allow segmentation by distance band around the station, which then also opens up possibilities for allowing trip rates to vary with the socio-economic characteristics of the local population.

The ticket sales and survey based sources of trip rate data can be used in combination with each other. The LENNON ticket sales data provides the evidence on the total number of trips, perhaps split by distance band, whilst the survey data provides evidence to allow for the distribution of the population and possibly socio-economic effects.

3.2 Coverage

Not only does this method provide more up-to-date evidence, but it can also address *attraction* and *remote* traffic which is not covered by existing evidence and trip rates more appropriate for the situation being forecast can be selected.

This approach is preferred to the use of existing trip rate evidence if resources are available.

4. TRIP RATE METHODS: ENHANCED

4.1 Method

The trip rate method based on new evidence would naturally try and select evidence that most closely corresponded to the forecasting situation. For example, if we wanted to forecast trip rates from Wetherby to Leeds, we might obtain trip rate data for Ilkley, Harrogate, Skipton and Selby. However, there

will be differences between the observed and forecast stations that should ideally be accounted for.

In the above example, we note that Skipton, Harrogate and Selby are each outside the Passenger Transport Executive (PTE) area. The fares to Leeds, which would be the key destination, would be higher, in part due to the absence of multi-modal tickets. The journey times might also differ whilst local income levels are also different.

Given that trip rate models operate at the level of the station, it is more straightforward to adjust factors such as income, which are specific to the locality, rather than to adjust for route specific effects such as journey times. Nonetheless, approximations can be made in the latter cases to account for what are expected to be the major effects.

The general principle of adjusting trip rates to account for differences between the forecast (F) station and reference (R) station(s) is:

$$A_F = \left(\frac{X_F}{X_R} \right)^a \left(\frac{Y_F}{Y_R} \right)^b \left(\frac{Z_F}{Z_R} \right)^c$$

(1)

A_F is the adjustment factor to be applied to the trip rate to 'customise' to the local situation. X, Y and Z are factors that differ between the forecast and reference station and a, b and c are the elasticities to X, Y and Z respectively which indicate the proportionate change in demand after a proportionate changes in the variable. The procedure generalises to any number of factors.

The key factors to account for would be differences in income levels, car ownership levels, and significant variations in the characteristics of rail. The latter would include the need to interchange, where the reopened line would serve as a feeder into the rail network, or major differences in fare levels.

Sources of evidence on the elasticities to use in equation 1 are PDFH (ATOC, 2002) and the Demand for Public Transport: A Practical Guide (TRL, 2004). Expert advice can also be sought.

A further means of obtaining enhanced trip rate models is to conduct analysis of NTS data. Although sample sizes can be small given the infrequency of rail trip making, it is possible to distinguish regional variations in trip rates and to

categorise by various socio-economic factors and distance from rail stations.

4.2 Coverage

This method covers local, *feeder*, *attraction* and *remote* traffic but cannot address *through* and *existing* traffic.

This approach is preferred to the use of existing trip rate evidence if resources are available.

5. DIVERSION RATES

This is analogous to the trip rate method, although operating at the level of the flow rather than the station. It provides a simple but relatively crude method of forecasting the traffic likely to be attracted by a station re-opening.

5.1 Method

This method relies on the availability of existing origin-destination data by car and bus and evidence on diversion rates to forecast the likely amount of switching from these modes to rail.

5.2 Sources of Evidence

This method can work at three levels.

Firstly, car and bus diversion rates could be obtained from comparable re-openings. The proportion of existing car and bus traffic that was captured by rail is applied to the available origin-destination data. The evidence might also indicate the proportion of traffic that was newly generated.

Secondly, evidence on market shares appropriate to the circumstances being forecast can be obtained. This is then applied to the existing total travel market. The problem here is that the split between car and bus in the market being forecast may not correspond to the figures that are being used for forecasting.

Finally, the most sophisticated approach is to take 'off-the-shelf' mode choice models and, according to the precise times and costs for the inter-zonal movements by each mode, to forecast the proportion that rail would capture on each flow. These models might be aggregate, estimated to market share data, or else disaggregate, estimated to the choices made by individuals. Either way, specialist advice is likely to be required.

5.3 Coverage

This method covers all types of traffic.

This method is unlikely to be of use for inter-urban travel

demand, given the general absence of reasonable quality data relating to the number of car and bus trips.

A further shortcoming is that it only covers mode switching, and therefore an amount must be added to represent the generation of new trips.

6. TRIP END MODELS: EXISTING EVIDENCE

Trip End Models operate at the level of the station but attempt to remedy some of the deficiencies of the trip rate method.

6.1 Method

The enhancement of the trip rate method is brought about by the development of a quantified relationship between the number of trips generated by a station and a range of factors which influence that demand.

However, given that the models are estimated at the level of the station, only broad service level measures can be included, such as the number of train departures per day, although greater detail can be included of characteristics of the origin other than population. These include local income and car ownership levels, and various socio-economic segmentations.

6.2 Sources of Evidence

The PDFH provides details of a model which, for local journeys, relates the volume of demand at a station to the population resident within 2 kilometres of a station, social class, the number of rail departures per day and the number of bus departures per day.

