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THE

BRANCH LINE REINVIGORATION SOCIETY

U N P R O F I T A B L E

L I N E S

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A Financial Study of Certain Railway Passenger Services in Somerset, Dorset and Hampshire

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C O N T E N T S .

P R E F A C E

As was forecast in a previous publication, proposals have now been made by the British Railways Board for the withdrawal of all passenger services between Bristol (Temple Meads) and Bournemouth (West) via Bath (Green Park); also between Evercreech Junction and Highbridge. At the same time, proposals have been made for the withdrawal of passenger services between Salisbury and West Moors and between Brockenhurst and Broadstone. In the following pages it is proposed to discuss these proposals from the financial stand-point.

We cannot hope to be as helpful as we should like over these services. In the first place, the "financial information" offered by British Railways to objectors is meagre; in the second place, the data supplied in the 'Beeching Report' is incomplete and therefore misleading. Nevertheless we think it important that some attempt should be made to get at the real truth about the economics of these passenger services before it is too late. That their withdrawal will cause hardship we can well believe; this is considered by the Transport Users' Consultative Committees. That the withdrawals are being pressed forward by British Railways without consideration of town and country planning requirements, local and national road congestion and future trends in population and industry is also true. A strong argument can be raised against rail closures on such grounds, but the basis on which closures are proposed is solely financial. That is why we devote this memorandum to the economics of three particular routes.

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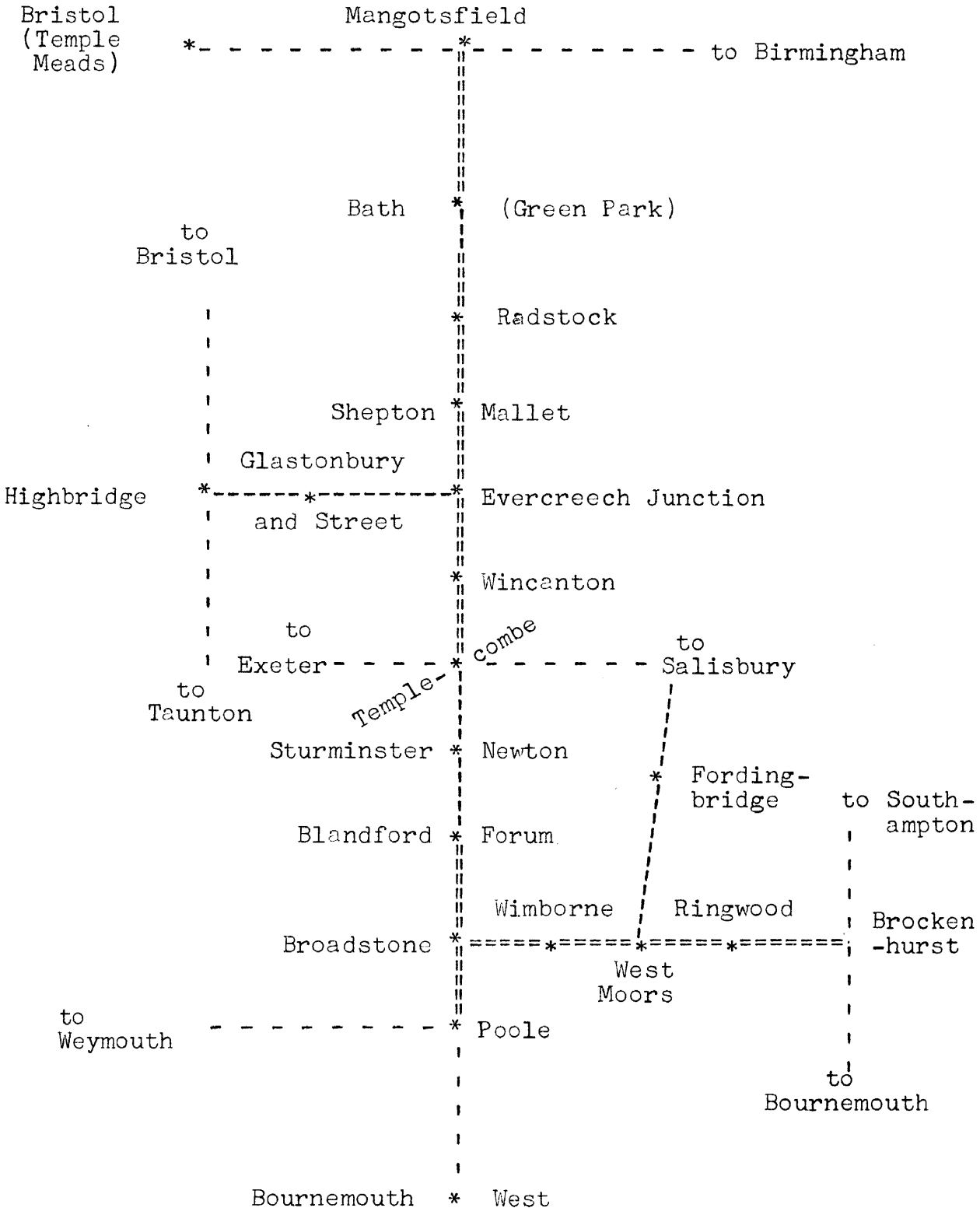

Key: Lines to be closed: ==========Double Track; ------Single Track
Other Lines: - - - - - - -

CHAPTER ONE

The Somerset and Dorset Railway

"During the eleven years 1950-61, British Railways closed completely or partially some 301 branch lines, or 19 per cent of the system. The estimated annual savings amounted to the equivalent of only 7% of the railways' loss for 1960.

