

Miniature Newcastle in the Post Office Building

Presentation by Miniature Newcastle
November 2024

Contents

1. Introduction
2. Success Factors
3. A Suitable Space
4. Visitation and Revenues
5. Layout Design and Operation
6. Building the Layout
7. Future Upgrades
8. Conclusions



1 Introduction

“Miniature Newcastle” was formed in late 2023 to develop an historically-based working model of Newcastle and surrounding areas, based on similar museum quality layouts around the world.

Its focus is on Newcastle’s unique rail, industry, maritime and architectural heritage, and how the city looked and functioned in the 1960’s.

Jerry Schwarz has very generously suggested that the proposed Miniature Newcastle Model could be housed in Newcastle’s former Post Office building.

The figure opposite shows the 16.5m * 9m space on the ground floor suggested for the layout, with shops and a café occupying the rest of the ground floor.

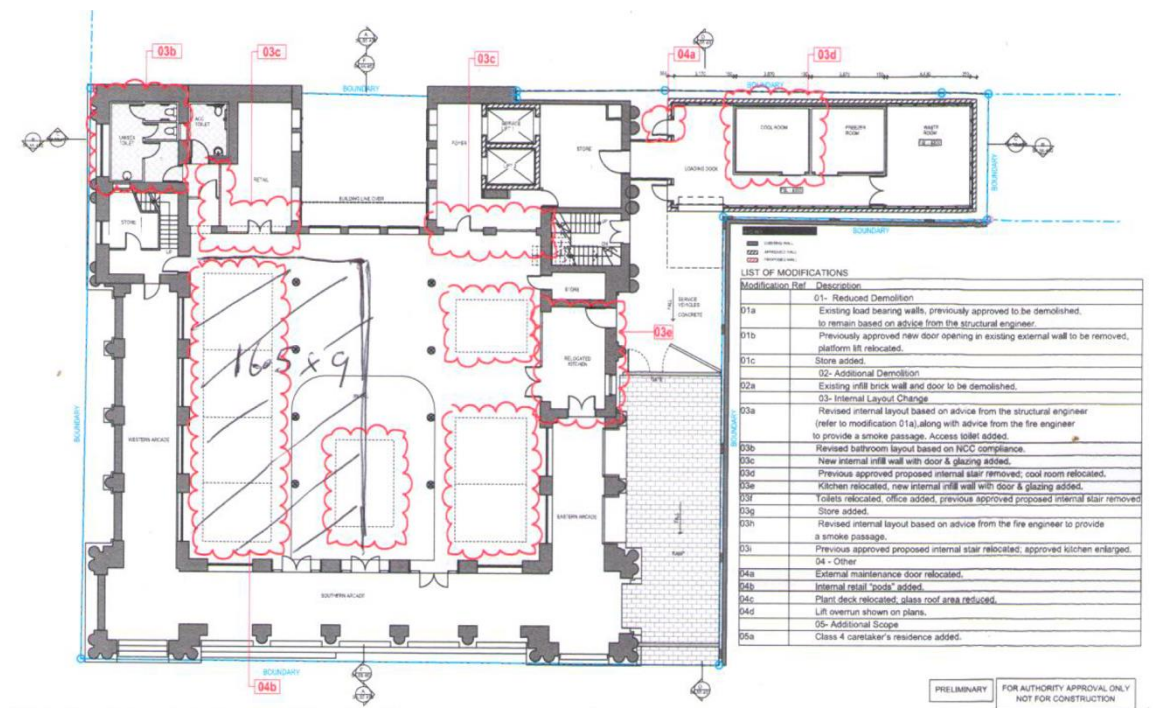
This presentation looks at the suitability of the space for accommodating Miniature Newcastle, together with other factors likely to influence the success of the venture. It also develops design objectives for the Miniature Newcastle Layout, together with a detailed layout plan fitting in the proposed space in the Post Office Building.

