

NATIONAL RAILWAY MUSEUM

**SITE
DEVELOPMENT
PLAN**

Approved by Board 21/9/2011

LIPSON STREET
PORT ADELAIDE

Graham Vincent/ B Sampson

CONTENTS

1. Introduction
2. Location diagram
3. Entry precinct
 - 3.1. Bookshop & administration redevelopment
(Including patron entry & exit issues)
 - 3.2. Bookshop Courtyard
 - 3.3. Picket Fencing
4. Lipson street frontage
 - 4.1. Model Goods Yard
5. Callington
 - 5.1. BBQ cover
6. Jacketts Park
 - 6.1. Covering of tracks J1 & J2
 - 6.2. Platform extension
 - 6.3. Additional Cover Goods Shed
 - 6.4. Non-traditional exhibits (inc. section cars)
 - 6.5. 610mm display
 - 6.6. Public relaxation area & Children's domain
 - 6.7. Toilets
 - 6.8. Car Barn Shed
7. Goods shed
 - 7.1. Pigeon repulsion
 - 7.2. User development
 - 7.3. Condition Assessment
 - 7.4. Kanni building
8. Major pavilions
 - 8.1. Inter pavilion covering
 - 8.2. Development of fixed 457mm crossing of mainline tracks
 - 8.3. Redevelopment of Fitch pavilion archives accommodation
 - 8.4. Fluck Pavilion Toilets
9. Rail Development Plan (RDP)
10. Water conservation
 - 10.1. Collection
 - 10.2. Functional reuse
 - 10.3. Solar Energy
11. Signaling
 - 11.1. 457mm track
 - 11.2. 1067mm yard
 - 11.3. 1600mm tracks
 - 11.4. CR display
12. Appendix
 - 12.1. Incidental Infrastructure Plan

1. INTRODUCTION

The National Railway Museum has been operating a well developed site since 1988 and apart from the 2001 opening of the “Commonwealth Pavilion” (subsequently named the Fluck Pavilion), has for the last 10 years been offering a stable presentation.

The recent minor individual site developments have been more to do with plant preservation and operating practices, than activities that will add to the attraction for patrons.

Some areas of the Museum have remained undeveloped and accordingly under-utilized throughout their lifetime.

This vision has been prepared to give a unified direction for the Museum’s site development in the foreseeable future.

It has been prepared in parallel with a number of supporting documents that address specific areas – notably Acquisition Planning, Display & Equipment Restoration management and Collection management policies.

It unashamedly –

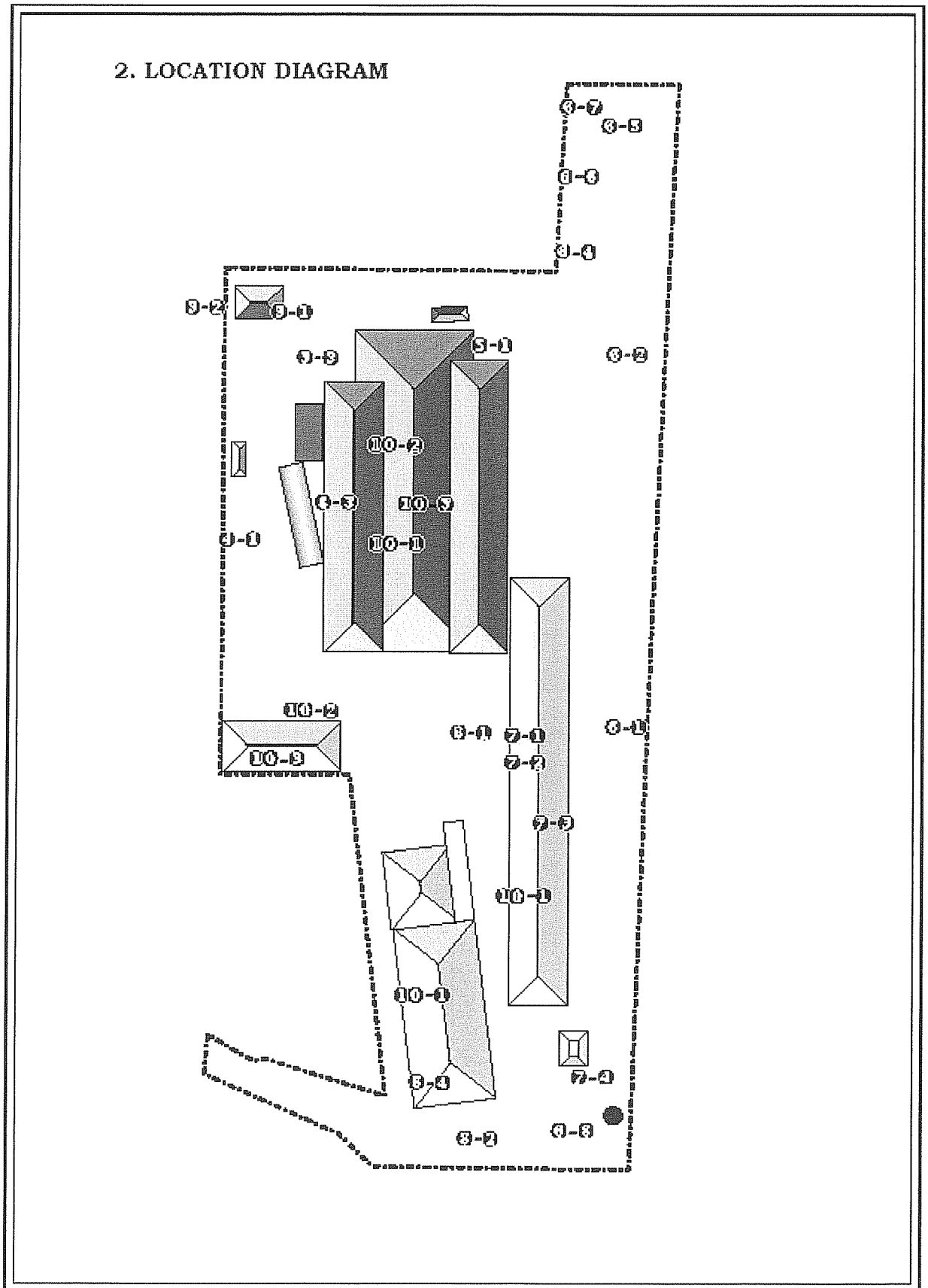
- is a collection of large and small developments,
- includes projects that are near completion through to those that are at best, on the horizon,
- takes no account of the Museum’s current ability to fund such plans
- assumes that the tenure of the various areas currently managed will remain available

