



Railway Appraisal & Business Cases

Introduction

Stantec is a leading transport and infrastructure consultancy firm with an established team delivering rail-related appraisals and business cases.

We assist clients in making the case for investment in the railway, whether that is a new or reopened line or station, or enhancements to services on existing lines.

Our key capabilities include:

- Supporting **clients** in making funding applications;
- Making the '**case for change**' – why is investment in the railway required?
- Options **appraisal** using national guidance, including WebTAG (England), STAG (Scotland) or WelTAG (Wales);
- **Business case development** in line with the H.M. Treasury 'five case model'; and
- **Monitoring and evaluation** of the impact of new railway infrastructure.

We typically work with:

- Community Rail Partnerships, railway societies and community interest groups;
- Local and regional government;
- Passenger transport authorities;
- Rail operators; and
- National government.

We have successfully supported each of the above organisation types to make the case for new investment while assessing the impacts of investment on communities and the economy. One particular area of expertise is establishing the case for railway investment where the traditional benefit-cost ratio might not stack up, typically re-focusing the case for change on improving connectivity and socio-economic issues.

In addition to our core railway consulting team, we offer:

- Within our wider team, capabilities in railway infrastructure design and supporting services such as planning and environmental services; and
- A specialist supply-chain with expertise across railway planning, operations and timetabling.

Key Facts

1644
TOTAL UK STAFF

158
TRANSPORT STAFF

23 OFFICES
AROUND THE UK
& EUROPE

£182m
TURNOVER 2020

How can we help?

Whilst the railway industry is **recovering from the effects of the COVID-19** pandemic, there is currently a significant programme of **research and investment** in the upgrade and expansion of the railway network and services. However, the demand for infrastructure and service investment continues to **exceed the level of funding available**, with many aspirations or proposals for new / reinstated lines, stations and services across the UK. The case for any single scheme must **stand out from the crowd** – we have set out below how **we can help you achieve this**.

BIDDING FOR FUNDING

Typical Clients: Community Rail Partnerships; Railway societies; community interest groups; and local authorities

We have a proven track record in supporting groups in bidding for funding to support the 'case for change' and business case work in relation to railway infrastructure and services. This has included bidding into formal funds, such as the Transport Scotland Local Rail Development Fund, and supporting local authorities in making the internal case for funding.

There is a major opportunity in this area at present following the UK Government's announcement in January 2020 of a £500m pot to fund feasibility studies, focused in particular on reversing line closures as part of the Beeching Cuts.

CASE FOR CHANGE

Typical Clients: Community Rail Partnerships; Railway societies; community interest groups; local & regional government; passenger transport authorities; rail operators; and national government

There are many proposed railway schemes around the UK, often promoted by politicians and / or local pressure groups. Whilst such support is essential to establish momentum for a scheme, it often leads to proposals lacking a coherent justification – i.e. what transport problems and opportunities is the project trying to resolve or realise? This lack of clarity at the outset can significantly undermine a proposal at the appraisal and business case stage.

We specialise in supporting clients to coherently establish this 'case for change', which determines whether there is merit in further considering a proposed scheme.



Through this stream of work, we focus on defining and evidencing the transport problems in an area and importantly, explore how these problems feed through into negative social and economic outcomes.

The 'case for change' determines a set of objectives, linked to the problems, which any scheme which emerges should seek to deliver. A robust 'case for change' therefore establishes a firm foundation for the project and provides both politicians and potential funding partners with a robust justification for action. It also establishes a range of transport options across all modes – the process ultimately must demonstrate that the rail option is the appropriate solution.

Note that Government bodies increasingly see this as a prerequisite and a key 'gateway' in the process – without a robust case for change, projects may not proceed further.

APPRAISAL AND BUSINESS CASE

Typical Clients: Community Rail Partnerships; Local & regional government; passenger transport authorities; rail operators; and national government.

We also have an accomplished record in progressing projects through the options appraisal and business case process, particularly in terms of the UK Government Restoring Your Railway Ideas Fund SOBC process. Our appraisal and business case development work is built upon the 'case for change' and allows for the analysis to be proportionately targeted at the key differentiators for any given project.

For example, for a new rural railway station proposal, the focus would be on, for example, connectivity and social inclusion rather than, for example, commuting and travel time savings. Our work in this area blends both standard appraisal approaches and rail specific considerations such as operations and timetabling, where our team and supply-chain can provide significant added value. The business case process ultimately takes a scheme through to the identification of a preferred option and ultimately to procurement and delivery.