6.3 Coverage

Since it enables variations in trip rates across stations according to local circumstances, more accurate forecasts can be expected than the trip rate method. However, as with that approach, the existing evidence as summarised in PDFH is somewhat dated.

The existing models are appropriate for *local*, *feeder* and *attraction* traffic.

7. TRIP END MODELS: NEW EVIDENCE

Trip End models are relatively straightforward to estimate. If they were to be estimated, they should exploit the possibilities offered by geo-demographic information systems and include a wide range of socio-economic variables to obtain a better explanation of the number of trips generated by a station which would provide a basis for more accurate demand forecasts.

7.1 Sources of Data

The models could be estimated to LENNON ticket sales data or to survey based data.

The issue of specifying the catchment area is an important one, but one which can be addressed by allowing for different population bands around stations within the modelling process.

Survey based data would give more of an indication of catchment areas and allows more disaggregation than analysis of ticket sales data. However, given that each station provides only a single observation, surveys would have to be conducted at numerous stations to obtain robust estimates. This would make the survey based method an unattractive option.

7.2 Coverage

The models could distinguish between trips originating at a station and trips destined at a station. This would be useful for forecasting trips to primarily attraction stations as well as enabling a more accurate explanation of demand variations than if the two types of flow were pooled into total demand.

In principle, there is no reason why the models cannot be used to examine remote traffic, but in practice the lack of such stations would pose a practical problem. However, they do not address through or existing traffic adequately given that they are based on trips specific to stations rather than flows.

8. STATED INTENTIONS

This method simply involves asking individuals what they would do in the light of a new train service.

8.1 Sources of Data

The data is obtained from surveys conducted specifically for this purpose or else as part of a survey to collect other information, such as data on travel patterns.

The question on intended future use given a reopened line can relate to specific trips if they were to be made again or to travel in general. The latter avoids the need to gross-up

from specific trips to the total but is more difficult for the respondent to answer because it involves a greater degree of uncertainty, part of which is that it implicitly deals with generation.

8.2 Coverage

Since this focuses on individual trip making, it covers all the different types of rail traffic, although identifying *through* and *remote* traffic is not straightforward.

The main shortcoming with this approach is that it tends to overpredict the usage of new services. This is because respondents have an incentive to state that they would use the new services even if they probably would not since they are not committed to use them and there are no costs involved in not revealing their true intentions but there are benefits to be gained from others using it or its existence as an option for future use.

It has been found that stated intentions overpredict demand by around 50% (Fowkes and Preston, 1991; Wardman and Shires, 2003). It is therefore recommended that allowance is made for this in forecasting.

9. COMPARABLE METHOD

Trip rate and trip end models are specific to stations rather than flows. Comparable flow methods operate at the level of the number of trips between two places, commonly stations or zones combining several local or minor stations. The aim is to identify station pairings which are as close as possible to the flows for which forecasts are required which then provide an estimate of the demand likely to materialise between the two stations.

The very nature of this approach means that it is based on fresh evidence rather than that contained in existing studies.

9.1 Sources of Data

The only feasible source of data on rail trips between two stations is that provided by LENNON.

In some situations, one of the station pairings will already exist. Thus it is sensible to select trips for this station. An example is that we might select Knaresborough to York to forecast Pocklington to York trips. In other situations, such as Pocklington to Stamford Bridge, neither station exists and thus the approach will involve a greater degree of uncertainty. In this case, Brough to Goole might be selected as a suitable flow.

There is no need to limit the approach to one comparable flow. Thus in the case of forecasting Pocklington to York

demand, we might select a number of flows into York and make a judgement on the basis of this broader range of evidence.

9.2 Coverage

Since this operates at the level of the station-to-station flow, it is suitable for all types of traffic provided the appropriate reference flows have been selected.

Given that it can deal with *through* traffic, it provides a means of enhancing station specific demand forecasts.

This method should only be used if, for whatever reason, it is not possible to develop a model that explains variations in trips across routes (see section 12).

10. ENHANCED COMPARABLE FLOW

There are two reasons why we might want to enhance the basic comparable flow approach if resources are available to do so.

Firstly, the comparable flows will clearly vary in the degree to which they approximate the conditions relevant to the forecasting flows. Thus whilst trips between Knaresborough and York might provide a reasonable first approximation to the trips between Pocklington and York, it would be desirable to account for the fact that Knaresborough is farther away from York but larger than Pocklington.

Secondly, not only will it be impossible to find suitable reference flows for all the flows to be forecast and a tedious task for the remaining cases, this procedure is not necessary. For example, we could forecast Pocklington to York trips and then amend this forecast to suit other flows such as Market Weighton and Stamford Bridge to York.

The preferred approach here would be to forecast demand using comparable flows for routes which are both important and for which sufficiently close comparable flows can be estimated. These then provide the basis for incrementing other flows relevant to the reopened service.

The 'customisation' of the reference flow so that its demand can provide a more accurate guide to the demand likely to prevail on the route being forecast requires adjustments to be made for differences according to:

- Population, local income and car ownership levels as generators or trips and local employment levels as attractors of trips.