The vision takes on board the framework within which it must exist as laid down in the “Port Adelaide Centre Vision Framework” of the Port Adelaide-Enfield Council and notes that framework’s encouragement that the “*National Railway Museum should be further developed and Improved as a tourist facility*” [sec 2.66]. This framework provides for some difficulties that will need to be addressed. It also notes the proposals of the Council expressed in the paper – “Light Rail - A catalyst for urban development”

It also makes some assumptions (that in time may be tested and found wanting) about the mostly unpublished ‘plans’, aspirations, views, & ‘visions’ of a variety of authorities including, the State Government Transport Policy Unit, various arms of State Government and in particular DTEI, and Arts SA.

After 23 years of successful operation, the Museum can move forward with vigor and enthusiasm, with considerable scope for additional developments designed both to provide further attractions for the target patronage, and for improved operational efficiency and protected displays.

2. LOCATION DIAGRAM



3. ENTRY PRECINCT

3.1 BOOKSHOP & ADMINISTRATION BUILDINGS (including issues of patron entry & exit)

CONCEPT

- a. Enlarge the Bookshop by alteration or replacement

PROPOSAL

- Alternative 1.. Extend the bookshop
 - Alternative 2.. Demolish the bookshop and replace with an enlarged bookshop building.
 - Alternative 3.. Demolish the bookshop and replace with a major building to house bookshop (and entry), administrative staff and management (leaving existing main pavilion offices for extension of archives.
- a. The size of the bookshop is now insufficient to adequately provide for the marketing of products that the Museum wishes to sell.
 - b. On any day of high visitation numbers - school holidays, group visits, and special program days (peaking at Friends of Thomas Event) it cannot adequately cope as the entrance (and exit) point for patrons visiting the Museum.
 - c. The bookshop, as the point of contact to the public, is remote from the administration and volunteers working there are not easily supervised or relieved.
 - d. There is an acute need to expand the space for archival activities.

It is proposed that the northwest corner of the property be developed in a number of stages...

1. Implement an interim arrangement to allow for large patron flow both into and out from the Museum without the need to pass through the bookshop
2. Develop a plan to enlarge the bookshop in stages towards the implementation of alternative 3
3. Extend or demolish the existing building to provide the requirements of the bookshop and entry / exit.
4. Further develop the building to accommodate administrative staff (leaving the Fitch pavilion offices for project 8.2)

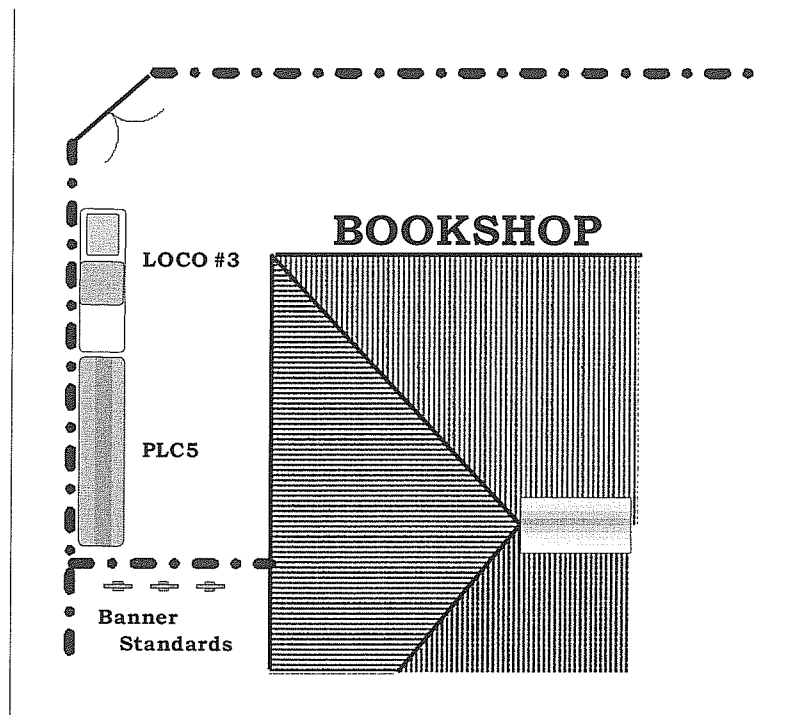
3.2 BOOKSHOP & ADMINISTRATION BUILDINGS

CONCEPT

- a. Reposition banner standards to more viewable location
- b. Position Mitzi and 1 disused carriage for children’s interest

