RECONSTRUCTION OF

RAILWAY BETWEEN KESWICK AND PENRITH

OUTLINE COMMERCIAL CASE

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CONTENTS

INTRODUCTION

This document concentrates on potential traffic for the re-constructed line between Penrith and Keswick showing traffic patterns and revenue distribution for potential train operators as well as the return available on the capital costs of the line.

The costs of an initial single track unsignalled line (but with scope for future development) can be justified with a good rate of return and attractive revenue predictions for a number of existing Train Operators.

A locally established independent Train Operator dependent solely on the revenue between Keswick and Penrith would need traffic flows at the optimistic end of these predictions to break even - there would also be the expense of extra facilities that would need to be built initially for train servicing and stabling.

SYSTEM SCOPE AND SERVICE PATTERNS

The very simplest line to construct would be a single track from Penrith (junction) to Keswick, without any signalling. This would be sufficient to allow an hourly shuttle service using modern Diesel Multiple Units (DMUs) such as "Sprinters". Intermediate stations can be included where they serve current needs - historical station sites are of little relevance.

Later developments which can increase the capacity of the line are double track sections with signalling, extra platform(s) at Keswick and facilities for stabling excursion or special trains (perhaps even steam hauled).

The line must, however, be able to prove itself at the simplest level - a straightforward Public Service.

Capital costs for this initial single track scheme (as set out in the May 1995 Development Plan) have been estimated by several parties as being in the range £ 20 Million +/- £ 5 Million.

An hourly service running at the same minutes past each hour ("Clockface Timetabling") is easily remembered and actually gives the impression of being more frequent and attractive.
Trains running at odd intervals are seen by the potential user as unreliable and inconvenient.

To serve the wide range of functions which such a line can be expected to fulfil (see Appendix 2), the service needs to be consistent every day of the week, all year round. To provide transport for industrial and hotel workers on various shift patterns at both ends, the service needs to start no later than 06:00 and continue until approximately 23:00 daily. Hotel jobs, for example, are often advertised with the rider "own transport essential" as Public Transport runs largely between 08:00 and 20:00. Many bus services currently on offer are also seasonal and of no use to permanent workers.

There is justification for a first train at about 05:00 from Keswick (as a railhead for Allerdale in general) to feed the first train from Penrith to London (currently at 05:37) which is predominantly a Business service. The last Northbound arrival at Penrith is 22:19.
In the near future international trains to and from France will also call in the County.

For distribution of visitors within the Lake District, Keswick would provide a direct alternative to Windermere as a railhead for visitors unable or unwilling to use cars. Appendix - provides a summary of passenger transport needs for various categories of user in the area.

THE TRAIN OPERATOR's COMMITMENTS

To provide the basic service pattern which appears desirable - round trips starting from Keswick at the following times;-

MONDAY TO SATURDAY		05:00 to 22:00 (18 trips)
	or	06:00 to 22:00 (17 trips)
SUNDAY		possibly 08:00 to 22:00 (15 trips)

a train needs to be available for approximately 130 hours per week including trips to and from a servicing point every two days for fuel etc.

ANALYSIS OF DIRECT COSTS

In the current railway organisation trains are leased by the Operators from Rolling Stock Companies and indicative prices for this type of train, including provision for major overhauls, are in the order of £160,000 per annum.

Routine Maintenance and servicing is likely to be in the order of £20,000 per annum.

Fuel consumption for a two car Sprinter Unit can be calculated from standard performance figures for diesel engines and for a shuttle service of this type will represent an hourly cost of about £8 - giving an annual figure in the order of £55,000.

Traincrew would normally consist of a Driver and Conductor; to cover the full service pattern would require approximately five sets of crew at a total annual cost of about £200,000.

The costs above amount to approximately £ 415,000 per annum.

Train Operators on the national Network owned by Railtrack are charged access fees. These comprise annual fees, charges for anticipated use and variations for actual mileage covered. However when averaged out they provide figures in the range of £8 to £13 per train-mile overall in the North West of England.