"Far greater savings could have been achieved without closing a single branch line, although clearly many of the lines did need closing. Prodigious waste was rife throughout the system - a lack of foresight and imagination perhaps without equal in British history in a large industrial concern."

(The Rural Transport Problem - D.St.John Thomas)

We have already described the lines of the former Somerset and Dorset Railway (in a previous pu'lication) and we will only re-call to the reader's attention the salient facts: The main line runs from Broadstone in Dorset to Bath. Through passenger trains run over this main line from Bournemouth West to Bristol via Mangotsfield. There is a branch line from Evercreech Junction to Highbridge.

British Railways propose the withdrawal of the passenger services over the whole of these routes. All stations between Mangotsfield and Broadstone (exclusive) will be closed to passengers, as will the stations on the branch line, with the exception of Highbridge. Broadstone and Mangotsfield are themselves due for closure under other schemes.

The proposals for withdrawal are being made in accordance with the principle enunciated in 'The Re-shaping of British Railways' (the 'Beeching Report') a passage from which reads as follows:

> " It is proposed to close down routes which are so lightly loaded as to have no chance of paying their way, and to discontinue services which cannot be provided economically by rail. "

British Railways are not bound to furnish information on the financial performance of any particular route or service, but they do, in fact, supply the appropriate Transport Users' Consultative Committee with some figures about each

proposal for withdrawal they make. These figures are passed on to anyone who objects to the proposal for withdrawal. The figures in respect of the Somerset and Dorset lines are as follows:-

		Per Annum
Revenue Attributable to Line		£ 108,600
Direct Costs: Movement	£ 327,100	
Terminal	£ 71.500	£ 398,600

The Direct Costs quoted above do not include any portion of the under-mentioned renewals expected to be required in the next five years.

	1st year £	2nd year £	3rd,4th,5th years £	Total for next five years £
Permanent Way	109,400	105,800	74,000	289,200
Signalling	2,800	20,900	20,100	43,800
Buildings, Bridges, etc.	6,900	10,680	10,600	28,180
	119,100	137,380	104,700	361,180

"Have you guessed the riddle yet ?" the Hatter said, turning to Alice again.
"No, I give it up", Alice replied: "What's the answer?"
"I haven't the slightest idea", said the Hatter.
"Nor I", said the March Hare.

* * * * * * * * * * * * *

It would be a considerable over-statement to describe the above figures as helpful to anyone interested in the basic reason for the economic failure and consequent closure of the rail service in question. No indication is given of the period to which the information relates, one does not know how "revenue attributable to the line" is arrived at, whether it is merely passenger revenue, includes parcels revenue or is the total revenue for all traffic over the line. Movement costs and terminal (or station) costs are included but there is no figure for track maintenance and signalling other than those shown as renewals "expected to be required in the next five years". Do these figures include day-to-day maintenance (which is seriously in arrear on the Somerset and Dorset) or do they only refer to genuine renewals ? There is something very strange about these figures, incidentally; why do the requirements fall so drastically in the 3rd, 4th and 5th years ? Why has 50% of the total expected renewal cost of signalling to be met in the second year ? It is all extremely mysterious.

Indeed, this is a pleasant intellectural conundrum, but one to which no solution is supplied, and the general effect is as maddening as that of the answerless riddle which Alice was asked at the Mad Hatters Tea Party. The only conclusion which one is expected to draw - and no doubt this will be duly emphasised - is that the services are losing £ 300,000 a year and that capital expenditure of £ 360,000 is required over the next five years. Further than this, one is not permitted to go.

It has already been pointed out elsewhere that, in discussing branch line passenger services, the Beeching Report either ignores or dismisses very perfunctorily four vital questions; these are :

1) Can train costs be cut ?
2) Can fares be increased ?
3) Can stations be closed ?
4) Can track and signalling costs be cut ?

We would add one further question to these :

5) Can services be improved and traffic increased ?

1) Can train costs be cut ?

All services over the Somerset and Dorset line are steam-hauled. This is the principal reason for their undoubted attraction to the railway enthusiast, of which there is copious evidence. Steam is, however, an extremely expensive method of providing a rail service. The Beeching Report quotes 15/- per train mile as an average cost for such cases. One would hazard a guess that on the Somerset and Dorset the average cost is higher. The cost of running a diesel multiple-unit varies, but a fair figure is 4/- per train mile; a rail-bus costs even less. Use of diesel multiple-units on the Somerset and Dorset could therefore cut movement costs by nearly 75%.

2) Can fares be increased ?

This, so far as we know, is never considered. The Beeching Report merely comments that, to cover costs on many services, fares would have to be increased to eight or ten times their present level. This statement is unsupported by reference to any particular case and we regard it as ill-judged. It is quite possible that higher fares would readily be paid if required to maintain a service desired in a particular locality. A small premium only would be necessary if attention were paid to reduction of costs.

3) Can stations be closed ?

There are 29 stations on the Somerset and Dorset lines, excluding halts and those not immediately affected by the closure proposals. The average station cost is quoted in the Beeching Report as £ 2,500 per annum. We have no hesitation in saying that all but six of these stations could be closed - either entirely or by conversion to unstaffed halts. Why such a step was not taken long ago is incomprehensible.

4) Can track and signalling costs be cut ?

This is the most difficult question for the layman to answer since it is, to a large extent, a technical one. There are, however, one or two basic principles:

i) Double track costs more than single track to maintain. 57 miles of the Somerset and Dorset route mileage is double track (including Mangotsfield - Bath (Green Park). Is this really necessary ?

ii) Signal-boxes are an expensive luxury. A box manned by two men costs £ 1, 500 a year to maintain. Including again Mangotsfield - Bath (Green Park), there are over 30 signal-boxes on the Somerset and Dorset. Are they all necessary ? Could not the traffic be easily re-organised to be signalled by ten boxes at the most ?

5) Can services be improved and traffic increased ?

Here we really enter the realms of conjecture. It is tempting to be dogmatic and assert that any change on the Somerset and Dorset could only be for the better. Nevertheless, it is notoriously difficult for a rail service to regain lost custom and it is probably safest not to assume that any great improvement in traffic would flow from an improved service. That a service by diesel multiple-units would be a vast improvement we hold to be a self-evident fact, particularly as their advent would coincide with a re-casting of the current antique time-table. In some parts of the country the use of diesel multiple-units has dramatically increased traffic and one would hope for some noticeable effect on the Somerset and Dorset.

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Having briefly considered various ways in which operating economies can be effected we should now like to try and apply the various methods to the operation of the Somerset and Dorset railway.

In our previous Report on these lines we made some suggestions for extensive modernisation and rationalisation; an obvious criticism of such suggestions, and one which has been indicated to us with some force, is that a fairly large amount of capital expenditure would have been required and that such expenditure would not be justified. The following suggestions involve very little capital expenditure initially; subsequently such expenditure would be confined to routine renewal of track and other fixed assets; (we assume that arrears of maintenance will be made good).

I. Assumed that entire system is retained for passenger services.

We have not prepared a detailed time-table, but we base our calculations on the premise that the main-line service between Bournemouth and Bristol (Temple Meads) will be operated by three two-car diesel multiple-units and the branch-line service between Evercreech and Highbridge by a single rail-bus.

The main-line carries seven trains each way daily over the entire route between Bournemouth (West) and Bristol (Temple Meads). The branch-line carries four trains daily in each direction between Templecombe and Highbridge. Assuming that this is a week-days only service, the total train mileage each week would be 6,600 (main-line) and 1,580 (branch-line).

All track between Broadstone and Mangotsfield will be singled (where it is not single already).

All stations between Broadstone and Mangotsfield (exclusive) and on the branch-line will be closed with the exception of: Blandford Forum, Sturminster Newton, Wincanton, Glastonbury and Street, Shepton Mallet (Charlton Road), Radstock (North), Bath (Green Park). It is assumed that Templecombe will remain open (on the former S.R. main-line to the West). Highbridge, on the main W.R. line from Bristol to Taunton will obviously remain open anyway.

Crossing places on the single track line will be retained (with appropriate signalling) at Bath (Green Park), Radstock, Midsomer Norton, Shepton Mallet, Evercreech Junction, Wincanton, Templecombe, Sturminster Newton, Blandford Forum, and Glastonbury and Street.

Stationmasters will not be appointed at the staffed stations, but a Line Manager for the entire route is envisaged. Station buildings will in all cases be rationalised for ease and economy of maintenance.

On the assumption that the system is operated in accordance with the above facts, the annual cost would be as

follows:-

Main Line

Movement costs:

Diesel multiple-units: 343,200 miles @ 4/- per mile	£ 68,640

Terminal costs:

8 x £ 2,500 * (making allowance for shared costs at Broadstone & Mangotsfield)	£ 20,000

Track and Signalling:

$73\frac{3}{4}$ miles x £ 3,500 ♀	£ 259,000
TOTAL	£ 347,640

* vide Beeching Report, p.16.
♀ Maintenance Category C, single track (Beeching Report, p.9.)

Branch Line

Movement costs:

Rail-bus: 82,160 miles @ 2/6d per mile	£ 10,270

Terminal costs:

$1\frac{1}{2}$ x £ 2,500 (making an allowance for shared costs at Highbridge)	£ 3,750

Track and Signalling:

$22\frac{1}{2}$ miles x £ 2,000 *	£ 44,000
TOTAL	£ 58,020

* Maintenance Category D for single track (Beeching Report, p.9.)