PROPOSAL

- a. Three banner standards are currently located on the north side of the bookshop. They are now enmeshed in trees and are not visible from the street. Because of the visibility and other reasons, they have not been used for many years.
It is proposed that these standards be re-located as shown below so that can be effectively used and provide for improved front-of-house image.
- b. The courtyard area to the road side (west) of the bookshop is lost area which has the potential to provide an introductory ‘play-time’ area for children particularly during times of long entry wait times.
It is proposed that Mitzi and one surplus carriage be repainted and placed in this area for children to play on and to further enhance the front-of-house image.
- c. Note that if this concept does not proceed a similar display should be incorporated in Proposal 6.6



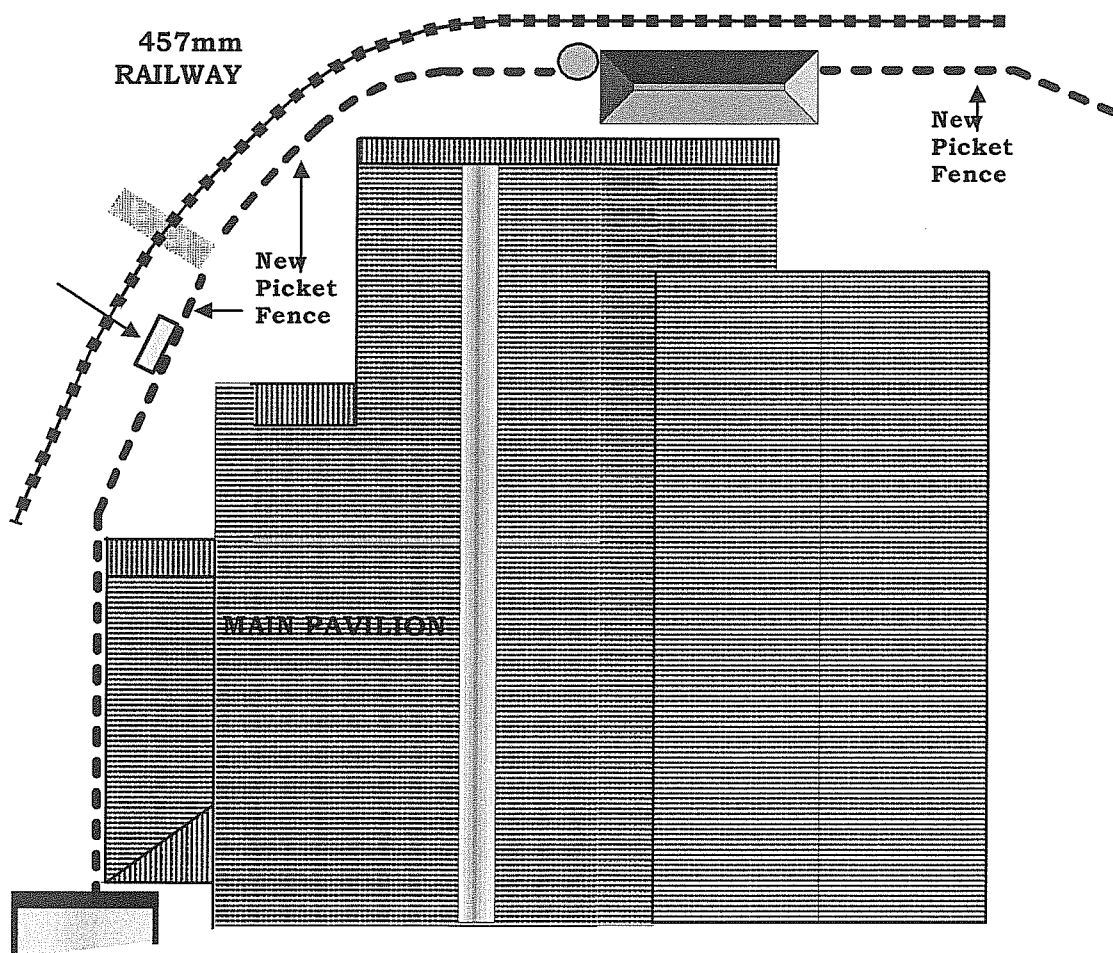
3.3 PICKET FENCING

CONCEPT

To improve the image of the fencing adjacent to the 457mm railway in the high pedestrian traffic areas by replacing the wire mesh fence with picket fencing.

PROPOSAL

It is proposed to replace the wire fencing over the distance shown below with painted picket fencing. An application for a grant from Port Adelaide Enfield Council is envisaged to cover the cost of material purchase, and it is proposed to arrange with the local Service Clubs to have a co-operative working bee to erect the fence.



4. LIPSON STREET FRONTAGE

4.1 MODEL GOODS YARD

CONCEPT

The area adjacent to the Lipson Street fence between Woodville Signal Cabin and the emergency entry gate, is well placed adjacent to the 1067mm tracks to recreate the image of a SA country typical goods yard.

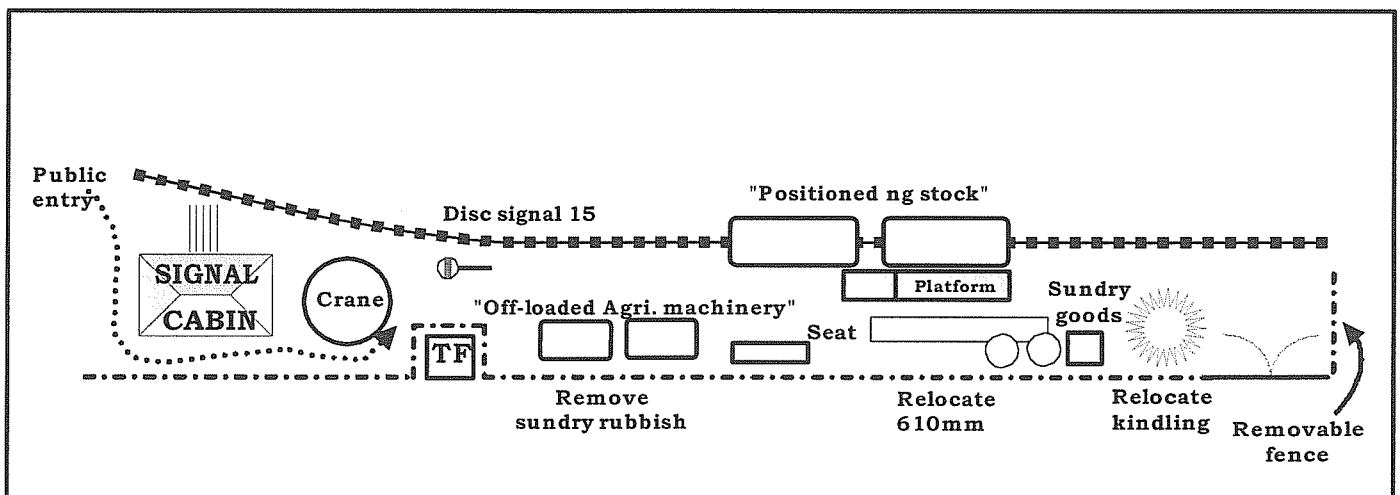
PROPOSAL

It is proposed ..

- a. to clean up this area and make it an area accessible to the public.
- b. to erect a collection of infrastructure items typical of the goods yard environment

The clean up will include..

- removal of all sundry timber and other scrap.
- relocation of the fire lighting timber pile
- relocation and preparing for display the 610mm Ruston Hornsby locos etc. (refer to Proposal 6.5)
- Create a pathway behind the Signalbox and toward the Steam shed, to permit visitor access and create a viewing area.



The infrastructure display will include

- the Blyth crane
- a working pole mounted disc signal (#15 in Steve Gordon's plan)
- the Header and the Seeder appropriately restored (one of these could be displayed on the flat wagon).
- Various "positioned" ng wagon(s)
- ideally a short goods platform – one van long
- a selection of typical "goods items"
- other suitable display/environmental material

At this time it would be appropriate to provide power supply to the "Woodville" signal cabin for light, power, security, and operational supply to enable the improved display of working components.

5. CALLINGTON

5.1 COVERING OF THE BBQ AREA

CONCEPT

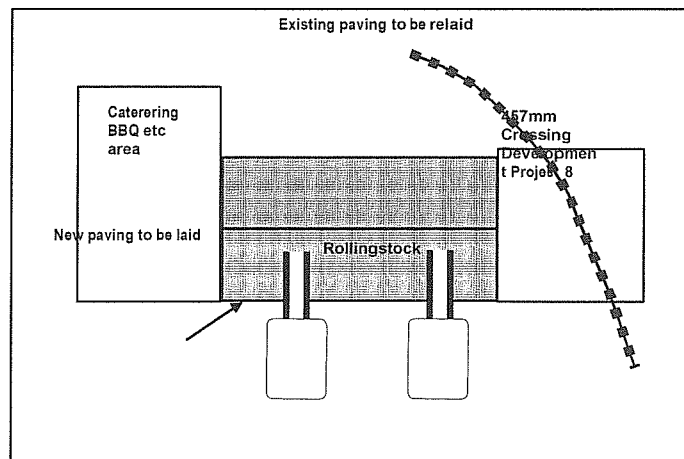
The paved area just outside the NE corner of the Fitch pavilion is regularly used on major event days for the operation of a BBQ based food stall, and as the location for food preparation staff during pavilion hire events requiring on-site catering.

For most events a large tarpaulin covering is erected to give some protection against the weather.

This arrangement is barely adequate and on days of significant rainfall or excessive heat it falls well short of acceptable.

PROPOSAL

It is proposed that an area approximately 4m x 8m be permanently covered to give an appropriate level of protection to our catering contractors and to eliminate the time and effort of erecting temporary tarpaulins.



6. JACKETTS PARK

6.1 COVERING OF TRACKS J1 & J2

CONCEPT

- For the Museum to advance in its display of additional items of rolling stock as they become available in future years, additional track is required. With the site constraints as currently imposed this seems unlikely.
However scope exists to cover additional track which would provide more flexibility in storage and display, and in practice provide some additional usable track space.
- One or both of the 'Jackets' tracks could be covered and provide considerable storage – in particular a logical home for the Red Hens.

PROPOSAL

- The coverage of the Jackets tracks provides for immediate additional out-of-the-weather storage without additional expense on track work. Whilst storage here would require relocation shunting for operational use of the tracks, the need for 'run around' is rare and the Track 1 could be considered as more or less permanent storage capacity. Track 2 would be an obvious home for the Red Hens since they are the most likely to use this track as an operational road, and it would be relatively easy to provide a pedestrian walkway along the western edge of the covering to enable viewing of these exhibits, making this a viewing area rather than just a storage area.

6.2 PLATFORM EXTENSION

CONCEPT

- The long term intention for the J2 track platform is for it to be extended to permit full loading capability of the 3 Red Hens or similar vehicles.

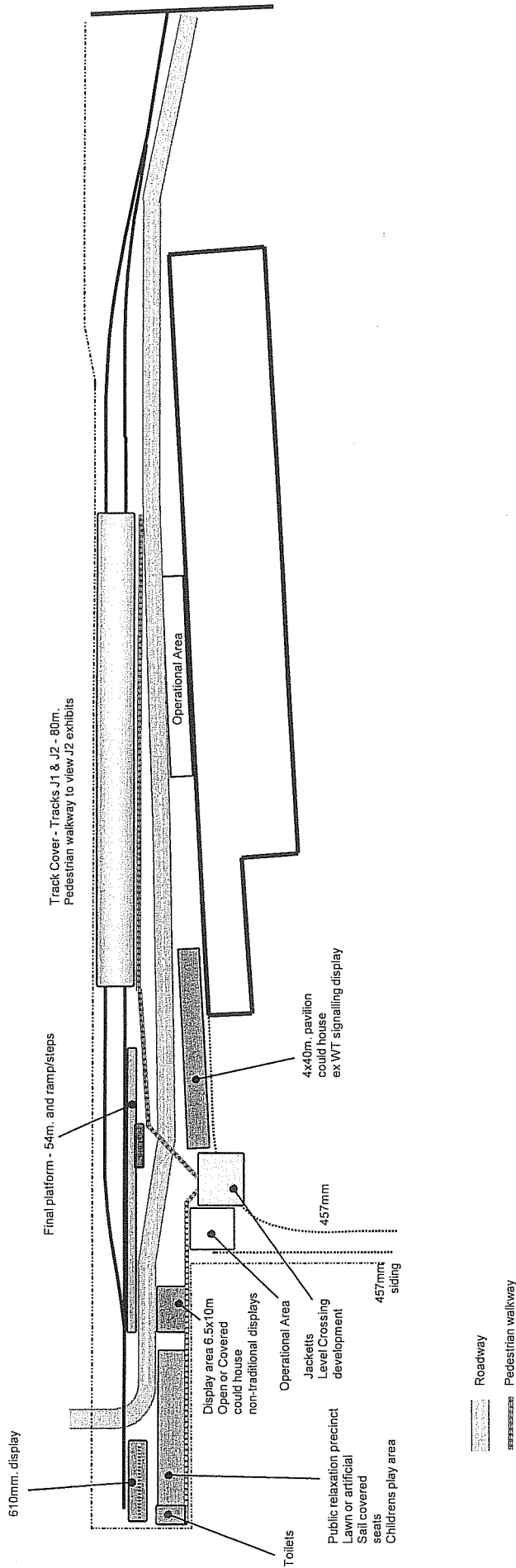
PROPOSAL

- It is proposed that the platform be extended, in stages if necessary, to a full 54m. (sufficient to accommodate the NRM 3 Red Hen set). The current profile and construction mode is to be extended and potentially a simple cantilever roof cover could be provided over part of the platform. In May 2011 the platform was extended to 23m with an access ramp starting from the northern end with a slope of 1:14 to comply with current legislation. The proposed design allows for a ramp at the North End/steps /exit near the centre of the length, and the required roadway can be deviated sufficiently to co-exist with this arrangement (refer to the diagram of Jacketts Park Scope for development').

6.3 Additional Cover for Rollingstock – Goods Shed

CONCEPT

Consideration should be given to extending the cover from the existing Goods Shed, northwards to the end of G1 and G2. This will provide better flexibility for restoration and/or storage of broad gauge exhibits.



JACKETTS PARK -- SCOPE FOR DEVELOPMENT

A proposal to develop this area to provide new display areas and to provide a comfortable atmosphere for patrons to congregate and relax.

6.4 NON TRADITIONAL EXHIBITS (e.g. Section Cars)

CONCEPT

There are a number of items requiring display scattered around the museum that can loosely be coupled under the heading of non-traditional exhibits that in some way relate to, or support railway history.

PROPOSAL

It is proposed that these items be gathered together in a single display either in a small pavilion or at least covered.

A potential site can be found in the Jacketts Park planning scope.

6.5 610mm GAUGE ROLLING STOCK

CONCEPT

There are a number of 610mm railway vehicles at the museum that are not displayed.

PROPOSAL

It is proposed that these items be gathered together in a single covered display.

A potential site can be found in the Jacketts Park planning scope.

6.6 PUBLIC RELAXATION AREA & CHILDREN'S DOMAIN

CONCEPT

On days of high visitation numbers, the 'prime' areas of the museum become seriously overcrowded, whilst there is no attraction to draw patrons to the more sparsely populated parts of the museum. Indeed there is no area for relaxation and 'taking a breather', and there is no specific area devoted to children.

PROPOSAL

It is proposed that an area in the NW corner of Jacketts Park be developed to provide

- A comfortable outdoor area covered with sail or similar, surfaced with a ground covering to enhance the atmosphere (lawn or lawn substitute), and provided with permanent outdoor seating.
- External landscaping and or decoration
- An enclosed children's play area with child proof gate latch and with sufficient play equipment to accommodate 50 children at any one time. The playground equipment should be designed to reflect a railway theme.
- An OH&S approved drinking fountain if possible
- Views of ongoing activities (loading of Red Hen rides, 610mm plant display, etc.

6.7 TOILETS

CONCEPT

There is a clear lack of toilet facilities because of the extent of the museum and the development of a 'rest' area (as above) would make the provision of nearby toilets both desirable and another useful facility in this area.

6.8 CAR BARN SHED

CONCEPT

In the southeastern corner of the museum near Kanni, there is a small parcel of land currently used to store rails and track materials. There is a enough room to erect a small single shed .which could be connected by a broad gauge track running south from Jackets No1.This building would be long enough to store eg 2 x bogie vehicles (approx 40m clearance).

7. GOODS SHED

7.1 PIGEON CONTROL

CONCEPT

- The Goods Shed provides a large protected area and is open to all bird life. Pigeons in particular dwell in the rafters and cause significant damage to the exhibits and vehicles under restoration.

PROPOSAL

- An effective method of pigeon control required for all affected areas at NRM - in particular the Goods Shed (e.g. spikes on rafters).

7.2 USER DEVELOPMENT

CONCEPT

- The Goods Shed is a heritage building and has a very large footprint.
- Currently there is little to entice visitors to the Goods Shed as there little on display, and has no thematic concept.
- The area is very large and has enormous potential for development of displays that could have a high degree of interest.

PROPOSAL

- It is proposed that a serious study be undertaken to determine a firm productive use for the goods shed, arranged in such a manner to make it intuitively attractive to patrons.

7.3 CONDITION ASSESSMENT

CONCEPT

- The Goods Shed platform is a wooden structure and wooden decking with an asphalt covering.
- Doubt exists on the integrity of this platform to support heavy items and/or large crowds of people.
- Its heritage value is unquestioned, but its capability to sustain a developed area of useful interpretive display, a children's activity centre, or other productive use needs assessment

PROPOSAL

- Prior to any proposal to value add the Goods Shed space for the benefit of the Museum and its patrons, an engineering / architectural assessment must be commissioned to establish the capability of the platform structure and approval sought from the Minister of Arts.

7.4 KANNI BUILDING

CONCEPT

- With this building no longer being used associated with the caretaker arrangements, some consideration of alternative use is required, in consultation with relevant stakeholders.

ACTION

- To develop a plan to use as a general or archival store.

8. MAJOR PAVILIONS

8.1 INTER PAVILION COVERING

CONCEPT

- For the Museum to advance in its display of additional items of rolling stock as they become available in future years, additional track is required. However, with the site constraints as currently imposed this seems unlikely.
However scope exists to cover additional track which would provide more flexibility in storage and display, and in practice provide some additional usable track space.
- Some of the tracks between the Fitch Pavilion and the Fluck Pavilion could be covered

PROPOSAL

- One area of on-property track that may be covered is that between the Fitch & Fluck Pavilion and extending south alongside the Fluck Pavilion. A variety of options are available in this area but the most obvious would be to cover Fitch Pavilion track 1 as far as the southern end of the Goods Shed thus giving the capability to display a long b.g. train consist eg 'The Overland'.
Scope may exist to also cover the tracks leading to the Fitch Pavilion - ie tracks Fitch 2 and 3.
- For coverage of these tracks appropriate eastern wall treatment will be necessary to meet the heritage requirements for development adjacent to the Goods Shed.
- A proposal to cover any of these track areas, will require a major assessment of the various issues involved. These include track clearances, heritage vista, storm water disposal, soil quality and others.

8.2 FIXED CROSSING OF 457m and MAINLINE TRACKS

CONCEPT

- The 457mm railway is laid across the eight 'mainline' tracks that enter the property at the southern fence and extend into the both the Fluck Pavilion, the Goods Shed, and the area between these two.
- On any occasion that these tracks are required for the passage of mainline vehicles, either for display re-arrangement shunting, or for the entry of other authority trains, the 457mm track must be lifted, removed, and subsequently replaced.
- This occurs in particular on any occasion that a charter train arrives in conjunction with a dinner party pavilion hire-out, significantly increasing the effort/costs involved in the event.

PROPOSAL

- It is proposed that an engineering solution be sought to permit the rail crossings to be made permanent. Such a proposal will need to include mechanisms for safe working at a point that would then introduce a potential traffic conflict. However a simpler and effective means of fishplate connections is still desirable.

8.3 ARCHIVES MEZZANINE

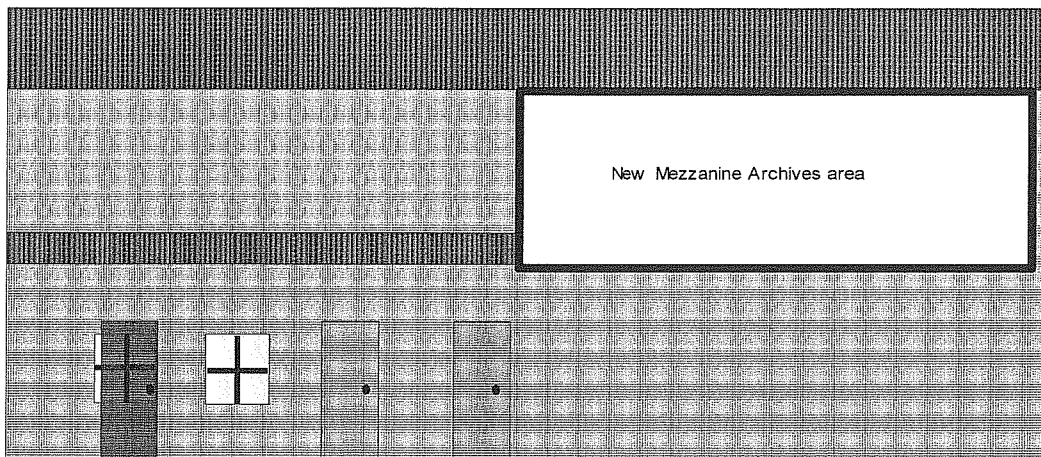
CONCEPT

The archives are crowded and provide no room for expansion. The undeveloped mezzanine area south of the staircase can be filled in and developed as a major addition to the archival storage and management capability whilst releasing the current archive office as a public reading and research room.

PROPOSAL

It is proposed that the mezzanine area south of the staircase (approx 35m x 12m = 420m²), be enclosed as a room for the primary storage of archive material. This will relieve the pressure on the existing archive office and make that room available as a public reading & research room. To enable ready access for the public, a door will be needed to be opened in place of one of the existing windows.

Note – Also see bookshop/administration proposal. Item 3.1.



New Door

West Elevation

8.4 FLUCK PAVILION TOILETS

CONCEPT

There is a clear lack of toilet facilities because of the extent of the museum. The lack of toilets at the south of the museum is a significant impediment to all activities in the Fluck Pavilion, and is of inconvenience to the visiting patrons (often deterring their visits to that pavilion), and almost prevents the leasing of space / facility in this pavilion – certainly it has been the determining factor in the loss of potential hire in the past.

PROPOSAL

Toilets be constructed somewhere near the southern end of the museum with easy access from the Fluck Pavilion.

9. RAIL DEVELOPMENT PLAN (RDP)

NRM's operational rail development goals are to:

- Provide sufficient rail tracks of various gauges and length (on a cost/benefit basis) to enable shunting flexibility and the opportunity to provide rides for visitors.
- Continue to provide a rail access connection to the operational urban network.
- Make provision in all future planning that NRM will be able to access the Rosewater loop corridor.
- Make provision in all future planning that NRM will be able to install a turntable of maximum diameter.

Existing and future NRM's operational running lines are subject to the Rail Safety Act and the NRM Rail Safety Management System and all relevant issues are contained within the RDP. Matters associated with the existing and future Rail Safety Interface Agreement procedures with DTEI are subject to various external factors, including and not limited to:

- land ownership and tenure,
- development approvals,
- City of Port Adelaide Enfield's own objectives, and
- ownership of existing rail infrastructure and rights of way.

10. WATER CONSERVATION

10.1 COLLECTION

CONCEPT

- Adelaide's available water supply continues to diminish and community expectation demands that those able to capture and re-use water effectively should do so. In particular those best able to provide leadership in water conservation have a responsibility to do so.
- Federal Government support is available to those that undertake water conservation measures.
- NRM has a huge water catchment area which is now all asbestos free. (Main Pavilion Roof, Goods Shed Roof, Commonwealth Pavilion Roof & Steam Shed Roof). This collection area totals about 0.8 Hectare (8220 sq m).
- There is thus the potential to collect 3 500 000 litres per year in an average rainfall year in Adelaide!

PROPOSAL

- With the assistance of a Federal Water Resources grant, the Museum should establish major water storage facilities and harvest the run-off from its huge roof structure.

10.2 FUNCTIONAL REUSE

CONCEPT

- The three major uses of water in the museum are toilets, gardening and boiler water.
- To reuse harvested water would incur significant plumbing costs – particularly for toilet use, since flushing water would need to be separated from hand use. Never-the-less if government funds can be acquired for the capital cost, the annual savings would be significant and the prestige in value to the community could be valuable.
- The much simpler task of providing water outlets to gardening areas and for boiler water would be straightforward

PROPOSAL

- The NRM should proceed with a water resource project without delay

10.3 SOLAR ENERGY

CONCEPT

- A feasibility should be initiated to install solar panels on the pavilion roofs to reduce the museum's electricity charges. Funding this project would need to be done with the assistance of grants from state or federal governments or commercial sponsors.

11. SIGNALLING

CONCEPT

- Signalling is a particularly visible form of railway infrastructure and adds markedly to the form, theatre and feel of a railway display, particularly when the signals are in operating condition.
- Significant eras of signalling are not represented in the current displays.
- The re-arrangements of trackwork and operations over the past decade provide the platform for a coordinated plan for trackside signaling displays (to supplement the indoor signaling equipment display that could be established – refer vision 6.3)

11.1 457mm TRACK

EXISTING

- The 457mm track features a number of operating or operable signals.

PROPOSAL

The existing display be enhanced by

- Recommissioning 407 & 408
- Removing two redundant disc signals at end of Callington (east)
- Installing a down signal (421) indicating crossing protection in conjunction with vision 5.3 (potentially an ex Port Line Metro Colour Light signal)

11.2 1067mm YARD

CONCEPT

- The 1067mm yard in conjunction with the Woodville Signal Box is the ideal location for a display of “signal box” operated manual lower quadrant signaling.
- This plan is the well documented “Gordon” plan

PROPOSAL

- Implement the established plan in accordance with the attached drawing

11.3 1600mm TRACKS

CONCEPT

- There are no signals currently displayed on 1600mm tracks within the Museum.

PROPOSAL

- Provide displays of Semaphore and Colour Light main line Signals (some gantry mounted) on the now, well developed 1600mm tracks generally in accordance with the diagram in section 13.

11.4 CR DISPLAY (In progress)

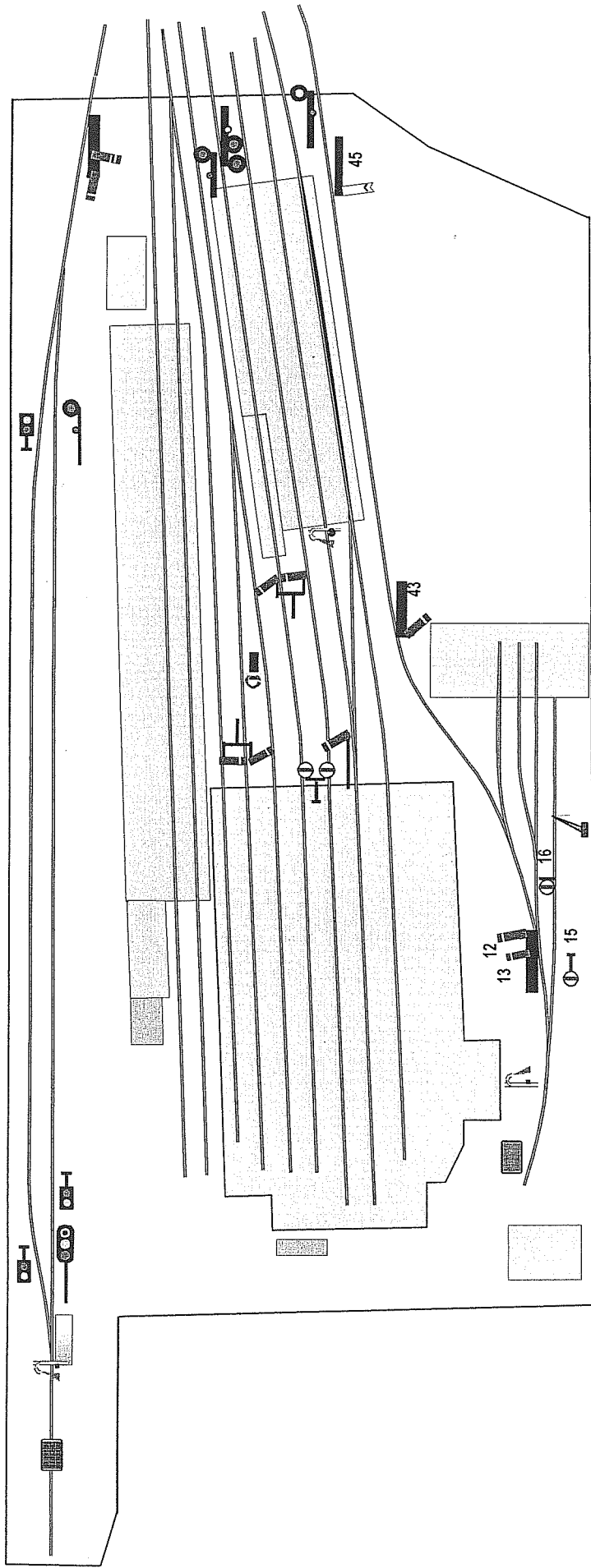
PROPOSAL













It is proposed to mount an ex CR gantry signal display adjacent to the Fluck Pavilion.

12. APPENDIX

12.1 INCIDENTAL INFRASTRUCTURE PLAN

See plan attached....as only a guide for positioning.



- | | | | | | |
|---|------------------------|---|------------------------------|---|-------------------------------|
|  | Crossing gates |  | Colour light signal |  | Lower Quadrant Gantry Signals |
|  | Water tank |  | Searchlight signal |  | Upper Quadrant Signal |
|  | Goods crane |  | Lower Quadrant Home | | |
|  | Low speed light signal |  | Lower Quadrant Fixed Distant | | |
|  | Low speed disc signal | | | | |
|  | Staff Exchanger | | | | |

12.1 INCIDENTAL YARD INFRASTRUCTURE