- Different fare levels and differences in the key timetable related service quality aspects of journey time, service frequency and interchange
- Different levels of competition from car and bus
- Other notable differences between the reference and forecast flows, although this should not generally be an issue to the extent that it has been possible to identify forecast flows which are similar to the actual flows.

Equation 1 (see section 4.1) sets out the procedure to be followed in adjusting the reference flow.

11. CROSS SECTIONAL DEMAND MODELS: EXISTING EVIDENCE

These models operate at the level of station-to-station flow. They are therefore an enhancement of the trip rate, trip end and comparative flow methods since they can examine causal factors in more detail.

11.1 Method

These models explicitly aim to explain the number of rail trips between rail stations. Variations in the number of trips across different flows are explained by reference to variations in the travel and socio-economic variables which are deemed to have the principal influences on rail demand. Statistical techniques are used to quantify the relationship between the range of explanatory factors and rail demand.

By far and away the most common means of estimating these models is to use LENNON ticket sales data, although survey data can be used either as a means of covering gaps in LENNON's recording of rail travel or as a source of information in its own right.

Ideally, variations in station-to-station rail trips are explained in terms of variations in: rail fares between stations; rail service quality between stations; the attractiveness of competing modes, factors influencing the generating potential of the origin station and factors affecting the attracting potential of the destination station. However, it is not uncommon that the competing modes are not considered and that the generation and attraction variables contain little other than population, with the exception of the use of 'station specific variables' as in Annex 1. Ideally competing modes should be considered since their attractiveness will impact on rail demand.

11.2 Sources of Evidence

PDFH contains a cross-sectional model for local trips. It forecasts trips from station *i* to station *j* and from station *j* to station *i* as a function of population within 800 metres of the

station and between 800 metres and 2 kilometres, social class, employment and the generalised time of rail and of rail relative to bus and car. However, the evidence is rather dated.

Annex 1 provides details of a cross-sectional model calibrated to 44679 observations for Non London inter-urban journeys over 20 miles. It covers 304 origin and 305 destination stations. Dummy variables are used to represent the generating potential of origin stations and the attractiveness of destination stations. Whilst this clearly does not cover stations which do not yet exist, sufficient stations are covered that it ought to be possible to select broadly similarly ones to those for which forecasts are required.

11.3 Coverage

Since this operates at the level of the station-to-station flow, it covers all types of traffic.

12. CROSS SECTIONAL DEMAND MODELS: NEW EVIDENCE

12.1 Method

If LENNON data is available at the level of the flow, there is little point aggregating it to the level of the station to develop trip end models since this loses a lot of detail and the averaging involved means that it is not possible to examine service quality effects at anything other than a very broad level. Although comparatively rare, there have been studies of new stations and services which have developed cross-sectional models in order to forecast demand.

12.2 Source of Data

The data upon which these models is calibrated is ticket sales data available from the LENNON system. This covers revenue and the volume of demand between stations. To this must be added data covering the attractiveness of the rail service and data on competing modes and the socio-economic characteristics of origins and destinations.

12.3 Coverage

This method covers all forms of traffic. Specialist advice should be sought in the development of these models.

13. INCREMENTAL DEMAND MODELS

13.1 Method

This method is based on the use of elasticities to amend base levels of demand according to changes in relevant variables. This is the traditional forecasting method used in the railway industry in Great Britain.

The methods outlined previously cannot handle what we have termed existing traffic where a reopening in effect offers travellers a choice of routes or increases the train service on an existing flow.

The main demand variable in these circumstances is the timetable. Traditional rail industry forecasting processes measure the overall attractiveness of a rail timetable in terms of its journey time, frequency and interchange requirements using what is termed the "rooftop model" to form one timetable quality variable – generalised journey time (GJT). Individuals are allocated to trains according to a profile of desired departure times and the relative attractiveness of different departures. The different departures are usually trains on a single route, but in this context they may represent departures on the existing route and on the new route.

When the new departures are introduced a new GJT is calculated and the effect on demand is forecast on the basis of a GJT elasticity applied to the proportionate change in GJT. This demand can then be allocated to different departures, yielding the demand for the new departures.

Where a reopening leads to the removal of an existing service, the approach becomes particularly straightforward. It then involves the comparison of the time, frequency and interchange features of the new service compared to the old service.

13.2 Source of Evidence

The forecasting procedure and elasticities are contained in the Passenger Demand Forecasting Handbook (ATOC, 2002) which also details the rooftop model and procedures underpinning the calculation of GJT.

However, application of this technique requires the use of the MOIRA programme or some similar program that can allocate individuals to trains and also calculate the overall attractiveness of rail so that the impact of the new service on overall demand as well as train choice can be determined. Copies of the MOIRA model are held by most train operators and the SRA.

13.3 Coverage

The method can be used to handle existing traffic where a route choice is offered or additional trains lead to increased frequency over part of the existing rail network. It can also be used where the reopening leads to the removal of an existing service.

The method is also central to forecasting future demand levels as GDP, car ownership and other external factors vary over time.

Specialist advice would be required for all but the simplest applications of this method.

14. CHOICE MODELS

Choice models operate at the level of individual decision and trip making and can be used to examine a wide range of choice contexts, either simultaneously or in isolation. The most commonly analysed context is that of mode choice, and this is critical to forecasting the demand for a reopened rail line since most of the traffic can be expected to be current trips attracted from other modes. However, other contexts can and have been examined, including route choice, ticket type choice, departure time choice, station choice and access mode choice.

The technique has been extensively used to forecast rail demand, from new local stations and services stemming from modest investment schemes through to major infrastructure projects and the provision of high speed inter-urban and international services.

14.1 Method

Choice models are invariably cross-sectional in nature, explaining variations in choice across individuals by reference to variations in the fare and service quality characteristics of the competing alternatives (eg, modes) and how reactions to these variables are modified by relevant socio-economic variables or trip characteristics. The most common modifiers are the trip related factors of journey purpose, time of travel and trip length, although income segmentations are not uncommon.

The quantified relationship takes the forms of the probability of an individual choosing a particular alternative as a function of the attractiveness of each alternative. The precise form adopted is almost always that of the multinomial or hierarchical logit approach.

Models are developed that deal simultaneously with the competition between rail, car, bus and, where appropriate, air or, more commonly, which examine in a pair wise fashion choices between rail and each of its competing modes separately.

Having estimated the choice model and determined the relative importance of each of the travel attributes to choice, the model is used to forecast how individuals would respond to the set of circumstances of the forecasting situation.

14.2 Sources of Data

Although these models can be estimated to secondary data, such as that available in travel survey databases such as the National Travel Survey, these rarely provide the necessary level of detail for the estimation of satisfactory choice models, not least because they rarely contain details of the cost and service quality features of each mode that individuals perceive and which therefore underpin their choices.

There are two sources of purpose collected data. The models can be estimated to the choices individuals actually make in the market place, termed Revealed Preference (RP) data, or to the choices made in response to the presentation of hypothetical travel scenarios, termed Stated Preference (SP) data. Revealed preference data is obtained from observations of actual behaviour of individuals in real world situations, stated preference, on the other hand, is data based on surveys of what people say they will do.

The advantage of RP data is that it reflects what individuals actually do. However, there can be limitations with this data, such as large correlations between variables or insufficient variation in others, whilst large amounts of data are usually required to develop robust models. On the other hand, SP data does not suffer these limitations, since the choice scenarios are under the control of the analyst, and multiple choice observations can be obtained per person. Its main drawback is that individuals are not committed to behave in accordance with their intentions and even random error in SP responses will impact on the demand forecasts obtained from models calibrated to this data.

Whilst models estimated solely to SP data far outweigh the number of models estimated solely to RP data, an increasingly common feature is the joint estimation to both types of data simultaneously. Most practitioners have a preference for rooting the model in some form of RP data or else validating the SP parameters against some measure of actual behaviour such as demand elasticities or market shares.

14.3 Coverage

Since these models are applied at the level of the individual they deal with all the different types of traffic. In addition, useful distinctions can be made between journey purpose, time of travel and various socio-economic factors, whilst the source of new rail traffic is indicated. The latter is important for social cost-benefit analysis.

A key issue, however, is the quality of the origin-destination data to which the models are applied. Particularly for inter-urban trips, the quality of the trip data that is available is

generally poor. Moreover, these models deal only with mode choice. Allowance must be made for the generation of new trips within the leisure market.

Not only must specialist advice be sought in the development and application of these models, which in itself is expensive, but the costs of data collection far exceed those involved in methods based on rail ticket sales data.

15. SUMMARY AND EVALUATION

We have here set out a range of models that can be used to forecast the rail demand likely to emerge from new services provided as a result of line re-openings.

It is recommended that, whenever possible, fresh data is collected to support the demand forecasting rather than relying on existing evidence and that, whenever possible, the forecasting procedure should be tailored as closely as possible to the forecasting situation. Procedures for using fresh data and for tailoring the forecasts have been outlined.

If ticket sales data is available in sufficient amounts (this will depend on specific circumstances but we would suggest data for a full year is used rather than a sample of a few weeks or months and a range of comparable flows / stations rather than a single example), it is recommended that causal models are developed to explain rail trips between stations rather than grouping data into trip rates from specific stations. Trip end models would be preferable to trip rate methods and in turn cross-sectional demand models would be preferable to trip end models.

For an initial low cost and relatively straightforward appraisal of the likely feasibility of a scheme, trip rate, diversion rate and comparable flow methods can be used to provide 'ballpark' estimates of demand.

If this stage shows that the scheme has some merit, a more detailed evaluation would involve the use of cross sectional rail demand models or choice models. This might be enhanced by the careful use of stated intentions or incremental methods to address specific issues.

We recommend that cross-sectional models are developed and used to forecast wherever sufficient rail trip data is available. Resources should only be committed to developing choice models where there is reliable data on current trip patterns by existing modes. Such situations would include more major schemes where resources to collect origin-destination data would be available.

Although some techniques are preferable to others, a range of techniques will sometimes be required to cover all sources of traffic and will also serve to provide a wider range of evidence from which judgments concerning likely demand can be drawn.

References

ATOC (2002) Passenger Demand Forecasting Handbook. 4th Edition, London.