Presenting Miniature Newcastle

We are very excited to announce the inception of “Miniature Newcastle”, a project to recreate in miniature the industry and rail links that made Newcastle the greatest industrial city in Australia by the mid 1960s. Many will remember the extensive rail network, numerous coal mines, steelworks and lead smelter, all of which have been lost to history. Please scroll down for more information

Join Us

<https://miniaturenewcastle.com>



5 *Layout Design and Operation*

The specific design objectives for the proposed Miniature Newcastle layout include:

- creating an ***authentic representation*** in miniature of the key elements of Newcastle’s heritage
- Having a ***variety of trains and other animation features***
- attracting ***significant visitor numbers*** of visitors both from its historical basis and from its interesting operation
- meeting ***public access requirements*** such as minimum aisle widths etc.
- providing sufficient ***visitor space*** to accommodate at least 60 visitors at any one time, and 50,000 – 100,000 visitors p.a.
- ***space for operators*** to monitor the trains and to engage with the public
- providing an ***interesting “club” layout***, which would attract model railway and other enthusiasts, who will be needed to provide a volunteer base for operating and maintaining the facility.
- ***Utilising elements of existing layouts*** to reduce the time and cost to complete the model.
- Providing ***potential for expansion*** should visitor numbers increase further in the future.

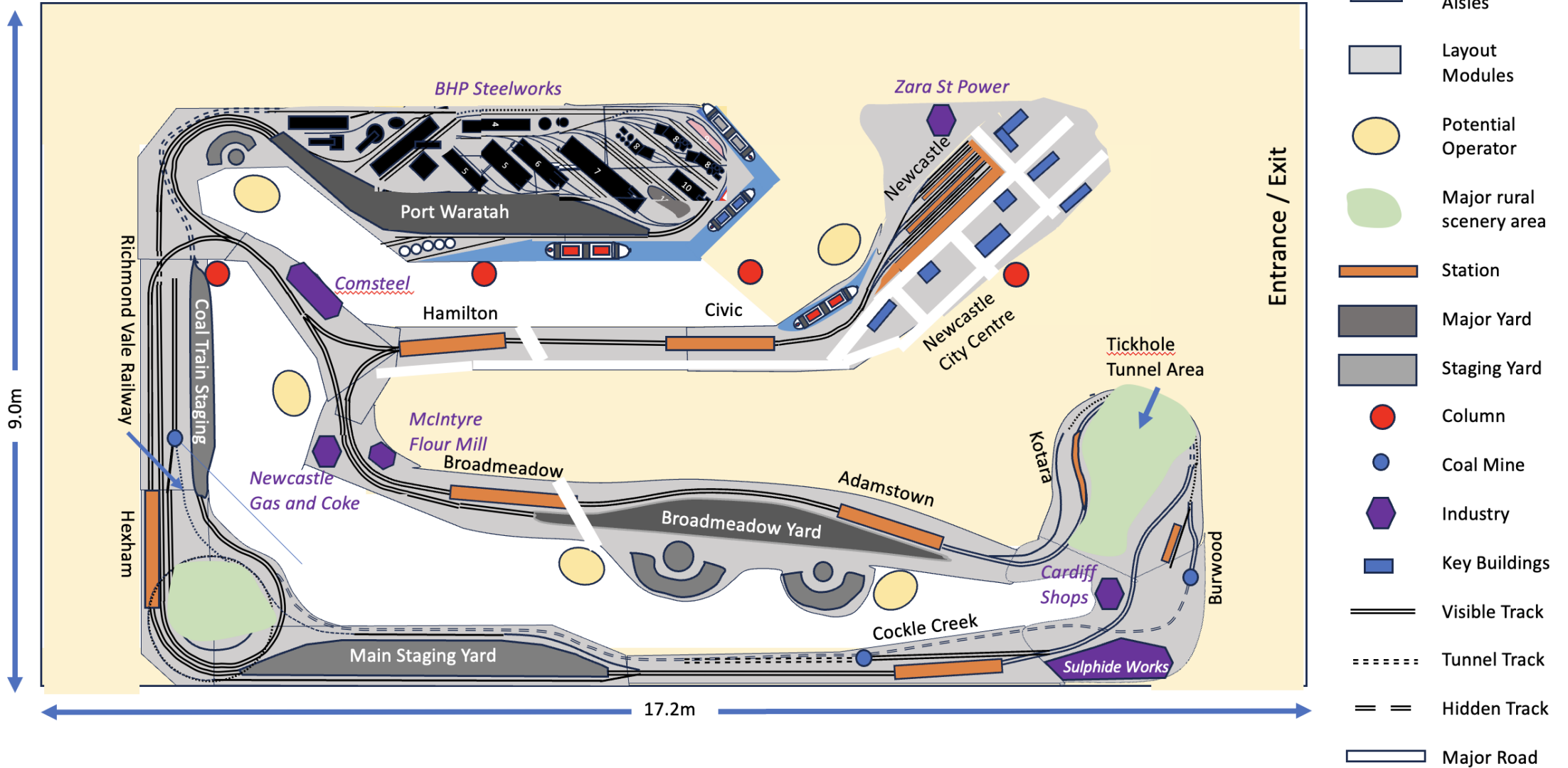


The existing Newcastle-Fassifern Layout above will form the basis of Miniature Newcastle



A Potential Plan

Base Model (9m * 17.2 m)