MONITORING & EVALUATION

Typical Clients: Local & regional government; passenger transport authorities; rail operators; and national government

The final component of our railway consultancy offer is monitoring & evaluation, which considers the transport and wider societal impacts of new railway infrastructure and services. As well as being a mandatory part of the business case process, it is also the most effective means of informing the case for further future railway investment.

The focus of monitoring & evaluation is to collect and analyse data which determines whether the scheme is delivering its investment objectives, as established in the 'case for change' and refined in the business case.

We have significant experience in this area, an added advantage of which is that we have developed a strong understanding of the transport, economic and societal outcomes and impacts of new railway lines, stations and services. We use the knowledge gained through these studies to feed back into our 'case for change' and appraisal studies, helping our clients to make the case for investment.



Project Experience



Our Railway Consultancy team has successfully delivered multiple rail-related projects, a selection of which is detailed below.

BIDDING FOR FUNDING

We have a long-established track record in supporting railway interest groups, local and regional government in bidding for public funding to develop railway projects.

ST ANDREWS RAIL LINK

The £2m Scottish Government Local Rail Development Fund (LRDF) was launched to respond to the interest and enthusiasm shown by local rail organisations, local authorities and Regional Transport Partnerships for new infrastructure and services. The fund involves interested parties bidding for money to develop their prospectus for investment.

We successfully supported a local campaign group in its bid to secure £40,000 of LRDF funding to investigate the case for reopening the St Andrews

– Leuchars branch line through a 'case for change' piece. We subsequently unlocked a further £180,000 of LRDF funding to develop a full appraisal of future transport options for St Andrews.

BEATTOCK RAILWAY STATION APPRAISAL

We undertook a small initial commission for a local action group to develop a high-level 'case for change', with a view to securing further funding from Dumfries & Galloway Council (D&GC) and, ultimately, Transport Scotland.

Our study, which focused on why transport investment is needed rather than the specific case for a station, provided the catalyst for D&GC to commission us to undertake a comprehensive appraisal which also considered new stations at Eastriggs and Thornhill.

This work latterly fed into Transport Scotland's South-West Scotland Transport Study and Strategic Transport Projects Review 2 (STPR2).

This is a good example of where our initial support for a local railway group has provided the basis for a much wider and externally funded appraisal and business case.

BONNYBRIDGE STATION SCOPING STUDY, FALKIRK COUNCIL

A subset of Falkirk Council Elected Members and a local action group have run a long campaign for the reopening of Bonnybridge Station on the Glasgow Queen Street – Stirling line. We supported Council Officers in reviewing the technical, operational and financial case for the station.

Our technical work and advice made the internal case for funding, with Members approving funds to pursue a full appraisal of the transport options for Bonnybridge, including the proposed station.

Project Experience

CASE FOR CHANGE

We consider 'case for change' work to be a key step in the ultimate delivery of rail schemes.

The examples below demonstrate where we have, or are, making a case for change based on a wide range of bespoke connectivity, social and economic factors, drawn from local consultation and data analysis.

H.M. NAVAL BASE CLYDE, HIGHLANDS & ISLANDS TRANSPORT PARTNERSHIP

HMNB Clyde is located at Faslane near Helensburgh and is the site of the UK's only nuclear submarine base. It is also the single largest employment site in Scotland.

Despite this, public transport connections to the site are poor. We are currently supporting the Highlands & Islands Transport Partnership in developing a 'case for change' for the site, which will include consideration of a new railway station on the West Highland Line.

UPPER CLYDESDALE TRANSPORT OPTIONS, SOUTH LANARKSHIRE COUNCIL

Currently, there are three stations in Clydesdale (Carluke, Lanark and Carstairs), all of which are in the north of the area. In the south, there is no rail access and there have been growing calls from both local communities and politicians for improved rail links in this area.

As a first step in potentially applying for funding from the *Scottish Stations Fund*, we sought to identify and evidence the transport problems and opportunities in the Clydesdale area through consideration of all sustainable transport modes. We identified a series of sustainable options which could be progressed to the next stage of the appraisal process, including two new railway stations at Law and Symington.

EAST LOTHIAN ACCESS STUDY, EAST LOTHIAN COUNCIL

East Lothian Council secured initial funding from the first bidding round into the LRDF. We subsequently developed an area-wide 'case for change' developing the rationale for rail-based investment in East Lothian and supported the Council to secure additional LRDF funding to undertake the full appraisal.

