

## RAILWAY PRESERVATION SOCIETY OF IRELAND

### Summary of Branch Line Feasibility Report, October 1980

#### 1. INTRODUCTION

The Feasibility Study was set up by the Council of the RPSI in June 1979 to examine the feasibility of the RPSI re-opening and operating a closed main line connected branch line within Northern Ireland, and to make a report and recommendation to the Council. P Scott and D Grimshaw were asked to form a sub-committee. The sub-committee decided that its procedure should be to identify as many areas as possible where difficulties could be expected, and to investigate these areas sufficiently to establish whether or not the difficulties could be overcome. Other areas were to be investigated only in so far as to establish an estimate of cost. The sub-committee decided that it should recommend whether or not re-opening a closed line was feasible, which if any lines should be considered, and whether, in the opinion of the sub-committee, the RPSI should proceed with such a scheme.

#### 2. AREAS OF DETAILED STUDY, TOGETHER WITH FINDINGS

2.1 Legal. The Department of the Environment for Northern Ireland and the Railway Inspectorate were consulted, and legislation researched. Parliamentary authority is necessary to build and operate a line of the length envisaged, in particular where road crossings of any type are involved. The Light Railways Act under which most of the preserved railways in Great Britain operate does not extend to Ireland. The Tramways (Ireland) Acts are still in force, but specify an axle load limit of 8 tons, which would be inadmissible. The only way in which legal authority can be conferred is by private Act of Parliament. The cost of such an Act is estimated at £5,000, if certain of the background work is carried out on a voluntary basis.

2.2 Protection of RPSI Rolling Stock. A new company would be set up to hold the legal powers conferred by the Act, and the RPSI could lease equipment to this company. Society property would thus be protected in the event of failure of the company.

2.3 Consideration of Possible Branch Lines. There are no suitable closed lines in Northern Ireland where railway powers are still in existence, so that the study considered lines which in all cases have been dismantled and subject to re-development. The sub-committee decided upon the following criteria/

1. To make the project worthwhile and yet not too expensive to maintain, the length should be between 5 and 10 miles.
2. Any line considered should have features which make it interesting and challenging to operate. An uninteresting but easily maintained section should be avoided, since much of the interest of the steam railway would be lost and the effect on both volunteers and visitors would be adverse.
3. The line should be scenically attractive, and should include as many typical railway features as possible.

4. It should be within 30 miles of the Belfast area from which the majority of both volunteers and visitors can be expected to come.
5. The line would be worked by volunteers.
6. Civil engineering works and installations involving high maintenance costs should be avoided. A balance would have to be struck between this and Nos. 2 and 3 above.
7. The line should be in an area not associated with the present civil unrest.
8. Close proximity to residential areas should be avoided.
9. It is assumed that the locomotives and rolling stock already maintained to operate main line trains would be available to work the branch, so that the overhaul of additional stock would not be required.

In addition, the Society laid down the condition that any line considered must be capable of connection to the existing main line system.

The following is a list of the lines considered, and the main observations in each case:

Knockmore Junction - Banbridge  
 Portadown - Armagh  
 Portadown - Dungannon  
 Ballymacarret Junction - Comber

Re-development precludes reinstatement of junction with main line.

Goragwood - Newry  
 Goragwood - Markethill

Location unsuitable due to present security situation.

Randalstown - Toome  
 (11¼ miles)

Main feature is masonry viaduct at Randalstown. Extensive redevelopment of formation for agricultural use. Recent housing development at Randalstown. 6 out of 7 public road bridges removed. M22 motorway crosses formation. Ruling gradient 1 in 132.

Kingsbog Junction - Ballyclare  
 (3¾ miles)

Extensive redevelopment of formation for highway and agricultural use. Restricted in length.

Scarva - Banbridge  
 (6¾ miles)

Scenically attractive. Interesting to operate. Ruling gradient 1 in 73. Requires 1 new bridge over road, replacement of steelwork and some masonry for canal bridge and 4 river bridges. Reinstatement of some earthworks required. 4 minor public road level crossings. Acquisition of property required or deviation of line.

Having taken into account in each case the extent of re-development of the track bed, the engineering problems, and whether the line would produce an attractive and interesting section of railway when restored, the sub-committee concluded that the only suitable line is the former branch of the GNR(I) from Scarva to Banbridge. From here, the study is concerned primarily with it as the only option.

2.4 Attitude of Local Authority. Banbridge District Council was approached regarding reinstatement of the railway as a tourist amenity, and has approved the scheme in principle. Application for a Department of Commerce Tourism Grant of 75% of the capital cost has been approved. A sub-committee has been set up to liaise with the RPSI. The formal position of the District Council at present is that the remaining 25% of the capital cost could not come out of District Council funds.

2.5 Availability of Land. Of 26 landowners, 23 are in favour and 3 against the reinstatement of the railway. Within the confines of a fact-finding study, no attempt could be made to persuade the 3 to re-consider their views. Land values were not directly discussed.