Fowkes, A.S. and Preston, J. (1991) Novel Approaches to Forecasting the Demand for New Local Rail Services. Transportation Research 25A, pp.208-218.

TRL (2004) The Demand for Public Transport: A Practical Guide. TRL Report 593, Crowthorne, Berkshire.

Wardman, M. and Shires, J. (2003) Review of Fare Elasticities in Great Britain. Working Paper 573, Institute for Transport Studies, University of Leeds.

Annex 1: Details of Inter-Urban Direct Demand Model

The form of the demand model is:

$$V_{ij} = \mu e^{\sum_{i=1}^{p-1} a_i O_i + \sum_{j=1}^{q-1} b_j D_j} F_{ij}^c GJT_{ij}^d \quad (2)$$

where there are p origin and q destination stations. An origin and a destination station are arbitrarily omitted and serve as a base from which the other coefficients are interpreted.

V_{ij} is the volume of trips between two stations i and j. A round trip counts as two trips. Season ticket sales are not covered.

F_{ij} is the one-way fare between the two stations in pence and GJT_{ij} is the one-way generalised journey time between two stations in minutes.

The fare elasticity (c) is -0.9, the GJT elasticity (d) is -1.28 and the constant (m) is 18.03. The model is estimated to annual data for the financial year 1999 to 2000 and thus the demand forecasts must be uplifted to account for GDP growth.

The origin specific parameters (a) and destination specific parameters (b) relevant to each station are set out opposite.

	Destination	Origin		Destination	Origin
Aberdeen	3.32984	3.06279	Christchurch	0.71247	0.29662
Accrington	-0.41094	-0.30073	Chesterfield	0.23498	0.44744
Airdrie	-1.44794	-1.86962	Chingford	-2.01870	-2.06147
Andover	0.46517	0.31959	Chelmsford	1.43018	0.73398
Ashford	0.89560	0.45792	Christchurch	-0.21813	0.26165
Abergavenny	0.09684	0.56310	Chester LS	-2.79003	-1.06069
Alfreton	-0.92915	-0.18935	Clacton	0.30514	0.37126
Alton	-0.70358	-0.73130	Carmarthen	0.49575	0.69433
Arbroath	-0.27101	-0.18953	Cheltenham	1.21410	0.88563
Audley End	-1.33015	-1.37222	Colchester	-2.78970	0.96954
Ayr	1.30532	1.12148	Coventry	1.44697	1.09746
Aylesbury	-0.37613	-0.70501	Chippenham	-0.21159	0.55036
Aberystwyth	1.46132	1.81987	Crewe	0.82166	0.92897
Banbury	0.44050	0.70124	Chorley	-0.48653	0.09237
Blackburn	0.16937	0.22747	Crawley	0.80638	0.53816
Bracknell	2.57156	1.18039	Chatham	1.30853	0.96690
Bicester	-0.15934	-0.11908	Chester	1.80938	1.17126
Brockenhurst	-0.23817	-0.44236	Darlington	1.21861	1.35948
Bedford	-2.90922	0.94438	Dumbarton	-0.36176	-0.27309
Bridlington	1.24916	1.08132	Derby	1.39400	1.21801
Beverley	-0.03554	-0.13837	Dundee	1.74156	1.60063
Bexhill	0.13643	0.04798	Dewsbury	-0.06421	0.16155
Bridgend	0.31006	0.15897	Dartford	-0.21682	-0.09933
Bham Intl	1.82033	0.82910	Dunfermline	-0.68323	-0.95896
Barrow	0.66046	1.23815	Durham	1.48548	1.42701
B Stortford	-0.40963	0.23153	Didcot	0.16701	0.43375
Barking	-0.97498	-0.77530	Dumfries	0.53678	1.10853
Bournemouth	2.15210	1.38980	Doncaster	1.21129	1.20740
Bromley	1.14746	0.59658	Dover	1.11719	0.51838
Burnley	-0.23017	-0.49149	Ealing	0.76749	-0.10876
Bangor	1.14657	1.25435	Eastbourne	1.29926	0.94714
Barnstaple	1.08824	0.18155	Edinburgh	3.75270	2.95849
Barnsley	-0.40701	-0.36243	E Grinstead	-0.64534	-0.80582
Bognor Regis	0.42086	0.16459	East Kilbride	-1.19660	-1.29501
Bolton	0.59245	0.65211	Elgin	0.55948	0.96902
Blackpool	2.60243	1.25181	Ely	0.00731	0.34195
Bristol Pway	1.05295	0.99794	Epsom	-0.31613	-0.49124
Bristol TM	2.66591	2.07150	Eastleigh	-0.40010	-0.44867
Bury St Ed	0.43023	0.40398	Evesham	-0.48456	-0.22792
Basingstoke	1.01834	0.67447	Exeter SD	2.02645	1.59766
Boston	0.54002	-0.01324	Exmouth	0.00343	-0.42036
Bath Spa	1.95469	1.45589	Feltham	-0.09689	0.26537
Brighton	2.62723	1.71488	Folkstone	-3.40060	-0.12726
Braintree	-0.84120	-1.04469	Farnham	-0.40468	-0.64791
Burton	-0.19686	0.21935	Fareham	0.11121	0.33597
Buxton	-0.64369	0.28236	Fort William	1.21490	1.75166
Berwick	0.40450	0.79493	Gloucester	0.79165	0.59920
Bridgwater	0.01553	-0.30675	Gerrards X	-0.95795	-1.20037
Carlisle	1.76953	1.16966	Greenock	-0.12520	-0.34668
Caterham	-1.89584	-1.85582	Guildford	1.41010	0.89083
Cambridge	2.22160	1.69359	Grimsby	0.94421	1.37382