The study was focused on evidencing the need for public transport – and specifically rail – improvements to meet the growing population of the area and several major developments, including a potential new settlement of 10,000 homes and associated community infrastructure.

The study outcomes are being used by the Council to make the case for investment with national government.



Project Experience

RESTORING YOUR RAILWAY IDEAS FUND

Stantec has played a leading role in the development of Strategic Outline Business Cases (SOBCs) in support of local authorities and rail promotion groups bidding into the UK Government Restoring Your Railway Ideas Fund.

CLITHEROE – HELLIFIELD STRATEGIC OUTLINE BUSINESS CASE, RIBBLE VALLEY BOROUGH COUNCIL, 2021

This study considered options for improving public transport connectivity between the Ribble Valley and Craven / North Yorkshire areas.

The study was primarily focused on restoring rail services on the existing line between Clitheroe and Hellifield, although the SOBC was multi-modal,

considering bus and light rail as well as heavy rail. The SOBC focused on establishing a clear case for change with regards to current travel behaviour in the area and its implications for local communities.

Having developed the rationale for investment, the business case generated, developed and appraised a long-list of options which considered: the Yorkshire destination of any restored railway link (Hellifield, Skipton, Settle, Ribbleshead or Garsdale); whether any future services should operate to Manchester or Preston; and the frequency / service level to be offered.

The appraisal involved the undertaking of detailed timetable analysis undertaken by partners AllanRail and Pilkington Rail Associates. The final SOBC was submitted to DfT in April 2021.

STRATFORD – WORCESTER / OXFORD STRATEGIC OUTLINE BUSINESS CASE, WYCHAVON DISTRICT COUNCIL ON BEHALF OF FOUR RAIL PROMOTION GROUPS, 2021

This SOBC was prepared in response to the successful RYR application to develop a business case for restoring the railway link between Stratford-upon-Avon in Warwickshire with Honeybourne in Worcestershire.

The study built on the previous Stratford Rail Study 2012, but took a step back from detailed appraisal and technical analysis to more fully develop the case for investment.

This case was focused on improving public transport connectivity between Stratford / South Warwickshire and Birmingham to Worcestershire, Gloucestershire, Oxfordshire, London, the South-West and South Wales.

The rationale for investment was wide ranging but focused on supporting the expansion of the labour pool, increased productivity, enabling development and supporting the development of the successful tourism product across the area.

Following an extensive baselining and stakeholder engagement exercise, a long-list of options was developed covering bus, tram, TramTrain, 'new modes' and heavy rail.

These options were subject to appraisal against the Transport Objectives set for the study, cost, deliverability and value for money as expressed through a benefit-cost ratio. The SOBC ultimately made a wide ranging case for investment identifying a shortlist of short and long-term options to progress to Outline Business Case – it was submitted to DfT in June 2021.





SOUTH FYLDE LINE STRATEGIC OUTLINE BUSINESS CASE, FYLDE COUNCIL, 2021

This SOBC emerged from the successful application for funding to consider the construction of a passing loop on the South Fylde Line to offer a half-hourly service between Blackpool South and Preston.

As with Stratford – Worcester / Oxford, the technical development of the options was well-progressed and significant modelling had been undertaken as part of previous studies.

The approach here was therefore to again take a step back from the options and focus on the development of a robust Strategic Case establishing how poor public transport frequency, reliability and capacity is impacting on the South Blackpool and South Fylde areas.

Having established the case for change, a long-list of options was developed incorporating bus, heavy rail, 'new' modes and light rail, specifically extension of the Blackpool Tramway onto the South Fylde Line using conventional tram or TramTrain.

Informed by desk-based research, a resident survey and stakeholder consultation, a set of Transport Objectives were set and the options appraised against them (together with a conventional value for money assessment).

The final SOBC identified a phased programme of options to be considered through the Outline Business Case process and was submitted to DfT in November 2021.



Project Experience

APPRAISALS AND BUSINESS CASES

Stantec is accomplished in preparing successful appraisals and subsequent business cases for railway services and infrastructure.

LEVENMOUTH SUSTAINABLE TRANSPORT APPRAISAL, TRANSPORT SCOTLAND AND FIFE COUNCIL

Stantec was commissioned by Transport Scotland to undertake the high-profile Levenmouth Sustainable Transport Study in line with the Scottish Transport Appraisal Guidance (STAG). The study appraised a range of multi-modal transport options which could help address the identified transport-related problems and realise the opportunities across the east coast of Fife, which is facing several economic challenges.