2.6 Public Road Crossings. There are 2 road over-bridges in situ, and 3 level crossings involving minor unclassified roads. There is one road under-bridge which may require to be replaced by a level crossing, and a new bridge will be required to span the Gilford road at Scarva. Agreement in principle has been reached with the DOENI Roads Service regarding the layout of this bridge.

2.7 River Crossings. There are 4 locations between Lawrencetown and Banbridge where the railway crossed the river Bann by steel girder bridges. The Department of Agriculture has been approached regarding reinstatement of these bridges, and has expressed no objection in principle but would have to consider detailed proposals.

2.8 Junction with Main Line at Scarva. Northern Ireland Railways Co Ltd has agreed in principle to a trailing connection on to the up line at Scarva.

2.9 Operating Requirements. Operation of the line would be subject to the Ministry of Transport Publication "Railway Construction and Operation Requirements" as advised by the Railway Inspectorate. The minimum requirements were estimated as follows:

1. Run-round loop at each end of line.
2. Storage sidings and locomotive shed, preferably at junction.
3. Interchange siding with NIR.
4. Station facilities at junction: office, ticket sales, shop, mess room, toilets, car park, coal and oil storage, tractor for coaling, loco water supply, mains water and single phase electricity supply, road access for heavy transport.
5. Other Stations: platform and ticket office.
6. Rolling Stock: 3 coaches, 2 brake coaches, 1 steam loco, 1 steam or diesel loco.
7. Staff: 3 ticket sales, 1 inspector, 1 driver, 1 fireman, 1

guard/shunter, one fitter/steam raiser. (Assumes crossing gates operated by train crew). Total 8.

8. Initial operation based on "single engine in steam", later "Staff and Ticket" system.
9. Signalling by fixed signals. Facing points worked by adjacent lever and point lock. Level crossings protected by fixed distant signals and stop boards on gates.
10. Line to be fenced over its entire length.
11. Line to be mile-posted.

2.10 Civil Engineering Works. The major works required are summarised as follows:

1. Scarva - Lawrencetown

Bridge 2 (Canal "Wash"), replace steelwork	£17,000
Bridge 2A (Gilford Road), new bridge and adjacent earthworks	£95,000
Minor bridges	£4,000
Stations, loco shed	£27,000
Level Crossings	£4,000
Earthworks	£27,000
PW Materials	£80,000
Point and Crossing work	£10,000
Formation repairs, fencing, drainage	£14,000
Total	£268,000

2. Lawrencetown - Banbridge

Bridge 14 (River Bann "Lawrencetown"), steelwork and one pier	£42,000
Bridge 17 (River Bann "Lenaderg"), steelwork	£11,000
Bridge 18 (River Bann "Hayes"), steelwork and one abutment	£21,000
Bridge 21 (River Bann "Cowdys"), steelwork and one pier	£27,000
Minor bridges	£6,000
Stations	
Level Crossings	£8,000
Earthworks	£8,000
PW Material	£55,000
Point and Crossing work	£2,000
Formation, fencing, drainage	£9,000
Total	£196,000

The above costings are on the basis that most bridge works, etc., are done by contractor or direct labour as appropriate, and that clearance, track laying, etc., is done by volunteers or as unemployment relief.

2.11 Availability of Second Hand Materials. NIR advise that suitable track materials should become available as main line re-laying progresses. Redundant semaphore signalling equipment should become available in 5 year's time. Suitable steelwork for the canal and river bridges is in existence on the disused railway between Omagh and Strabane; agreement in principle has been reached for the acquisition of these bridge structures.

2.12 Insurance. Messrs Bowring Martin (RPSI Insurance Brokers) have

advised that there is no basic difference between the Society's present activities and the operation of a branch line. The premium would depend upon the risk associated with such aspects as track maintenance, fencing and level crossings, and the means taken to ensure satisfactory standards of upkeep. The increase in public liability premium would be in the region of £3,000.

2.13 Viability. Likely commercial viability was estimated, assuming:

1. The locomotives and rolling stock already maintained for main line operation would be available to operate the branch line as well.
2. The line would be operated by volunteers, so that no charges for employment or remuneration of staff have been included.
3. No depreciation charge has been included in respect of trackwork, etc., since materials will be either new or in good second-hand condition with a life of at least 15 years. It was felt that depreciation should only be charged after the first few years' operation, by which time the scheme would have become established and its likely long term future known.

Costs:

- a. Marginal (Proportional to number of days operation.)  
Coal, oil and consumable spares £200 per day.
- b. Allocated (Annual costs allocated to each days operation)

Insurance	£3,000
Loco and coach additional maintenance	£1,000
Track and building maintenance	£2,000
Advertising and administration	£1,000
Total	£7,000

Assuming 30 days operation, the allocated costs would be £230 per day. The total costs per day's operation would be £430.