Main Line

Parcel, Mail and Newspaper carriage receipts will make some contribution towards total cost. For the sake of simplicity it is assumed that such receipts will average out at £ 5 per train or £ 21,800 per annum.

Freight Traffic is assumed to cover its movement costs and to make a contribution towards track and signalling costs of £ 25,900 per annum.

The deduction of these two figures from the total cost calculated above at £ 347,640 leaves a net annual cost of £ 299, 940 to be retrieved from passenger traffic on the main line.

Branch Line

Parcel, Mail and Newspaper carriage receipts will make some contribution towards total costs. For the sake of simplicity it is assumed that such receipts will average out at £ 2 per train or £ 3,740 per annum.

Freight Traffic is assumed to cover its movement costs and to make a contribution towards track and signalling costs of £ 4,400 per annum.

The deduction of these two figures from the total cost calculated above at £ 58,020 leaves a net annual cost of £ 49,880 to be retrieved from passenger traffic on the branch line.

Main Line

£ 299,940 per annum = £ 67 per mile per week for providing the passenger service between Bournemouth (West) and Bristol (Temple Meads). At 2d per mile average fare this is equivalent to 8,040 passengers per week. At 3d per mile average fare (this is, in fact, the standard fare for second class travel) it is equivalent to 5,360 passengers per week, or an average loading of 64 passengers per train. The famous 'Density of Passenger Traffic' map issued as an appendix to the Beeching Report shows a density of 5,000 - 10,000 passengers per week between Bristol (Temple Meads) and Templecombe and a density of less than 5,000 passengers per week between Templecombe and Bournemouth.

Branch Line

£ 49,880 per annum = £ 43 per mile per week for providing the passenger service between Highbridge and Evercreech. At 2d per mile average fare this is equivalent to 5,160 passengers per week. At 3d per mile average fare it is equivalent to 3,440 passengers per week, or an average loading of 71 passengers per train. The Density Map (referred to above) merely shows that less than 5,000 passengers per week use this route at present.

II. Assumed that certain parts of the system are discarded.

We are conscious that the hypothesis upon which we have worked in the foregoing section may not be tenable on the ground that excessive capital expenditure is required to certain parts of the system (See, e.g. the 'financial information' supplied by British Railways to the Transport Users' Consultative Committee). We have no information on this point of any value but, on the assumption that heavy capital expenditure is required (as distinct from routine maintenance which has been allowed to get into arrear) we have prepared a further set of calculations.

As the basis for these we have assumed that the entire section Evercreech Junction - Mangotsfield has been abandoned. It is notorious that this section contains all the major civil engineering works on the line and is by far the most expensive to maintain, as well as incorporating the large white elephant of Bath (Green Park) station. In fact, we understand that part of the line is to be retained in the region of Radstock anyway, for freight purposes, but we ignore that point in the following calculations.

The route retained for passenger services therefore runs from Highbridge to Broadstone. It will be single track throughout. Stations retained between Highbridge and Broadstone will be Glastonbury and Street, Wincanton, Sturminster Newton and Blandford Forum. It is assumed that Templecombe will be kept open on the former S.R. route to the West.

The passenger service would be maintained by two diesel multiple-units each making five journeys over the whole route each week-day.

Movement cost:

Diesel multiple-units: 209,040 train miles @ 4/- each	£ 41,808

Terminal costs:

5 x £ 2,500 (making allowance for shared costs at Broadstone and Highbridge)	£ 12,500

Track and Signalling:

59 miles @ £ 2,750 per mile (Maintenance Category D+)	£ 162,250
TOTAL	£ 216,558

It is assumed that parcel, mail and newspaper carriage receipts will make some contribution towards total cost. For the sake of simplicity it is assumed that such receipts will average out at £ 3 per train or £ 9,360 per annum. Freight traffic is assumed to cover its movement costs and to make a contribution of £ 16,225 per annum towards track and signalling costs.

The deduction of these two figures from the total cost calculated above at £ 216,558 leaves a net annual cost of £ 190,973 to be retrieved from passenger traffic over the route between Bournemouth and Highbridge.

£ 190,973 per annum = £ 55 per mile per week. At 2d per mile average fare this is equivalent to 6,600 passengers per week. At 3d per mile average fare it is equivalent to 4,400 passengers per week, or an average loading of 73 people per train. Most of the route comes in the 'under 5,000' category in the Density Map referred to above.

We comment on these figures in the concluding chapter of this study.

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CHAPTER TWO

Salisbury - Bournemouth West
Brockenhurst - Bournemouth West

" The Board will not produce a detailed breakdown of earnings. Under the 1962 Transport Act we are not required to produce any figures for the Consultative Committees as the only issue involved is whether there will be hardship to passengers. But, in fact, we do give them certain figures as a guide. "

(A British Railways Board Spokesman)

British Railways have proposed the withdrawal of the passenger services on the above routes. The hearing before the Transport Users' Consultative Committee has actually taken place (on September 17th at Bournemouth).