The final report recommended a package of measures comprising the reintroduction of the Levenmouth rail link, improved local bus services and active travel enhancements.

The £70m project was announced by Cabinet Secretary for Transport, Infrastructure and Connectivity Michael Matheson MSP on 8th August 2019. Main construction works start in 2022. Our work was commended by the local MSP.

THANET PARKWAY, KENT COUNTY COUNCIL

We developed a business case on behalf of Kent County Council for a new railway station south of Manston Airport, which would create a new parkway site on the Ashford International to Ramsgate line.

The study involved demand modelling, economic appraisal and an assessment of the viability of a new station at this site.

It concluded that the station offered a 'high value for money' benefit-cost ratio and provided the basis for subsequent Outline and Full Business Cases to support an application to the Local Growth Fund stream administered by the South-East Local Enterprise Partnership. The station is now under construction

MEDWAY COUNCIL NEW ROUTES TO GOOD GROWTH, MEDWAY COUNCIL

Responding to development pressures in the Medway area, the Council commissioned Stantec to lead its Housing Infrastructure Fund Business Case to be submitted to the Ministry of Housing, Communities and Local Government (MHCLG).

The New Routes to Good Growth business case was used to bid for £170 million of capital funding to support a package of major infrastructure developments in the Hoo Peninsula, including a new railway line and station.



The interventions and supporting business case were prompted by a need to facilitate the delivery of nearly 11,000 new homes in the peninsula by 2035, supporting over one third of Medway Council's housing need over this period. In November 2019, the MHCLG announced that Medway had been successful in its bid for the full £170 million of funding requested. This

case study highlights how we can bring our multi-disciplinary offer together to make a development-led case for new railway infrastructure and services.



Project Experience

MONITORING AND EVALUATION

Stantec is a leading consultancy in the monitoring and evaluation of new railway lines, stations and services.

Our work in this field has significantly developed the body of evidence on the transport, social and economic impact of railway investment, in turn allowing us to start from a more informed position when making the case for new infrastructure.

BORDERS RAILWAY EVALUATION, TRANSPORT SCOTLAND

The Borders Railway reopened on 6th September 2015, connecting Tweedbank to Edinburgh Waverley, a distance of circa 35 miles. Transport Scotland commissioned Stantec to undertake a three-stage evaluation of the project.

The first stage of the project was the development of a pre-opening baseline, which combined primary research and secondary data analysis to determine pre-opening travel patterns, awareness of the project, anticipated use and business investment / land-use decisions which had been prompted by the scheduled reopening.

The second piece of work was the Year 1 evaluation, which was undertaken one year after the line had reopened. The study reviewed usage (comparing outturn against forecasts), the contribution of the Borders Railway to its investment objectives, its impact on quality of life and barriers / issues which were preventing use.

We then undertook the Year 2 evaluation in 2018, which updated the Year 1 findings and mapped the emerging economic and societal consequences of the UK's longest newly constructed domestic railway for over 100 years.

EVALUATION OF THE VALLEYS RAIL STRENGTHENING AND EBBW VALE LINE REOPENING, WELSH GOVERNMENT

The Welsh Government commissioned Stantec to undertake this evaluation assessing the outputs, outcomes and impacts of the Valleys Rail Strengthening project (additional rolling stock and longer train formations at peak times) and the reopening of the Ebbw Vale Line.

The substantive element of the study involved evaluating the change in travel behaviour and the wider societal impacts of the investment. The focus was the reopening of the Ebbw Vale Line as it represented a wholly new transport connection, as opposed to an incremental improvement to existing services.

The final Evaluation Report demonstrated the significant value for money and wider socio-economic benefits obtained from the reopening of the Ebbw Vale Line and the wider scheme.

AIRDRIE – BATHGATE RAILWAY EVALUATION, TRANSPORT SCOTLAND

Transport Scotland commissioned Stantec to undertake this 'Stage 2' Evaluation of the Airdrie to Bathgate Rail Link, which reopened in 2010. Building on the outcomes of the Stage 1 Evaluation of the project which was completed in 2015, and working in line with Transport Scotland's Rail Evaluation Guidance, the aim of this study was to produce a comprehensive evaluation of the Airdrie - Bathgate Rail Link against both the Investment Objectives and the wider STAG Criteria.