	Destination	Origin		Destination	Origin
Great Malvern	-0.45650	-0.63581	Kemble	-0.75512	-0.44408
Gobowen	-0.64991	-0.01973	Kettering	0.28117	1.22406
Goole	-0.80532	0.25212	Kidderminster	-0.44004	-0.53762
Grantham	0.27297	0.59507	Kirkby	-1.03518	-0.84644
Gravesend	-0.59949	-0.48353	Kings Lynn	0.60187	0.79572
Gatwick	2.69641	1.84289	Kilmarnock	0.14294	0.35802
Gt Yarmouth	1.09758	0.17306	Kingston	-0.18926	-0.90060
Havant	0.14045	0.26491	Lancaster	1.01320	1.05290
Hayes	-0.26735	-2.16844	Loughborough	0.22091	0.25993
Hexham	-0.08799	-0.02486	Leighton Buzz	-0.97195	-0.26188
Hereford	0.81950	0.81030	Lincoln	1.52329	1.13033
Halifax	0.02289	0.04292	Leeds	2.77243	2.13298
Hastings	1.19269	0.80676	Leicester	1.92993	1.52655
Harrogate	1.00535	0.39539	Letchworth	-1.13534	-0.68492
Haywards H	0.16925	0.28445	Lewisham	-0.74898	-1.05783
Hitchin	-0.51715	-0.25760	Long Eaton	-1.51981	-0.63947
Hemel Hemp	-0.25917	-0.02541	Lichfield		0.93359
Hinkley	-1.00970	-0.77574	Littlehampton	-0.30920	-0.91573
Harpenden	0.14232	0.35029	Llandudno	1.09764	-0.12025
Hartlepool	-0.39475	-0.03866	Llanelli	-0.46159	-0.42694
Horsham	0.35329	0.13095	Leamington	0.36388	0.51653
Harrow	0.49153	0.64426	Luton Parkway	-0.16934	-0.32717
Hartford	-1.26545	-0.45130	Luton	1.18135	1.02717
Huddersfield	0.84210	0.91044	Lewes	0.08362	-0.27155
Hull	1.97419	1.75878	Lowestoft	0.87546	1.09026
Huntingdon	-0.06062	-0.08003	Macclesfield	0.25138	0.29212
Haverfordwest	0.47492	1.17236	Maidenhead	0.22027	-0.11102
Heathrow Apt	3.60091	6.14306	Margate	1.01078	-0.03667
Harlow	0.45369	0.23234	Middlesbrough	0.90095	0.70722
H Wycombe	0.41805	0.16804	Mkt Hbrough	-0.82546	-0.20479
Ilkley	-1.09436	-0.99306	Meadowhall	0.80820	-0.60360
Inverkeithing	0.06171	0.22252	Manch Airport	2.55512	1.46409
Nottingham	2.38840	1.89698	Milton Keynes	1.78672	1.70093
New Abbot	0.75818	0.55341	Mel Mowbray	-1.01304	-0.49496
Neath	-0.11380	0.35562	Morpeth	-1.29439	-0.97351
Northallerton	-0.30456	0.17169	Motherwell	0.30739	0.33255
Nuneaton	-0.21094	0.08577	Newbury	0.11035	-0.24825
Newport	0.90142	0.68606	Newcastle	3.15659	2.83043
Oban	1.93336	1.22533	Northampton	0.96077	0.91697
Oldham	-0.93261	-0.69500	Norwich	2.21782	1.89447
Ormskirk	-1.19800	-1.26742	Scunthorpe	-0.00311	0.40672
Orpington	-0.38088	-0.56625	Sevenoaks	-0.22537	-0.19067
Oxford	2.21296	1.72536	Sheffield	2.14491	1.84333
Oxenholme	0.31700	0.18306	Shrewsbury	0.96746	0.83879
Peterborough	1.76178	1.62613	Shpley	-0.14535	0.66513
Plymouth	2.56368	2.03156	Sittingbourne	-0.25701	0.05517
Inverness	2.70047	2.45961	Skegness	2.42350	1.09416
Ipswich	1.33570	1.04258	Skipton	-0.10898	0.44930
Irvine	0.06482	0.49120	Slough	0.78711	0.38984
Kirkaldy	0.42798	0.91578	Sleaford	-0.43495	0.50519
Keighley	0.07194	0.86800	Stamford	-0.20052	0.16116