Revenue: Assuming fares of £1 adult and 50p child, the average revenue per passenger journey would be 75p with a 1:1 ratio. For revenue to match costs, 270 journeys would be required to cover marginal costs and 570 to cover total costs. The traffic required would therefore be between 270 and 570 journeys per day, depending upon the proportion of fixed costs allocated to the branch line.

Survey: In order to assess the likely traffic, a survey was carried out at Whitehead, during the operation of the Sunday Train Rides. The following results were obtained:

1. 30% of visitors travelled further than 20 miles, and 32% from 15 to 20 miles.
2. 68% came out purely for the train ride.
3. 85% thought that the train ride was too short.
4. Passenger figures are between 200 and 300 per day.

It was concluded that the added attraction of an operational steam railway together with suitable advertising would produce the required

traffic.

2.14 Volunteers. Both professional and unskilled volunteers would be required to design and organise the reconstruction of the line, and to carry out practical work, e.g. clearance, fencing and track laying. Volunteers would be required to administer, maintain and operate the line for traffic. Assessment of likely volunteer participation was felt to be extremely difficult, but the following points should be noted:

1. The branch line would greatly widen the scope for practical participation by railway enthusiasts in the actual running of the railway, an aspect which is almost totally denied in the present RPSI situation.
2. It was established that a minimum of 8 staff would be required to work the line. If the present RPSI operating staff alone is considered, the railway could operate on 30 days if each member were prepared to work one day in eight.
3. Of the 481 tourist railways and museums in Great Britain, 40 come into the category of steam operated tourist lines ranging from 1 to 20 miles in length. On a proportional population basis (60 million to 1.5 million), Northern Ireland should be capable of supporting at least one major railway preservation scheme.
4. The maintenance of 4 level crossings and 6 bridges on the Scarva - Banbridge line will require more volunteer work than an equivalent line without such features.
5. The project is suitable for participation by youth groups and unemployment relief schemes.

It was concluded that sufficient volunteers would be forthcoming, but that this could only be properly assessed if the Society took the initial steps in the promotion of the scheme.

#### 2.15 Summary of Capital Costs:

1. Legal (New Company, Private Act of Parliament, etc.)	£5,000
2. Scarva - Lawrencetown (Works, buildings, track, land)	£399,000
3. Lawrencetown - Banbridge (ditto)	£265,000
Total	£668,000

2.16 Finance. The capital funding required for the project would be in the region of £100,000 per annum for around 7 years, and this would clearly be well outside the capability of the Society without assistance. The Northern Ireland Tourist Board was approached regarding grant aid, and has approved the scheme in principle subject to satisfactory negotiations with the District Councils involved and satisfactory financial appraisal. The scheme stands a good chance of being given a 75% grant, subject to the necessary funds being available from the Department of Commerce. The remaining 25% would have to be found by the Society, the District Councils, or both. This would mean the Society raising some proportion of £25,000 per annum. Suggested methods are by share issue, covenanting, donations, appeals, fund raising events, industrial sponsorship.

2.17 Effect of Other Railway Schemes. Other existing and proposed railway schemes could affect grant aid, availability of materials and viability. The Tourist Board has indicated that grant aid is likely for one major scheme only, and that a fragmented approach will not be looked upon favourably. Certain materials, for example good second hand sleepers and signalling equipment may be in short supply. Schemes remote from each other are unlikely to affect traffic and volunteers, and may in fact complement each other by widening public awareness. The existing Shanes Castle Railway at Antrim, being well established and essentially of a different character, should not affect or itself be affected by developments at Banbridge. However, any similar venture close to the Banbridge area could be detrimental in that it would draw upon the same pool of both visitors and volunteers.

2.18 Vesting of Land. In the event of sustained opposition to the scheme on the part of any of the 3 dissenting land owners, it would be necessary for the land to be obtained by compulsory purchase for the scheme to proceed. In theory, this could be done either by the District Council under existing powers, or by the Railway Company under the terms of its own Act. However, the indication is that vesting of land is a highly sensitive subject and powers to vest are only given and used with great reluctance. The Private Act would stand a much greater chance of becoming law if vesting powers were not sought. However, in the event of one objector only, it is not unreasonable to assume that vesting could be used, so long as the scheme had widespread support throughout the community.

### 3/ CONCLUSION

1. It is feasible for the Society to re-open and operate a branch line in Northern Ireland, provided:
  - a. Legislation is forthcoming;
  - b. Grant aid is available;
  - c. The District Council backs the scheme, possibly to the extent of vesting land;
  - d. Volunteers are forthcoming in sufficient numbers to organise, reconstruct, maintain and operate the line.
2. The only line which could be considered is the branch of the former GNR(I) from Scarva to Banbridge.
3. Because of impending re-development of parts of the railway land, a firm decision by the Society whether or not to proceed with the scheme is needed as a matter of urgency.
4. The members of the Sub-committee were sufficiently encouraged by their researches that they felt in a position to recommend that the Society proceed with the scheme.

# PLAN OF SCARVA - BANBRIDGE RAILWAY

Showing principal features and civil engineering works required.