The Salisbury - Bournemouth West route is 38¼ miles long. The first five miles out of Salisbury - as far as Alderbury Junction - use the Salisbury - Portsmouth/Southampton main-line which is not to be closed to traffic. There then

follows 14¾ miles of single track to West Moors, where there is a junction with the Brockenhurst - Bournemouth West route.

The distance between Brockenhurst and Bournemouth West is 30¾ miles; between Brockenhurst and Broadstone the route is, in fact, the original main-line from Southampton to Weymouth. The entire route is double track.

Both routes are used for through trains as well as local services, especially in the summer. A newspaper train runs from Salisbury to Weymouth in the early hours of the morning over most of the Salisbury - Bournemouth West route.

Both routes are fully signalled, most of the stations are staffed and the passenger services are steam-hauled thus giving the same classic conditions for uneconomical operation as exist in the case of the Somerset and Dorset railway. We say nothing on the subject of the actual service offered except that it is capable of improvement.

At the Committee hearing it was stated by British Railways that through services which have formerly used the lines will be re-routed if the closures take effect. One wonders why they were not re-routed long before, so that the maintenance and upkeep of the lines could have been more closely suited to the local services which are their main raison d'être. British Railways propose that the sections between West Moors and Salisbury and between Ringwood and Brockenhurst be entirely closed; that between Poole and Ringwood is to be retained for freight "with simplified signalling and lower standards of maintenance than at present". Apparently the possibility of maintaining a passenger service as well, notwithstanding the simplified signalling, etc., was not considered.

As was pointed out at the hearing, the area served by the lines in question is one which is developing rapidly as a hinterland to Bournemouth and Poole. The roads are badly congested, particularly in summer, and this state will worsen rather than improve. Having regard to this, one might have thought that rail transport in the area should be improved and increased rather than entirely abandoned.

The major point made by the spokesman for British Railways was that these services lose £ 150,000 a year - or ten times their cost on the Salisbury line and seven times their cost on the Brockenhurst line.

The following figures have been produced as 'information':

Salisbury - Bournemouth West

Passenger earnings	£ 5,000 p.a.
Expenses	£ 51,400 p.a.

Renewal expenditure required in the next five years:

Permanent way	£ 42,800
Signalling	£ 7,500
Bridges	£ 50,000
Buildings and other assets	£ 8,500
	£108,000

Brockenhurst - Bournemouth West

Passenger earnings	£ 17,700 p.a.
Expenses	£ 121,300 p.a.

Renewal expenditure required in next five years:

Permanent way	£ -
Signalling	£ 18,250
Bridges, buildings and other assets	£ 8,000
	£ 26,250

The only comment which one can make on these figures is that they are even more ambiguous than those furnished in respect of the Somerset and Dorset railway and as British Railways is under no obligation to produce them at all one can only suppose that their main objective is to enable the British Railways spokesman to tell the Transport Users' Consultative Committee at its public hearing that such-and-such a service is losing so much per annum. Since the spokesman cannot be questioned at all on this point the statement receives the maximum of publicity without the slightest risk that its veracity might be impugned.

We repeat the questions which we asked in Chapter I:

1) Can train costs be cut ?
2) Can fares be increased ?
3) Can stations be closed ?
4) Can track and signalling costs be cut ?
5) Can services be improved and traffic increased ?

1) Can train costs be cut ?

The short answer is yes; we suggest the use of two 2-car diesel multiple units and one rail-bus, used interchangeably on both routes.

2) Can fares be increased ?

The figures quoted by British Railways are nowhere near explicit enough to tell us what the average fare at present charged amounts to. We can only repeat the observations made under this heading in Chapter I.

3) Can stations be closed ?

Yes. The whole lot could be closed, and tickets sold and collected on the trains.

4) Can track and signalling costs be cut ?

Yes. The track between Poole and Brockenhurst could be sibgled for a start. Signal-boxes are only required at Broadstone, Wimborne, West Moors, Ringwood and Fordingbridge.

5) Can services be improved and traffic increased ?

Certainly to the first part of the question, probably to the second part. The use of diesel multiple-units and a rail-bus would result in a more attractive service and a thorough re-casting of the timetable would double the effect.

The following figures for the two routes (treated as one entity for operating purposes) are based on the very elementary proposals mentioned above.

Movement Cost:

1) 140,000 miles @ 4/6d per mile	£ 31,500
2) 70,000 miles @ 3/- per mile	£ 10,500
	£ 42,000

(1) = diesel multiple-units; (2) = rail-bus.
Allowance has been made for the extra cost of collecting fares on the trains. Assumed five journeys each way over both routes.

Terminal Costs: Nominal.	£ 4,000
Track and Signalling:	
Maintenance Category D (Single tck)	£ 86,000
TOTAL	£132,000

It is assumed that parcels, newspapers and mail will make a contribution of £ 6,000 per annum towards total cost and that freight traffic will make a contribution of £ 8,600 towards track and signalling costs, in addition to covering its own movement costs.