	Destination	Origin		Destination	Origin
Stowmarket	-1.60573	-0.43555	Worcester	1.08378	0.67110
St Helens	-1.11341	-0.86593	Staines	-0.40523	-0.95087
Portsmouth	-1.77514	0.95434	Soton Airport	0.17624	0.39983
Penrith	0.41123	0.15031	Solihull	-0.31108	-0.04951
Penzance	1.65549	1.24182	Southport	0.86028	0.20619
Poole	1.30847	0.68878	Stoke on Trent	1.04057	1.08118
Preston	1.67812	1.32088	Southampton	2.11736	1.45433
Port Talbot	-0.60166	-0.58509	Spalding	-0.86625	-0.41692
Perth	1.03108	0.80922	Stockport	0.89169	1.07578
Petersfield	-0.12085	1.04515	Stratford (Lon)	0.27329	-0.98325
Paisley	1.67079	1.57235	Stansted Airpt	1.50931	0.88940
Ramsgate	0.26056	0.29998	Stafford	0.36891	0.52331
Redcar	0.38159	-0.20505	Stroud	-0.22432	0.44442
Rochdale	-0.50345	-0.37633	Streatham	-1.16265	-1.16618
Redditch	-0.89923	-0.18899	Stirling	1.08386	0.98294
Reading	-1.46377	1.61000	Stranraer	0.78035	0.83417
Redhill	-0.07628	-0.04080	Sunderland	0.78957	0.60652
Redruth	0.46317	0.71687	Sutton (Lon)	-0.06570	-0.14076
Retford	-0.68780	0.07982	Stevenage	2.19384	2.48512
Rhyl	1.10746	0.70901	Swansea	1.93797	1.46568
Rayleigh	1.57412	1.00396	Swindon	1.49147	1.27272
Rotherham	-0.78545	-0.13052	Stalybridge	-1.11534	-0.30771
Richmond	0.46916	0.12361	Tamworth	-0.65431	-0.33564
Rugby	0.26958	0.46466	Taunton	1.26716	0.79867
Runcorn	1.01091	0.78325	Tunbridge W	0.64398	0.33780
St Albans	0.89069	1.01106	Telford	0.59146	0.71126
Sandwell	-1.30406	-1.47819	Tonbridge	0.03968	0.15532
Salisbury	1.05169	0.89364	Torquay	0.12609	
St Annes	-0.71722	-0.08042	Truro	1.49095	1.17461
St Austell	0.37050	0.48125	Thetford	-0.56494	-0.11917
Stratford	0.64388	0.17013	Tiverton	0.65546	0.00537
Stourbridge	-1.26492	0.35647	Wellingborough	0.16016	0.69586
Selby	-1.17688	-0.84547	Weymouth	1.46700	1.06743
Scarborough	1.81852	1.26180	Bradford	0.91464	0.70354
Watford	2.10107	2.16813	Birmingham	3.20667	2.28527
Welwyn GC	-0.41851	-0.60201	Croydon	1.93572	1.61319
Wimbledon	0.92199	0.61345	Dorchester	0.69720	0.59146
Winchester	1.14425	0.54230	Dorking	-0.61060	-0.83651
Wokingham	-0.06334	0.13902	Farnborough	0.49493	0.64833
Wilmslow	-0.62063	-0.64205	Falkirk	0.02488	0.39987
Woking	0.79066	0.75723	Glasgow	3.25216	2.91222
Worthing	0.44833	0.03008	Hertford	-1.00274	-1.15602
Worksop	-0.86442	-0.44090	Liverpool	2.66961	2.07795
Wrexham	-0.12645	-0.19553	Manchester	3.20226	2.47946
Westbury	-0.47074	-0.60517	Maidstone	0.97474	0.33157
Walsall	-0.37034	-0.73905	Newark	-0.04548	0.29074
Weston SM	1.04516	0.13748	Southend	3.25767	1.78403
Whitehaven	0.27946	0.98569	Wakefield	0.46121	0.55180
Witham	0.60664	0.84310	Wigan	0.47058	0.67009
W'hampton	1.22217	1.06848	Warrington	0.74865	0.57601
Woolwich	0.00705		York	2.58158	2.15306

Appendix 'B' Guidelines on Engineering Works

The following provides a check list of matters which need to be identified and resolved in the Route Survey and subsequent design of engineering works to reinstate the route. The list is not deemed to be fully comprehensive but provides a guide as to the likely problems which will be met.

Structures

- Underbridges
 - In place – condition Work required
 - Removed – cost to replace
 - Abutments & piers may still be in place – condition
 - Over watercourses – consult Environment Agency if replacement is needed
 - Over roads – consult Highways Agency and the LA
- Overbridges
 - Highways and public footpaths and bridleways – in place Highway Authority conditions
 - Removed and right of way now at railway level creating obstruction – costs to replace Highways Agency will specify conditions
- Culverts
 - May be overgrown and hidden. BRRPB may have records; otherwise consult the LA and Environment Agency
 - Check with farmer or landowner
 - Likely to be blocked and in poor condition
- Bridges over/under operational railways – consult NR (or other owner)
- Tunnels – NR, BRRPB or LA most likely to have legal responsibility. May have been filled in – works and costs to examine and reopen.