The hourly pattern outlined results in a total annual mileage on the Keswick to Penrith line of about 216,000, giving a notional Access Charge (based on £9 to £10 per train mile) in the region of £1.94 Million to £2.16 Million per annum.

Total annual direct costs to a Train Operator therefore work out in round figures from £2.38 to £2.60 Million.

Operators using Sprinters in the immediate area are Regional Railways North West -RRNW- (including Manchester to Barrow and Windermere), Regional Railways North East -RRNE- (including Newcastle and Leeds to Carlisle and Manchester) and Scotrail (North of Carlisle).
These are the most likely Operators to be interested in access to Keswick so their situations are examined in more detail.

Train Operating Costs involve other supporting activities such as service and maintenance planning, control, supervision of staff etc.

Total Operating Costs comprise these plus all the general company overheads of administration, licensing, marketing, staffing of stations, general management and so on.

Figures published in Modern Railways in April 1994 allow these to be calculated as follows;

OPERATOR	TRAIN OPERATING COSTS PER TRAIN-MILE	TOTAL OPERATING COSTS PER TRAIN-MILE
RRNW	£3.55	£9.53
RRNE	£3.54	£9.55
SCOTRAIL	£3.54	£9.53

These will be used later to compare with revenue predictions.

PREDICTIONS OF PASSENGER NUMBERS

1. By analogy with existing lines, Cumbria Tourist Board expects to see

Connection with the National Network - similar to Oxenholme to Windermere	100,000
Scenic attractions and casual usage (comparison with other independent tourist lines, not operating all year)	150,000
Local commuting etc	50,000
TOTAL BASE LOAD	300,000

2. A Consultant's view (Brian Eaton - work for the Lake District National Park)

National Access	100,000
Scenic attraction / tripping	150,000
Local Commuting / access	50,000
Potential for "Park and Ride" using land adjacent to Penrith station, signed from the M6	60,000
Development of "Park and Ride at Threlkeld to ease Keswick traffic congestion	?
"Novelty Value" of a new line	50,000
Education and interpretation of local geography and history	?
As part of a fully developed Public Transport network for the Lake District	?
MINIMUM	410,000

CURRENT TRAFFIC PATTERNS IN THE AREA

Discussion with representatives of the Lake District Traffic Management Initiative and the Cumbria Tourist Board showed general agreement on the following points;-

Each year over 14 million people visit the Lake District of whom between 5 and 8 million are thought to pass through Keswick at some stage (figures from "the facts", Appendix 4, suggest a 1992 total of 6.75 Million).

Analysis of visitors to the Windermere area have shown that about 5% of those from the Manchester area (the largest source) came by rail - this was before direct services were established and would have involved at least two changes - at Preston and Oxenholme.

Day Trip visitors come largely from within a one to one and a half hour journey radius, thus focussing on Keswick from Cumbria, North Lancashire, Southern Scotland, parts of Tyneside and Yorkshire.

Mobility of the population in general increases roughly in line with national economic growth (2 to 3 % per annum currently), although car traffic outstrips this with growth rates anticipated by the Government approaching 5% per annum over the next twenty to thirty years.

The vast majority of visitors to Keswick come by car as Public Transport access to the area is inadequate.
Bus services mainly operate within the Lake District and do not provide a convenient access from outside.

OTHER INDICATORS

Total market share for rail passengers on longer distance routes can be in the range of 7-10%.

Recent Newspaper reports have quoted a 24% increase in Britons taking holidays in the UK in 1994.

Various studies of traffic on the A66 West of the M6 have estimated a total of 1.5 million journeys, although no detailed breakdown of origin and destination has yet been published.

The average party size in cars in the area was recorded by the Consultant as 2.4.

No reliable figures have been found for Bus and Coach traffic.

The following points are worth considering although they cannot be directly added to the figures above;-

1. The Settle and Carlisle line operates an infrequent service of Sprinters and achieves annual Passenger totals in the order of 500,000. this is partly through having its Eastern end in the West Yorkshire conurbations, but owes a lot to marketing raising Public awareness throughout Britain and abroad.