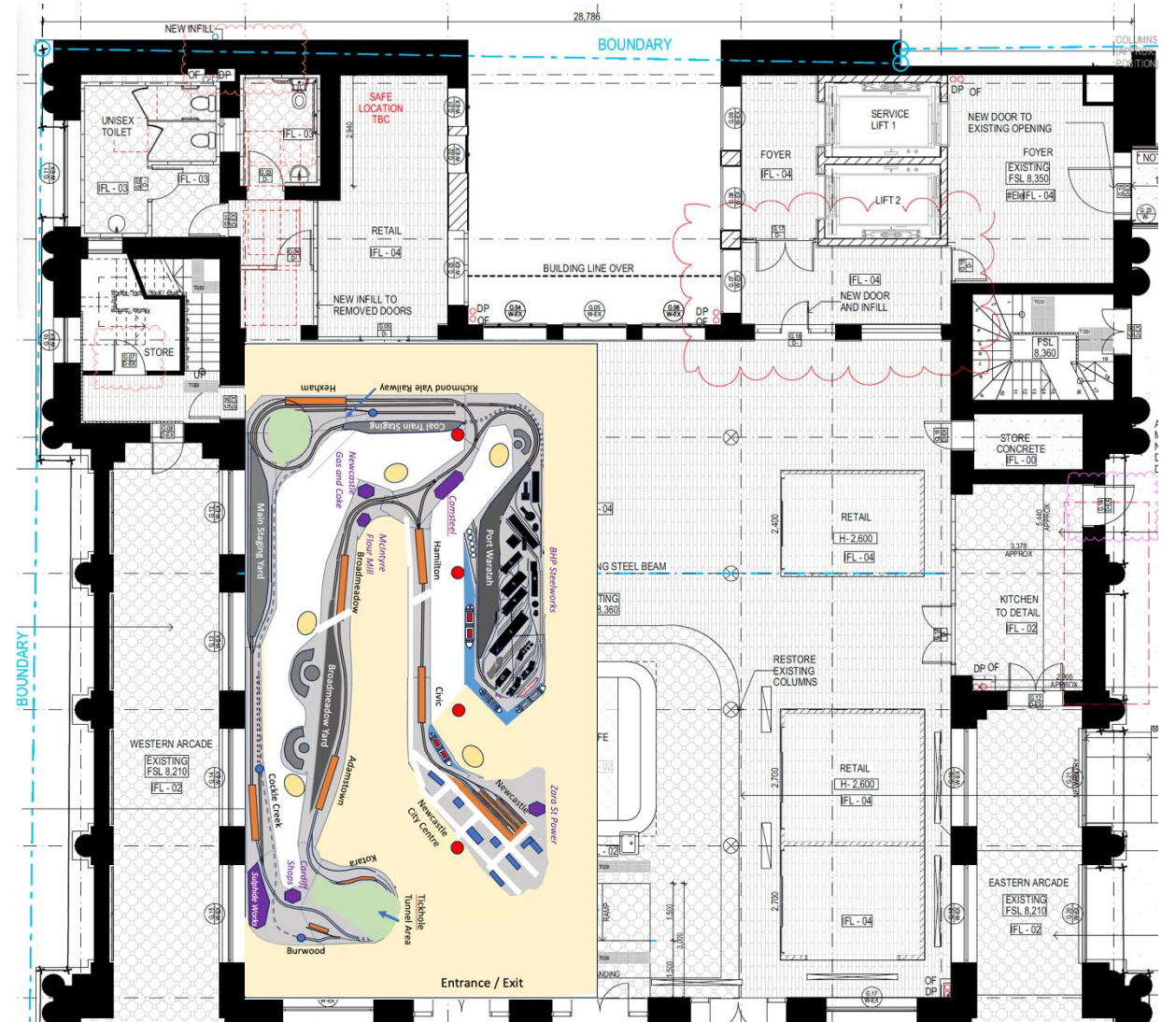


Meeting the Design Objectives

Objective	How achieved
Authentic Representation	Includes Newcastle CBD, the BHP Steelworks, Port Waratah, Broadmeadow Yard and Locomotive Depot plus numerous mines and industries
Operation and animation	Up to 12 trains operating at one time, plus vehicles, with options for visitors to operate some trains by pushing buttons. Animation of the steel works demonstrating how steel was made.
Visitor Numbers	65 sq. m. of visitor space provided, which could accommodate at least 65 visitors at one time without crowding.
Operator Space	Two people are needed to run the layout when in visitor mode. Space for at least 5 “fixed location” operators plus a dozen or more running trains during club sessions.
Public Access	Minimum visitor aisle width 1.3 metres. Access from the lower right corner of the layout room, off Hunter Street.
Club Layout	Can accommodate 30 or more trains and up to 20 operators. Caters for a wide variety of passenger, freight and coal trains from the 1950’s to the 1980’s.
Existing Layout Elements	Utilises up to 12 modules from existing layout(s).
Potential for expansion	Designed to be able to be easily extended to provide additional visitor and layout space in the future if justified by interest and visitor numbers.

Fitting the Space

- This shows how the layout could be accommodated in part of the Ground Floor of the Post Office Building.
- The columns would be mostly within the operator areas and should not provide any issues for visitor movement or viewing lines.
- The layout provides space for faithful representations of the key buildings, industries, rail operations and scenes, such as the Newcastle CBD and harbour.
- Public entry is suggested from the lower right corner of the layout, from Hunter street. An attendant / operator could be located adjacent to the Newcastle CBD area where he/she could see the whole layout and be close to the entrance to collect entry fees and introduce the public to the layout.
- An additional operator could be located in the main operator aisle to monitor train operation, particularly in the Broadmeadow area and Staging yards.



Managing Volunteers

- Major successful model railway layouts internationally have emerged from several models
 - Club-based layouts, such as the San Diego Model Railway Museum
 - Private ventures, such as Miniature Wonderland
 - Council or other government-based facilities, such as the Bathurst Railway Museum.
- In all cases a skilled and committed group of volunteers to help build, maintain and operate the layout is usually essential.
- This can be a difficult task to manage (Miniature Wonderland has almost 450 people involved, many part-time or volunteer, including 40 skilled modellers engaged in designing and building the various layouts).
- Many different skills are involved, ranging from carpentry to electronics, software, engineering, CAD design and 3D printing.
- Maintaining the interest of volunteers would be easier if the layout is interesting to operate and if “club” sessions available to volunteers are available at times when the facility is not open to the public.
- Experience from the Bathurst Railway Museum suggests that a suitable historically-based model can attract people who previously had little involvement in the model railway world, especially retired people who tend to have the time and inclination to engage in volunteer activities.
- Maintaining the volunteer side of Miniature Newcastle will require a manager with skills in personnel management in addition to technical skills.

Operation as a “Club” Layout.

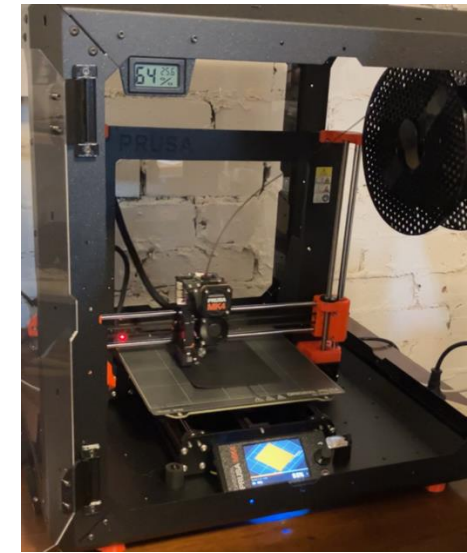
- Miniature Newcastle can also be used as a “club” layout at times when the facility is closed to the public, such as in the evenings, or at times of the week or the year when the museum is not open.
- The layout has been designed to provide long-term operating interest to railway modelers, with the potential for simulations of the prototype railways in the Newcastle area, especially in the 1960’s (although other periods could be used).
- The proposed layout is large enough to support 20 or more people in such operations. While in museum-based operations Train Controller Software will be used to run the trains, in club-based operations a more manually controlled style of operation is desirable to give the members of Miniature Newcastle the opportunity to control trains, signals and other features.
- Currently this style of operations has been used on the Newcastle to Fassifern layout for at least 7 years, with up to 16 operators. Typically, up to 9 will control specific trains based on prototype timetables, while others handle tasks such as controlling points and signals, shunting in yards, running the Broadmeadow locomotive depot or handling specific rail operations in the steelworks.



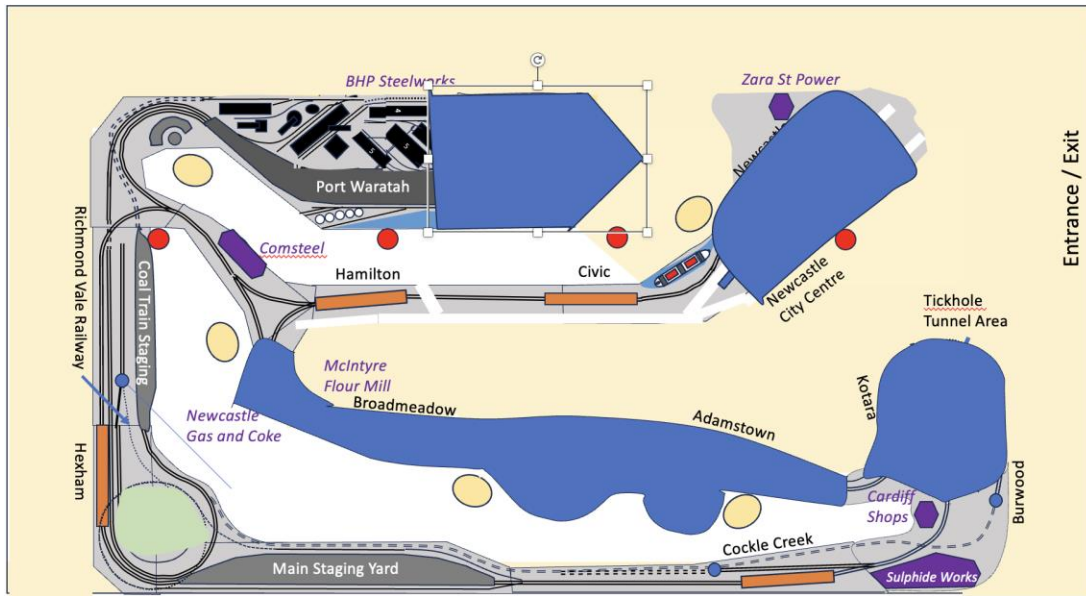
6 Building the Layout

A wide variety of skills are required to bring Miniature Wonderland to fruition, ranging from architectural knowledge to CAD design and 3-D Printing. Fortunately, there are many railway modellers and others both in the Newcastle area and more widely with the necessary skills, experience and interest to make this a reality. For example:

- Alistair Gilmour is currently working on an HO scale model of the Newcastle Customs House. Starting with detailed plans and photographs, he has developed hundreds of CAD drawings, and is now printing the parts on a high-quality 3D printer.
- Mark Metrikas has extensive knowledge and contacts in the area of architectural heritage.
- Chris Lord is planning to upgrade his beautiful HO scale model of Newcastle Station
- Laurie Moses is currently automating the Newcastle – Fassifern layout using Train Controller software.
- John Gaydon and Lachlan McGuire have developed the organisational structure for Miniature Newcastle, established a website etc and have experience in both the technical aspects of model railways and in areas such as management of volunteers.

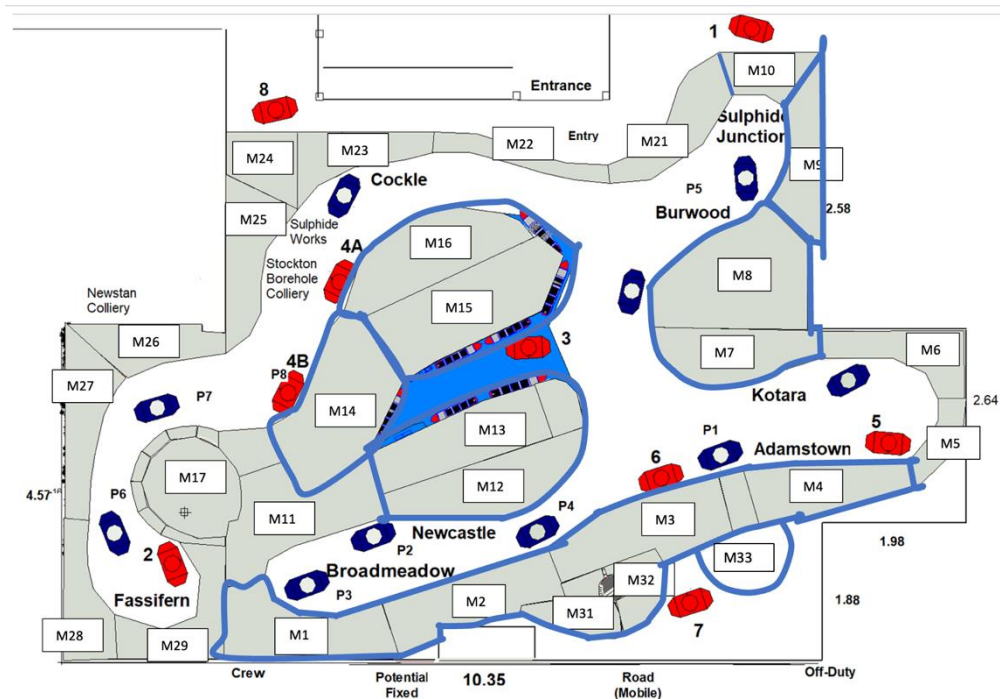


Re-using Existing Layout Modules



The proposed design uses up to 14 modules from the Newcastle Fassifern layout (Blue-shaded areas in the diagram above). This covers much of the more complex parts of the layout, greatly speeding up its potential construction:

- Modules M1, M2, M3 and M4, covering Broadmeadow station and yard and Adamstown Station. These would be essentially unchanged. Some modifications to M1 and M2 to modify the existing Sydney staging (under Broadmeadow station) would be undertaken to provide staging for coal trains.
- