PLANNING AND CONSTRUCTING A TRAMWAY MUSEUM

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Introduction

This is obviously a very broad topic, and various aspects could on their own warrant major discussion. The intention is to consider this question under a number of headings and endeavour to put across a number of ideas - some of which you may not necessarily agree with - in the hope that these will be taken up and perhaps given treatment in some depth during the subsequent discussion. I make no apologies for appearing idealistic in some aspects. Do not expect an exact blueprint that each of you can copy from. All of us are some way along the road of development and some of my remarks may be more applicable if we were only beginning to think about setting up a tramway. However, I hope I can give you a few ideas to think about, and we should all be able to gain something from the discussion session that will follow.

Objectives

I do not wish to overlap into John Radcliffe's paper, but this is perhaps the most important determinant of how we plan and construct a tramway. Unless we have a clear idea what we are aiming for and why, it is unlikely that development would be able to proceed in any sort of orderly or logical fashion. If clear decisions can be made in the first instance as to what we are aiming to achieve, then details, planning and construction will normally follow relatively easily. Over time of course, it may be that a new object will emerge and this will mean alterations and additions to the plan, but perhaps this is inevitable.

As a simple example of how objectives and planning are related, we could take the case of a museum set up, with the basic objective of collecting a few trams which would be statically displayed within a building, perhaps as part of an illustration of the history of public transport. The planning and construction which follows is relatively simple - the acquisition of space, building cover, obtaining vehicles, "restoring" and displaying.

I suspect however, that most of us at this gathering have rather more ambitious aims and objectives, and perhaps the following would cover what most of us are proposing - whether clearly stated or perhaps until now only at the back of our minds.

1. The collection, preservation and restoration (if possible to operating condition) of a representative sample of tramcars types and/or other vintage transport, from one or more transport systems.

2. Either the preservation of resurrection and restoration of an existing or former line or transport system on which to demonstrate these vehicles, and offer rides to the general public as well as to members and enthusiasts.

OR

the construction and operation of a new line to demonstrate as per 2. above.

3. The integration of such museum line into an overall technological museum project or as a public transport system linking important public facilities or places of interest, rather than a small line offering a "there and back" joyride. (i.e., a purpose for the line.)

4. The preservation and/or construction of period atmosphere such as line side accessories, old time streets, etc.

5. The illustration of tramway and other technological history by means of display, working models, cut away sections etc.

If aims and objectives can clearly be decided upon at an early date, planning the project has some immediate guidelines to follow. For practical reasons, e.g. site and vehicle availability, some objectives may have to be compromised or altered but that possibility should not deter us from aiming high in the first place.

Site Characteristics

The suitability of any particular site depends on what objectives are of the museum group. For this discussion let us assume that the above objectives apply, and so it is apparent that the site would need to include the following characteristics.

a. Physical Factors

1. An area sufficiently large to accomodate the necessary buildings for the storage, maintenance and restoration of the tramcar fleet. Assuming a fleet of 20 tramcars, we would be talking about an area of say 7,000 sq. feet just for storage, and preferably another 3,000 sq. feet would be needed for maintenance and restoration members facilities etc. So let us say about 10,000 sq. feet, or a little under 1,000 sq. metres. To this must be added sufficient areas for landscaping, members car park and separation distance from boundaries to meet local council requirements, where applicable. Obviously a site will need to be relatively flat, or capable of being made so, and the ground conditions should also be suitable i.e. a rubbish tip may not be suitable.

2. An area in which to operate the fleet. Where the objective is the preservation of an existing line the choice is obviously rather limited. In other cases there is some freedom of choice, but there is a basic criterion that there must be sufficient length to be able to demonstrate and operate satisfactorily. Where passenger running is envisaged it would seem to be that a length of somewhere between 1 and 3 miles is most appropriate and practical. Much less and the ability to demonstrate the vehicles and give a sense of 'riding somewhere' is impaired; and much more, difficulties of building and maintaining track etc., especially by volunteer labour, are likely to arise. As some museum groups have found, a former railway reservation may be ideal, as it will comprise sufficient length and also not too much width from a property maintenance point of view, as well as usually being in a single ownership, and able to be acquired or leased, hopefully without undue difficulties or costs from a Government Agency. The line need not be

flat, any railway gradient, and curves for that matter, can easily be negotiated by an electric or steam tram (horse trams may need something a little more gentle), and some variations in topography may add interest. Nothing could be less exciting than being able to see the destination from the beginning of the line.

3. Sufficient area for off street parking for the public and areas for static display, and perhaps an old time street, other related activities, e.g. other museum groups preserving vintage buses, fire engines, etc.

b. Other location factors.

1. Proximity to a major urban area with ready access from or off a major highway. If it has sufficient usage in the area concerned, then public transport accessibility may also be important. Without being too parochial, I hope, I think it would be fair to say the Ferrymead Tramway's relative success when annual passenger totals are compared with say Wellington Tramway Museum at Queen Elizabeth park, and T.M.S.V. at Bylands, must be to a considerable extent due to the closeness of Ferrymead to Christchurch. Christchurch has a population of just under 300,000 and the museum is just 4.5 miles from Cathedral Square, the heart of the Central Business District. If possible one part of the line should be able to be sufficiently accessible to provide for tapping public patronage. Accessibility for bringing trams and other heavy equipment in is also another obvious location factor which should not be overlooked. e.g. problems from sub-standard bridges sharp corners, etc.

2. Town Planning Zoning . I will consider this in more depth shortly, but at this stage would comment that from a cost and availability point of view, rural land will generally be easier to obtain than urban (whether residential or commercial/industrial, with an urban park being the possible exception) and that were there a choice between high quality agricultural land and poor quality land you are more likely to be successful in obtaining poor land. I have just mentioned that accessibility to an urban area is very important, however too close a proximity to present or future residential zone, may cause some difficulties, e.g. complaints from noise, unsightliness etc., to quote Ferrymead example. Where you are fortunate enough to be adjacent to a built up area, a buffer zone such as a park or playing field, or an industrial estate would be preferable to having houses immediately adjacent.

3. Focal Points. As suggested in Objective 3, much more sense of purpose, and hopefully higher patronage will result if the line actually goes somewhere instead of just there and back joyride. Suggested focal points may include:

i. Tramway storage and workshop buildings
ii. Old time street or township through which the line will run.
iii. Museum Display buildings.
iv. Public car park.
v. "Public" facilities such as Zoo, Art Galleries Picnic Areas etc. (Ferrymead and MOTAT being good examples.)

Summing up this topic of site characteristics a diagramatic view of an ideal museum site could be something

like this:

with 1 and 2 being focal points.

Public access should preferably be restricted to one end or perhaps a point along the route of the system to ensure that the tramway is used. i.e. It is not much use having a major car-park at both ends and good road access as this does not encourage people to use the tramway.

Town Planning and Other Local Considerations.

Although I am a town planner it's those times when I'm not a "museum developer", I have found this aspect a little difficult to come to grips with because of the legislative differences between N.Z. situation and each Australian State. I am only familiar with the N.Z. situation and will therefore have to speak in a fairly general way. Some points may not necessarily be applicable to your State.

In building a tramway museum there are a number of legal and quasi-legal aspects that have to be faced. Legal authority to operate a tramway under Tramway's Acts and Light Railway's Acts etc, is perhaps obvious, and I do not propose to cover this aspect in detail. It will vary from State to State and presumably each museum has by now sorted out its own problems. I would like to spend a little time considering other regulations, viz Town Planning and Building By-Laws.

Firstly an explanation of the difference between the two. Town Planning aims to regulate the use of land usually by zoning, e.g. Rural, residential etc., and deciding which uses are allowed in any particular zone and perhaps where and on what conditions on particular sites. Where it becomes of interest to us, is of course that you do not find a tramway museum as a use specifically permitted in any zone. By-laws on the other hand, are more concerned with the details of construction of buildings and other structures that relate to any permitted use. They may for example determine the type of material to be used and are generally devised to ensure safety of occupants using the building or in the locality of the building, or to make sure that the building won't blow down in a strong wind. Building by-laws have been with us for many years, but the standards have tended to change and stiffen. What may have been acceptable 50 years ago, or even 20 years ago may not be so to-day. This obviously has repurcussions when we are endeavouring to recreate history with old time buildings etc. (e.g. N.Z. wooden shingle roofs have been prohibited as a new form of construction since 1920.) Brick and stone buildings must now be reinforced against earthquake damage, and no doubt Cyclone Tracy (Darwin 1974) has had repurcussions throughout Australia as far as building regulations go. Town Planning on the other hand is a relatively new phenomenon. Government control has often existed for years but in some areas it is only now coming into effect (e.g. N.Z. 1953 Act), and while some of us may have been able to establish without town planning problems this is not to say we won't be caught up in the future.

How are we affected by Town Planning and what can we do about it?

As has been said, Town Planning usually prescribes what uses shall be permitted for any particular area. For any use that is not normally permitted, there is usually provision for making special application to the town planning authority, which

may in some cases be the local council, in some others a sort of regional council, and there is usually a right of appeal to a judicial body such as a Town Planning Appeal Board or similar. Such applications usually involve public hearings and there are rights of objection by other parties such as neighbouring land-owners, organisations etc. Unless there is provision in your own area's plan for your use, and you may find there is under such obscure listings as 'educational or cultural facilities' or if you have an old railway reservation, the land may still be zoned or gazetted for railway purposes. You may be faced with such an application if you wish either to establish or undergo substantial expansion. It obviously pays to keep a good relationship with your neighbours and with your local council and other authorities, or you may find strenuous opposition to your plans.

Another significant point about Town Planning schemes is that the scheme itself, when first introduced, is usually open for public inspection, comment and objection and that from time to time it may be altered or reviewed and this also allows for public participation in deciding the issue. If your scheme is not satisfactory you may be able to get it altered for the next time it comes up for reassessment. (give Ferrymead as an example - show the submission given by the Trust.) Finally, just as others have the right to object to your development if it is not normally permitted use, so too will you usually have similar rights if others in the district make application for special use. This is a fact of which you should be aware. If granting someone elses application is likely to have a detrimental affect on you, then you should object to it, e.g. a proposal for a housing estate next door, or a private museum etc.

DETAILED LAYOUT CONSIDERATIONS

Earlier in this discussion general comments were made about ideal site layouts etc., and some ideas on how such a site may be laid out are now tossed in for discussion. The main activities on a site and some comments about where they should be and how they relate are as follows:-

1. Location of buildings. Bearing in mind local regulations as regards distances from boundaries and distances between buildings, the sort of things to think about are;

   i. Accessability by public, members, vehicles etc. - this will vary according to the building - e.g. storage buildings - if you don't want the public there, site them away from public areas or fence them off. Museum displaying - good public access essential - preferably by tram as suggested earlier. Emergency access important.

   ii. Rail (tramway access) - if major right of way fixed by say old railway reservation, site building, to enable space for depot fan and for future expansion - even if right now you don't think that you'll need it. You can build fairly tight curves - say 50 - 60' radius, but these can cause more wear than more gradual curves. A traverser is another possibility - saves space and special work - some disadvantages though.

   iii. Public car park - further earlier comments - site it close enough to some part of the complex to encourage people to use it - if a 1/4 mile walk is involved you'll probably frighten many off - everybody is lazy! How big should the car park be? Depends on exits and projected patronage. I doubt whether many of us (except perhaps on

special occasions) will have more than 100 or so cars at any one time - do surveys - if plenty of room build a permanent car park for say this number of cars and have a paddock available for special occasions. How much land required? As a rule of thumb every car will need 25m^2 i.e. 1 hectare will hold 400 cars, or in imperial units a little under 40 cars per 10,000 sq. feet or 160 per acre. Don't forget about landscaping - particularly if readily seen from highway.

iv. Siting of public facilities - souvenir and sweet shops, toilets etc., from revenue point of view - siting quite important - try to establish a clear route along which all or most will walk - may be a good idea to have at entrance/exit e.g. Sovereign Hillm Motat - you are also supervising people leaving making sure they are not smuggling a tram motor with them. If complex is big enough - more than one selling point may pay dividends - people may spend more in little bits spread over a period of time than all at once. Toilets must be obviously accessible but availability of service - sewer may be a deciding factor - costs of extension etc.

v. Other services such as power, telephone etc., may also influence location e.g. if using mains power, power station cheapest, though not necessarily most convenient closest to source. Public safety aspects; if buildings sited along tram route tramway overhead poles can be used to carry other services.

vi. Relativity to other land uses outside museum e.g. don't site workshop close to a residential section if you can avoid it - bear in mind the nuisance aspects of some museum activities e.g. night operations, workshop noise, unsightly poles and wires, rail squeal, large numbers of general public, unfinished appearance, gongs and whistles may be music to our ears, but not necessarily to our neighbours.

PLANNING A DEVELOPMENT PROGRAMME

A question of priorities - again work it from your objectives. Usual trend has been for museums to throw down a piece of track and start operating - to bring in revenue - but should this really be the first priority? Assuming we are starting from scratch a development programme might go something like this.

1. In the light of what is or is likely to be available decide basic objectives - acquisition policy etc., and determine how project will be initially financial - if possible.

2. Look for other suitable sites.

3. Commence acquisition of equipment and planning for buildings to house trams etc. Location of buildings can be decided with reference to total scheme - preferably don't take delivery of vehicles until cover has been arranged (unless climatic conditions are such that cover is not necessary).

4. Depending on man power and financial resources commence site works, location buildings track laying etc., and also renovation/restoration of rolling stock so that vehicles will be presentable by the time the museum opens.

5. If intense public interest and accessability is good, probably not much worry with opening a small section

of line at a time - this may be necessary if public money is being used over a period of years - other approach Adelaide - complete the line before opening - some debate on pros. and cons would be useful.

6. Endeavour to plan ahead for the future expansion, future acquisitions etc., and co-ordinate with associated activities.

7. Assess progress to date, direction you are going etc., and perhaps consider ways of injecting more finance/labour to allow more rapid progress.