This leaves £ 117,400 to be covered by passenger receipts, which is equivalent to £ 34 per mile per week of route. At an average fare of 2d per mile this is equivalent to 4,080 passengers per week. At an average fare of 3d per mile this is equivalent to 2,720 passengers per week.

At this point, perhaps, it would be germane to mention that the passenger receipts for the Salisbury/Bournemouth West route in the 'information' supplied by British Railways seem quite inexplicable. Total receipts for a route mileage of 38¼ are quited as being £ 5,000. This is equivalent to about £ 3 per mile per week; at an average fare of 2d per mile this would account for 360 passengers per week and at an average rate of 3d per mile for 240 passengers per week - or 60 and 40 per day respectively. This result seems unbelieveable, particularly when one takes into account the <u>through</u> traffic passing over the branch and one can conclude that in this case the use of the words 'passenger earnings' was mis-conceived. Curiously enough, the words generally used, i.e. 'revenue <u>attributable</u> to the line' are conspicuous by their absence.

We comment on these figures in the concluding chapter of this study.

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CHAPTER THREE

The Light Railway.

"They order", said I, "this matter better in France".

(A sentimental journey through France and Italy - L. Sterne.)

A curious omission from the Beeching Report is the subject of the Light Railway; powers are available which are ideally suited to the operation of the lightly-loaded rural line but they are not even briefly discussed. The heavily dogmatic approach prevails and it is made clear that unless a full quota of Victorian ironmongery and an absolute plethora of staff is utilised no passenger service can possibly be operated.

In fact it is perfectly possible to run a very useful passenger service with the minimum of equipment and this is not infrequently done on the Continent where, as in other matters, they order their affairs to greater advantage.

The Light Railways Acts of 1896 and 1912 were passed at a time when Britain's railways were omnipotent and the intention was to encourage extension of the rail system to parts of the country which suffered from its absence - notably the isolated agricultural community.

Not much use has been made of the Acts, other than for industrial, non-public lines, but they offer an extremely useful and interesting opportunity to any local authority enterprising enough to grasp it boldly.

Under the Acts, any local authority, individual, corporation or company (or jointly, as the case may be) may make an application to the Minister of Transport for what is called a Light Railway Order. The procedure is governed by the Ministry of Transport (Light Railways Procedure) Rules, S.R. & O., 1927.196. The Minister of Transport may authorise any local authority making such an application to advance money either by way of loan or as share capital in support of the construction and operation of a Light Railway and generally any Local Authority may also participate fully in the construction and operation.

There is no doubt, therefore, that the power exists for local authorities and any other public-spirited body or person to apply for a Light Railway Order and thenceforth relieve British Railways of the impossible burden imposed upon them by their rural routes mileage.

What advantage does a Light Railway possess over the more orthodox kind ?

The essential advantage is that it is a great deal cheaper to run.

Some guide to the operational requirements of the Light Railway can be found in "Requirements for Passenger Lines and Recommendations for Goods Lines of the Minister of Transport and Civil Aviation in Regard to Railway Construction and Operation" (M.O.T.& C.A. - H.M.S.O., 1950: Reprint 1960). On page 25 (which follows a discussion of the requirements, etc., relating to the orthodox railway line) this document says :

"On Light Railways, or lines of local interest, the application of the foregoing Requirements will be considered

in each case on its merits, having regard to the gauge, volume of traffic, axle-load and speed limits".

In other words, a very wide discretion is given to the Minister. Certain suggestions are made, e.g.:

"An acceptable apparatus (instead of a Block Signalling System), where such is necessary at all, for providing an adequate interval of space between following trains will be some form of telephone instrument".

"A Ground Frame, which need not have overhead cover, is acceptable in lieu of a signal box."

Regarding level crossings: "The arrangements are for consideration in each individual case." Cattle guards, speed reduction and whistle boards, two warning signs on each road approach are some of the possibilities.

It will readily be understood that the operation of a Light Railway is vastly less expensive and very much simpler than usually obtains. Track and signalling cost - a very heavy feature in most operational accounts - is reduced dramatically. Routes which carry a traffic beneath the contempt of Dr.Beeching prove an economic proposition on a Light Railway. When one considers that the track of the routes discussed in Chapters I and II is in reasonable condition (certainly good enough for a Light Railway) it becomes clear that they could be maintained for many years at an annual cost of a great deal less than the £ 2,000 per mile which is the lowest figure quoted in the Beeching Report.

In fact, we understand that certain freight routes of British Railways are maintained for £ 300 per mile per year. Not to be unduly grasping, we will estimate a light railway expenditure of £ 500 per mile per year.

We choose two examples to illustrate the economy that can be achieved:

1) The Somerset and Dorset Railway

We assume that the northern section from Evercreech to Bath has been closed, due to the high cost of capital expenditure required to maintain it in being.

There remains the 63 miles from Highbridge to Poole, all single track, to be operated as a Light Railway. We envisage two Light Railway Boards, one (the Mid-Somerset Light Railway) from Highbridge to Templecombe, the other (the Mid-Dorset Light Railway) from Poole to Templecombe. (The constit-

-ution of these two Boards we would suggest as an amalgam of local authority, parish council, Chamber of Commerce, N.F.U. and industry.)

Movement costs:

Bournemouth West / Highbridge (67 miles) 209,040 miles per annum @ 4/6d per mile	£ 47,034
Terminal costs / Administration costs	£ 5,000 (say)
Track and Signalling costs:	
63 miles @ £ 500 per mile per annum	£ 31,500
	£ 83,534

We assume that we may deduct from this gross figure parcels, etc. and freight receipts of £ 25,500 (as in Chapter I), leaving a total required passenger revenue of £ 58,000. This is equivalent to £ 17 per mile per week; at an average fare of 2d per mile this requires 2,040 passengers per week; at 3d per mile, 1,360 passengers per week. Or, 34 and 23 passengers per train respectively.

Compare these figures with the ones arrived at in Chapter I for a similar operation on orthodox lines.

2) Salisbury / Bournemouth and Brockenhurst / Bournemouth

Movement costs:

As in Chapter II	£ 42,000
Terminal costs / Administration costs	£ 4,000 (say)
Track and Signalling costs:	
(at £ 500 per mile, allowing for track shared with other routes)	£ 21,500
	£ 67,500

Assumed that parcels, etc. and freight receipts will amount to £ 14,600 per annum, leaving a net figure of £ 52,900 to be covered by passenger receipts. This is equivalent to £ 15 per mile per week; at an average fare of 2d per

mile, 1,800 passengers per week, at an average fare of 3d per mile, 1,200 passengers per week. (Compared with figures of 3,720 and 2,480 for orthodox working).

It will readily be seen from the above illustrations that quite small (relatively) flows of traffic can be transported by rail without financial loss. As it is on financial grounds alone (there being, we take it, no social or moral or ethical objection to railways) that closure proposals are put forward we hope that such grounds will be contested. Some closures are justified but, in many cases, British Railways themselves could eliminate a route loss by more efficient and less involved operation. In other cases a Light Railway Order is the proper solution. We shall be glad to assist, to the best of our ability, any body interested in applying for one, either in respect of lines discussed in this paper or any other.

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CHAPTER FOUR.

Conclusions

1) Can train costs be cut ?
2) Can fares be increased ?
3) Can stations be closed ?
4) Can track and Signalling costs be cut ?
5) Can services be improved and traffic increased ?

We make no apology for repeating these questions yet again, since they form the entire basis of our argument which is, quite simply, that many branch and secondary lines of British Railways threatened with closure could be made viable financially, given the interest and initiative to make them so.

The driving force which is propelling the various proposals for closure into the hands of the Transport Users' Consultative Committees and the Minister of Transport is the theory that railways can only be economic if routes carry dense traffic. In support of this theory the Beeching Report produces the rather feeble example quoted in the Report on p.16, from which one is supposed to deduce that, even where freight traffic is also carried, no route carrying less than 10,000 passengers per week can possibly afford a passenger service.

What we hope we have done in the preceding chapters is to illustrate the fallacy on which this argument is based - that there is some immutable law of railway operation requiring expensive provision of staffed stations and signalling (apart from the obvious, indeed glaring, economies that can be effected by use of diesel motive-power instead of steam), and the very significant part played in railway economics by the annual cost of the track.

We are, of course, conscious that the figures we have used are not fully justified by concrete evidence as is desirable; figures for track and signalling cost, for instance, are based initially upon those shown in the Beeching Report but we do not know whether they are particularly appropriate to the lines under discussion. So far as Light Railway operation is concerned, our estimate is based upon the known fact that British Railways run certain freight lines at a track, etc cost of only £ 300 per mile but we do not know whether we have been over- or under-optimistic in assessing the likely cost where a passenger service is also operated.

Parcels and freight receipts have been invoked to contribute towards the total cost of the lines discussed. We do not think that we have been extravagant in assessing such contributions. All the lines carry at present a considerable parcel and freight traffic - see e.g. map No.4 of the Beeching Report - "British Railways Distribution of Freight Traffic Station Tonnage". We are not suggesting that such traffic will make a profit but that it may be expected to make some contribution towards the upkeep of the tracks it uses.

We make no comment on capital expenditure, since we have no information on the subject apart from that supplied by British Railways to the Transport Users' Consultative Committee and nothing of any value can be distilled therefrom. It is known that maintenance has been allowed to get into arrear on the Somerset and Dorset line and probably on the others also, and, in so far as this may be reflected in the estimates for future capital expenditure they should to that extent be discounted in considering the closure proposals. We cannot think it right that the closure or retention of a service should depend upon the amount of work which has not been done in the past. So far as our own proposals are concerned, relatively little capital expenditure would be incurred; the main expense would be the provision of suitable alternative motive-power, the simplification (and elimination) of signalling and the rationalisation of station buildings. A certain amount of money would also have to be spent on providing alternative protection at level crossings in place of the present manually-operated gates.

We have assumed, in calculating movement costs, that diesel multiple-units and rail-buses would be used; it is generally assumed that they provide the best service on branch and secondary lines and the economics of their use are well-known. There is a case, however, for introducing the diesel locomotive, coupled with the use of excess main-line coaching stock. This arrangement gives greater flexibility and would be no more expensive; we hope that it will be considered.

The real purpose of the calculations made in Chapters I and II was to try and establish whether a variation in operating costs could result in expenditure figures that one could reasonably expect to cover by passenger receipts; the results of the calculations are summarised as follows :-

Somerset & Dorset line:	Trains per week.	At 2d per mile.		At 3d per mile.	
Chapter I; Example I.		1.	2.	1.	2.
1. Main Line	84	8040	95	5360	64
2. Branch	48	5160	107	3440	71
3. Example II	60	6600	110	4400	73
4. III: Light Railway	60	2040	34	1360	23
Salisbury / Brockenhurst - Bournemouth West lines:					
5. Chapter II	120	4080	34	2720	23
6. III: Light Railway	120	1800	15	1200	10

Column 1 = passengers per week required
2 = passengers per train required

We think that these figures are interesting, particularly those showing the number of passengers per train required. (It should be remembered, when considering these, that the figures in line 2 are inflated by the sparse service, and those in lines 5 and 6 inflated by the more intensive service). A rough comparison can be made with the census figures compiled by British Railways, the Dorset County Council and the Sturminster Rural District Council:-

<u>Dorset County Council figures for Salisbury / Bournemouth.</u>

<u>Maximum loading</u> per train (excluding through services).

Down: 35, 104, 97, 78, 143, 40.
Up: 15, 21, 154, 48, 22, 46, 58.

Dorset County Council figures for Brockenhurst / Bournemouth.

Down: 30, 25, 62, 34, 30, 31, 23, 28, 37, 24.
Up: 20, 52, 50, 37, 26, 54, 36, 140.

(These figures relate to a summer week-day.)

British Railways figures for Somerset and Dorset main-line.

Maximum loading (estimated) for trains running entire route.

Down: 91, 46, 37, 41. Up: 35, 105, 75.

(These figures relate to a summer week-day).

Sturminster R.D.C. figures for Templecombe / Bournemouth.

Maximum loading for trains on this section:

Down: 80, 52, 37, 15, 12, 27, 14.
Up: 23, 20, 12, 18, 50, 39, 14.

(These figures relate to a winter week-day.)

One should consider these figures bearing in mind the undoubted fact that the services provided are debilitated by years of inattention, with the result that traffic has fallen off and that none of the census figures quoted above takes into account special traffic of the excursion type which could well be expected on all the routes under consideration.

We think that the figures we have tentatively calculated as showing the required traffic to make the lines viable financially are not beyond the reach of an enterprising management. Indeed, we should be surprised if the Salisbury / Brockenhurst / Bournemouth West lines could not pay their way without much difficulty. The Highbridge / Evercreech Junction section of the Somerset and Dorset carries a very sparse passenger traffic at the moment and we doubt whether a passenger service can be justified on its own; but if the line is to be kept open for freight, why not operate the section as a Light Railway ?

All the routes under discussion could, we are convinced, continue to provide a service to the public, either as Light Railways or in a less elaborate guise than at present. We should like to see a great deal more flexibility in the approach by British Railways to the problems of their lesser lines. It is difficult to believe that enough thought has been

applied to the operation and finance of lines like the ones we have considered in this short and all-too-cursory study. We applaud the forward-looking sections of the Beeching Report and wish the innovations every success. At the same time, we hope Dr Beeching will realise that, as he carries part of his railway system forward into the 20th Century, he is in danger of relegating other parts of the country to the standards of the 18th.

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THE BRANCH LINE REINVIGORATION SOCIETY.

The objects of the Branch Line Reinvigoration Society, as laid down in the Society's Constitution, are as follows :-

(a) to secure the provision, retention and improvement of railway services, with particular reference to local and branch services, where these are considered to be necessary or socially desirable.

(b) to work for the establishment of a co-ordinated national rail, road and air transport system, making the best use of available resources and freed from considerations determined purely by profit.

(c) to encourage the use of railways in general, and branch lines in particular.

The Society seeks, inter alia, to obtain the co-operation of Local Authorities and Provincial Bodies in the carrying out of its objects.

The membership fees for the full year January to December, 1964, have been fixed as follows :-

Corporate Members	£ 1 - 0s - 0d.
Adult Members	10s - 6d.
Juvenile Members .. .. (under 18 years)	6s - 0d.

Reduced fees are payable for members joining on or after 1st July in each year.

Copies of the Society's Constitution, Manifesto and also membership application forms may be obtained free of charge upon request to the Membership Secretary at -

20, Ridge Crest,
Enfield,
Middlesex.