The research included: an on-train survey of users of the Airdrie - Bathgate Line between Drumgelloch and Bathgate; a telephone survey of residents living within the line catchment area; secondary data analysis; and a comprehensive stakeholder engagement exercise.

The final report offered a detailed picture of how travel patterns had changed since the Airdrie - Bathgate Line reopened and the overall impact of these changes on the communities within West Lothian and North Lanarkshire.



People



STEPHEN CANNING

Restoring Your Railway Ideas Fund Lead

BA (Hons) Arts & Social Sciences
(University of Strathclyde, 2005)

Chartered Transport Planning
Professional, 2015

Stephen is an accomplished transport planner and economist and a highly experienced Project Director and Manager.

He has coordinated Stantec's response to the UK Government's Restoring Your Railway Ideas Fund and acted as Project Director on the Clitheroe – Hellifield, Stratford – Worcester / Oxford and South Fylde SOBCs. He has also acted as Project Director in the preparation of a strategy for the future development of the Bentham Line, which runs from Leeds to Morecambe and Lancaster.

A Chartered Transport Planning Professional, Stephen's specific area of expertise is preparation of the 'case for change' / rationale for investment, which is integral to the development of the Strategic Outline Business Case. He specialises in making the case for railway investment where the typical measure of value for money – the benefit-cost ratio – is low.

He does this through focusing on the prospective travel behaviour, economic and societal benefits of investing in railway infrastructure and services. A selection of Stephen's railway-related experience is set out below:

- Bentham Line Strategic Outline Business Case
- Clitheroe – Hellifield Strategic Outline Business Case
- Stratford – Worcester / Oxford Strategic Outline Business Case
- South Fylde Line Strategic Outline Business Case
- South Wales Metro Phase 2 Evaluation
- Evaluation of the Valleys Rail Strengthening and Ebbw Vale Line Reopening
- Bonnybridge Station Case for Change

People



DR SCOTT LEITHAM
Director, Transport Planning

BEng (Hons), Civil and Transportation Engineering, Napier Polytechnic, Edinburgh, Scotland, 1991

PhD, Transport Infrastructure and Industrial Operation and Location, Napier University, Edinburgh, Scotland, 1996

The Chartered Institution of Highways & Transportation, Transport Planning Professional

Scott is a Chartered Transport Planner whose experience since 1991 spans academic research and transport consultancy.

He has an established reputation in the railway consultancy sector, with experience across 'case for change' studies, appraisals, business cases, evaluations and franchise bids. He is also a highly versatile and experienced Project Manager and Director who has

managed or directed a wide variety of transport planning and appraisal projects across all modes and disciplines. His experience spans demand forecasting, multi-modal modelling and multi-criteria appraisal. Scott typically acts as Project Director on most of Stantec's railway consultancy work, detailed below.

Numerous 'case for change' projects to develop the rationale for new railway lines and stations including:

- Beattock, Thornhill and Eastriggs in Dumfries & Galloway
- H.M. Naval Base Clyde
- St Andrews Rail Link
- Abronhill, Glenboig and Plains in North Lanarkshire
- Bonnybridge and Grangemouth in Falkirk

Appraisal and business case development projects for new lines or major infrastructure investment, including:

- Clitheroe – Hellifield Strategic Outline Business Case
- Stratford – Worcester / Oxford Strategic Outline Business Case Airdrie – Bathgate line
- Levenmouth Sustainable Transport Study
- Edinburgh Glasgow Improvement Programme and the rolling programme of electrification

Appraisal and business case development projects for new or reopened railway stations, including:

- Reston and East Linton (Scottish Borders and East Lothian)
- Alconbury (Cambridgeshire)
- Corringham (Essex)
- Littleworth (Lincolnshire)

Projects monitoring and evaluating new railway lines and / or stations, including:

- Borders Railway
- Airdrie – Bathgate Rail Link
- Valleys Rail Strengthening and Ebbw Vale Line
- Aberdeen – Inverness rail line improvements
- Laurencekirk railway station (Aberdeenshire)



STEPHEN CANNING

**Restoring Your Railway
Ideas Fund Lead**

t. +44 131 297 7012
e. stephen.canning@stantec.com



DR SCOTT LEITHAM

**Director,
Transport Planning**

t. +44 131 297 7011
e. scott.leitham@stantec.com



■
Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. This allows us to assess what's needed and connect our expertise, to appreciate nuances and envision what's never been considered, to bring together diverse perspectives so we can collaborate toward a shared success.

We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at stantec.com or find us on social media.