Level crossings

- Public highways – may have been replaced on new road alignment or intact but not operational if mothballed – costs to reinstate – HA may insist on replacement bridge, share costs
- Public footpaths/bridleways
- Legal requirement to reinstate and maintain

Earthworks

- Will probably be substantially intact
- But – lack of inspection and maintenance will have led to erosion of the profile
- Bank slips will be undetected or not repaired
- Cuttings may have been filled in, possible used for waste disposal
- Has made-up ground created potential instability of embankments and cuttings
- Unofficial footpaths will have caused erosion
- Reinstatement and repairs should take account of new slope requirements and the need for the formation to be wide enough to accommodate safe access for maintenance staff

- Similarly, accepted new footpaths and cycleways may need to be accommodated

Drainage

- Key to effective track stability
- Will probably be blocked or otherwise damaged
- Allow for repairs and reinstatement
- Lineside developments since closure may have created need for drainage previously not required
- Watch for unofficial outfalls onto the line from lineside properties, particularly industrial premises

Encroachments

- Encroachments within the boundary may have reduced clearances to the Line
- May be “soft” e.g. garden extensions or “hard” e.g. paved access roads
- Consult owners. Consider legal action to remove. Consult LA.
- Accommodate with appropriate structure/realignment. Consider sharing costs within reason to avoid conflict and resistance to the project

Lineside Boundary Fence

- Must be intact throughout before reopening
- May be need for high security fence where appropriate Consult LA
- Consult neighbours
- BRRPB will have records of boundary where the Line has not been sold
- Allow for gates and warning notices at public footpaths and occupation/accommodation crossings

Obstructions to the Line of Route

- Developments since closure may totally or partially block the line by buildings or other developments. e.g. residential housing or industrial premises
- Consider buy back/terminate a lease/ compulsory purchase
- Otherwise consider alternative alignments
- Highway improvements, widenings

Stations

- Have decisions been made as to location of stations? The old stations may not be in the right location for today's circumstances
- Consider proximity to population, businesses, education, health and leisure services, ease of access and opportunities for interchange.
- What sort of station – “cheap and cheerful” or more elaborate
- Allow for station access, car parking and bus stop
- Potential for a Park & Ride scheme

- Consult LA and Highways Agency re access to the highway
- Allow for provision for the disabled
- Planning approval may be required
- Access between platforms

Facilities

- Staff accommodation
- Stores accommodation – domestic, p-way materials, building materials
- Train maintenance – cleaning, fuelling, light servicing
- Waste disposal
- Plant and equipment, stores and servicing

Planned Developments

- Proposals within the Regional or County planning processes may impact on the alignment. E.g. proposed new road/bypass, road realignment or widening
- Other developments
- Consult the LA

Sites of Special Scientific Interest (SSSI)

- Check with English Nature for any SSSIs which will be affected and what protection arrangements may be sought

Appendix 'C' Glossary of Terms and Abbreviations

ATOC	Association of Train Operating Companies
DSA	Development Service Agreement
HMRI	Her Majesty's Railway Inspectorate
NR	Network Rail
RGS	Railway Group Standards
RSSB	Railway Safety and Standards Board
SRA	Strategic Rail Authority
TOC	Train Operating Company
Traction	Locomotives or self-propelled train units
T&RS	Traction and Rolling Stock – train units, locomotives and carriages
T&WA	Transport and Works Act
Wayleave	Rented right of way e.g. for utility company's pipes or cables

Appendix 'D'

Useful Information Sources and Contacts

ACoRP: web site www.acorp.uk.com

Association of Train Operating Companies: web site
www.atoc.org

Department for Transport: web site www.dft.gov.uk

Environment Agency: web site www.environment-agency.gov.uk

HM Treasury: web site www.hm-treasury.gov.uk

Network Rail: web site www.networkrail.co.uk

Office of the Deputy Prime Minister: web site
www.odpm.gov.uk

Rail Freight Group: web site www.frg.org.uk

Rail Passengers' Council: web site www.railpassengers.org.uk

Strategic Rail Authority: web site www.sra.gov.uk

British Rail Residual Property Board
BRB (Residuary) Ltd. Whittles House, 14 Pentonville Road,
London N1 9RP
Telephone 020 7904 5100

Her Majesty's Railway Inspectorate
Rose Court, 2 Southwark Bridge, London SE1 9HS
Telephone 020 7717 653

"Keeping Track"
Keeping Track Publications Ltd., 17-19 West Street,
Dunstable, Beds. LU6 15L

Network Rail
Network Rail Infrastructure Ltd, 40 Melton Street,
London NW1 2EE
Telephone 020 7557 8000

Rail Safety and Standards Board
Enquiry Desk, RSSB, Floor 4, Evergreen House,
160 Euston Road, London NW1 2DX
Telephone 020 7904 7518

Strategic Rail Authority
55 Victoria Street, London SW1H 0EU
Telephone 020 7654 6000

Technical Indexes Ltd.
Willoughby Road, Bracknell, RG12 8DW



Yorkshire and The Humber Region
4th Floor, Victoria Wharf, No.4 The Embankment,
Sovereign Street, Leeds LS1 4BA
Tel: 0113 246 9222 • **Fax:** 0113 246 0353

www.countryside.gov.uk

Produced by Navigator PR & Marketing Communications 01947 880513 www.navigatorpr.com