2. Multipliers for apparently small changes in travel patterns can have significant impact on total usage:

- 25 people commuting to full time jobs represent a journey total of	10,000
- 100 people making one weekly trip for leisure or visiting purposes represent a journey total of	10,000
- 30 people attending full time school or college represent a journey total of	10,000
- ONE coach party per day, April to October represents a journey total of	20,000

FARES AND REVENUE

The simplest analysis would treat the Keswick to Penrith Line as a separate entity, with separate ticketing from the rest of the Rail network - this would be the case for an independent operator.

To be comparable with local bus fares and car running costs as perceived by the user, Keswick to Penrith would have to be priced at about

£2.00 to £2.50 Single
£3.00 to £4.50 Return

The effective maximum bus fare in Cumbria is £5.20 - the CMS Explorer ticket giving freedom of the network for a whole day.

This immediately shows that an independent operator would need to sell nearly 600,00 return tickets in a year just to cover direct costs.

However, established Train Operating Companies/Units (all currently subsidiaries of the BR Board) would gain substantially from longer distance fares of visitors to the area, also helping to fill capacity on trains already running throughout the system.

The "Saver" fare is the most common leisure fare - cheaper fares are available but heavily restricted and higher fares apply to trains classified as business services.
Saver prices are used in the following analyses as "typical", giving return fares to Cumbria in the range £25 to £75 from the rest of Mainland Britain.

Even at the lower end of this scale, the Railway system as a whole stands to benefit by £ 1 Million for every 30,000 visitors to Cumbria.

Train Operators have clearly defined home operating areas - soon to be the subject of Franchises - but will be free to develop services into other areas as they see fit. Revenue from fares is shared between all the operators by a computer system which assesses the proportion of each journey likely to be made on each Operator's services - giving an incentive to develop cross country routes.

Using estimated visitor numbers at 5 Million and 8 Million per annum and the originating areas from the 1994 Visitor Survey suggests numbers from each area as follows

CUMBRIA	14.6 %	730,000 - 1,168,000
NORTHERN ENGLAND	8.4 %	420,000 - 672,000
NORTHWEST ENGLAND	19.5 %	975,000 - 1,560,000
YORKSHIRE / HUMBERSIDE	14.4 %	720,000 - 1,152,000
EAST / WEST MIDLANDS	10.2 %	510,000 - 816,000
LONDON AND SOUTH EAST	19.0 %	950,000 - 1,520,000
SCOTLAND	1.7 %	85,000 - 136,000
SOUTH WEST & WALES	6.2 %	310,000 - 496,000
NORTHERN IRELAND	0.3 %	15,000 - 24,000
OVERSEAS	1.8 %	90,000 - 144,000
TOTALS	96.1 %	4,805,000 - 7,688,000

Taking 5% as the typical proportion likely to arrive by rail gives predicted revenues from each area as follows

AREA	OPERATORS	RAIL USERS (@ 5%)	FARE CENTRE	RETURN FARE £	REVENUE POTENTIAL £
CUMBRIA	RRNE/RRNW SCOT/ICWC ICXC	36500	CARLISLE	4.70	171,550
NORTH	RRNE	8400	NEWCASTLE	11.50	96,600
NW	RRNW	19500	MANCHESTER	33.00	643,500
YORKS HUMBER	RRNE	14400	YORK	26.00	374,400
MIDLANDS	ICWC/ICXC RRC	10200	BIRMINGHAM	50.00	510,000
LONDON S/EAST ANGLIA	ICWC RRC 3.NSE	19000	LONDON	61.00	1,159,000
SCOTLAND	ICWC/ICXC SCOT	1700	GLASGOW	29.00	49,300
WALES & SW	RRNW/ICXC	6200	CARDIFF	82.00	508,400
N.I.	ICWC/RRNW SCOT	300	BELFAST	54.00	16,200
OVERSEAS	ICWC/EPS	1800	PARIS	150.00	270,000
	TOTALS	118000			£ 3,798,950

These figures assume a redistribution of 5% of the existing visitor numbers onto rail (mainly from cars) based on the conservative estimate of 5 Million per annum.

There are additional effects from the introduction of a new service - providing access to those without cars and curiosity value - which are not easily quantifiable but in recent years the Manchester Metrolink and Robin Hood line (Nottingham to Newstead) and the new station at Ivybridge in Devon have exceeded projected figures and achieved up to twice their predicted usage after a twelve month settling in period.

More optimistic figures which could be justified by the studies quoted would be for a 7% redistribution of up to 8 Million visitors - giving passenger numbers and revenue 40% higher than the figures above, again with the possibility of extras.

POTENTIAL BENEFITS TO TRAIN OPERATOR WORKING THE LINE

Assuming that one established operator ran the whole service between Penrith and Keswick, they would be credited with 100% of ticket sales between those points. Fares for longer journeys would be apportioned as described above with a separate calculation for every combination of origin and destination.

For simplicity, the following table is constructed by dividing the revenue potential from each area by the number of operators involved.

The Operators already identified as having existing services in Cumbria using Sprinters - and hence best placed to operate to Keswick - are RRNorth West, RRNorth East and Scotrail. All services to Penrith are currently operated by InterCity West Coast (ICWC) and Cross Country (ICXC).

International services via the Channel Tunnel are operated by European Passenger Services (EPS) which is not part of BR. Night trains are due to start in 1996.

a) Conservative figures based on 300,000 users of the Penrith / Keswick line, return fare at £4.00 with a 5% rail share of 5 Million visitors to Keswick annually.

OPERATOR	KESWICK/PENRITH FARES RETAINED £	SHARE OF LONG DISTANCE FARES £	TOTAL REVENUE £
RRNW	1,200,000	937,410	2,137,410
RRNE	1,200,000	505,300	1,705,300
SCOT	1,200,000	64,350	1,264,350
ICWC	-	807,433	807,433
ICXC	-	458,510	458,510
RRC	-	401,810	401,810
EPS	-	135,000	135,000

b) More optimistic figures, based on 450,000 users, return fare for Keswick-Penrith still at £4.00 but a rail share of 8 Million visitors.

OPERATOR	KESWICK/PENRITH FARES RETAINED £	SHARE OF LONG DISTANCE FARES £	TOTAL REVENUE £
RRNW	1,800,000	1,312,374	3,112,374
RRNE	1,800,000	707,420	2,507,420
SCOT	1,800,000	90,090	1,800,090
ICWC	-	1,130,406	1,130,406
ICXC	-	641,914	641,914
RRC	-	562,520	562,520
EPS	-	189,000	189,000

The Operator serving Keswick has the ability to improve its position even further by introducing through services from its home area and careful marketing.
Although the service has been described as a self-contained shuttle operation, it is possible to combine this with longer distance services as RRNW currently do from Manchester Airport to Barrow and Windermere.

VIABILITY FOR A TRAIN OPERATOR

A comparison of Train Operators' costs to Revenue predictions from above gives the following picture

OPERATOR	COSTS PLUS ACCESS CHARGES (£ M) PENRITH / KESWICK						REVENUE FORECAST	
	DIRECT ONLY		TRAIN OPERATING		TOTAL			
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
RRNW	2.38	2.60	2.87	3.09	4.00	4.22	2.14	3.11
RRNE	2.38	2.60	2.87	3.09	4.00	4.22	1.71	2.51
SCOT	2.38	2.60	2.87	3.09	4.00	4.22	1.26	1.89
	UNIT HIRE FUEL CREW MTCE		PLANNING CONTROL S/VISION		ALL CO. O/HEADS			

Regional Railways North West and North East are thus both shown to be able to earn sufficient to cover the direct costs of providing an hourly service between Keswick and Penrith, with some contribution to Operating and perhaps even Company overheads, based on current traffic patterns. This is unusual for a "rural" route and is more typical of a busy cross country line.

JUSTIFICATION OF CONSTRUCTION BUDGET

The return on any Capital expenditure building the line would come primarily from Track Access Charges to the eventual Operator (excluding any grant assistance which may be forthcoming).

Public Sector projects normally have to show an 8% return (12.5 year payback) while some large construction projects in the private Sector are judged on 5% (20 year payback).

RATE OF ACCESS CHARGE	RATE OF RETURN 5%	8%
£9 per Train-Mile (£1.94M p.a.)	£38.8M	£24.2M
£10 per Train-Mile (£2.16M p.a.)	£43.2M	£27.0M

CONCLUSIONS

1. By treating the Penrith to Keswick line as an extension of an established Train Operator's network, the hourly service proposed is an economic proposition for either Regional Railways North West or North East - either being capable of covering its direct costs and making some contribution to overheads without any growth in traffic.
   Scotrail falls a little short, but not by much.

2. Introduction of a service to Keswick has significant financial benefits for all the Operators currently serving Cumbria, and some in other areas where visitors originate.
   This all helps strengthen Cumbria's position in the Rail Network.

3. An independent Operator set up to run services between Keswick and Penrith only would need assurance of significant growth or revenue guarantees to be confident. There would be additional expenditure in providing servicing, stabling and maintenance facilities which would weaken the position.

4. Established operators bring all the strengths of experienced staff, existing marketing systems and all the necessary licences to enable a smooth start on day one.

5. Track Access charges at prevailing rates for the North West of England adequately justify a Construction budget of £ 20 +/- 5 Million as estimated for the initial single track scheme, possibly giving some margin for early development of the route.

6. The Railway has the ability, even at the lower levels of predicted usage, to remove 100,000 cars per annum (up to 500 per day in Summer) from Keswick, without reducing visitor numbers.
   As part of a managed Public Transport system for the Lake District, the impact could be further enhanced.

APPENDIX 1

REFERNCES

Cumbria Tourist Board
Tourism in Cumbria in the 1990s - the facts.
Tourism Impact Study 1992.
Visitor surveys - Cumbria 1994.

Lake District Traffic Management Initiative
Traffic in the Lake District.
A Road Classification for the Lake District.

Modern Railways (Ian Allan Ltd.)
Various issues detailing costs of Rolling Stock leasing, Track Access Charges, Train Operators' costs and revenue distribution.

Brian Eaton - Consultant
Verification of estimated usage, outline costs, Public perceptions of transport systems and fare levels.

APPENDIX 2

PASSENGER TRANSPORT NEEDS IN THE KESWICK / PENRITH AREA

A broad summary of needs for passenger transport in and around the National Park looks something like this;-

Park Inhabitants :	Travel to work Travel to school / college Shopping (light / occasional) Commercial visits / meetings Leisure - evenings / weekends Leisure trips - holidays Access to National Routes
Other local inhabitants:	Travel to work Leisure trips into the Park Access to National Routes
Visitors:	Access to accommodation Visits to attractions Shopping Access to leisure facilities Access to the countryside

For the local population the most poorly served is the "travel to work" category - bus operators left to their own devices have tended in many areas to operate services between about 07:00 and 20:00 when the largest numbers of people are about, but fail to serve shift workers.

In an area dominated by tourism, such as the National Park, staff need to be at work in Hotels and Guest Houses by 07:00 (before Breakfasts) and may not be leaving until between 21:00 and 22:00 (after Dinners have been served) thus requiring services to run reliably between about 06:00 and 23:00. This pattern tends only to be seen in Metropolitan areas.

Factories and other industrial sites in and around Penrith operate a variety of shift patterns.

Currently buses do not provide the links necessary for travel to Schools and Colleges at both ends of the line. Higher and Further education has tended to be overlooked although there is plenty of provision, and demand, in the area. Students seem to be expected to own cars.

For leisure purposes and to serve visitors, only the car gives total freedom, but Public Transport can come close by providing frequent services with carefully planned interchanges and simple ticketing.

Suggestions for developing an integrated system involving trains, buses and boats have been made in a submission to the Lake District Traffic Management Initiative.

APPENDIX 3

TOURISM IMPACT STUDY ALLERDALE - 1992

Cumbria Tourist Board estimate that Keswick accounts for 75% of Allerdale's accommodation provision for visitors, and this factor is used in the following tables.

	ALLERDALE	KESWICK
TOTAL BED SPACES	24,707	18,530
(OF THESE) SERVICED	6,176	4,632
DAY VISITORS (CUMBRIAN)	1.72 Million	1.29 M
" " (OTHER)	930,000	697,500
VISITOR NIGHTS - TOTAL	3.605 M	2.704 M
" - IN VISITOR ACCOMMODATION	2.820 M	2.115 M
" - VISITING FRIENDS ETC	790,000	592,000

Occupancy rates for all forms of accommodation were in the ranges

50 to 70 %	from May to October
40 to 50 %	in April
30 to 40 %	November and March
20 to 30 %	December to February

Accommodation for independent travellers, such as Youth Hostels etc. showed a flatter spread and only fell below 30% in November, January and February - but only just.

There is therefore not a pronounced peak, with a ratio only in the range of 2:1 between Summer and Winter staying visitors.
The general experience is that Keswick is an all year round attraction with no closed period.

APPENDIX 4

TOURISM IN CUMBRIA IN THE 1990s - THE FACTS

This study carried out in 1992 looked at the whole of Cumbria and concluded that-

- 3 Million people stayed at least one night in Cumbria
- 6 Million day trips were made by Cumbrian residents for leisure purposes
- Nearly half of all staying visitors were from the North of England
- Less than 1 in 12 were foreign with Germany and the USA dominant.
- The average length of stay was 5.7 nights.
- The main purposes of the visits were
  - to drive in the country
  - to visit towns and villages
  - rambling
  - visiting heritage sites and museums.
- The scenery was the main reason for choosing Cumbria.
- 90 % arrived by car
- 80 % were in parties of 2 to 4
- 80 % were repeat visitors.

The main complaints and disincentives were

- Congestion
- Lack of Parking
- Poor weather
- Poor availability of Public Transport

Figures extracted for Allerdale:

Staying visitors were 23 % of the total to the County

Visitors	staying	in serviced accommodation	30 %
"	"	" self catering	13 %
"	"	camping / caravanning	22 %
"	"	in "other" accommodation	3 %
"	"	with friends / relatives	22 %

Day Visitors represented 12 % of the total to the County

- non-resident, from accommodation	6 %
- " " from home	40 %
- Cumbrian residents	54 %

APPENDIX 5

1994 VISITOR SURVEY - NORTH AND WEST CUMBRIA

This study, published by the Cumbria Tourist Board, analysed visitors to a number of attractions, their origins, types of accommodation, length of stay and perceptions of service.

Areas of origin -	CUMBRIA	14.6 %
	NORTHERN ENGLAND	8.4 %
	NORTHWEST ENGLAND	19.5 %
	YORKSHIRE / HUMBERSIDE	14.4 %
	EAST / WEST MIDLANDS	10.2 %
	LONDON AND SOUTH EAST	19.0 %
	SCOTLAND	1.7 %
	SOUTH WEST & WALES	6.2 %
	NORTHERN IRELAND	0.3 %
	OVERSEAS	1.8 %

Accommodation -	Staying in West Cumbria	17.3 %
-	In holiday Accommodation in the Keswick area	16.6%

Reason for visit -	Specialist interest	33.6 %
-	To entertain children	17.8 %
-	Just in the area	14.6 %
-	Show friends / relatives	7.8 %
-	To pass the time	7.0 %
-	Just saw the signs	2.4 %

Planning of visit	- today	38.3 %
	- this week	38.7 %
	- over 1 week ago	8.9 %
	- over 1 month ago	12.7 %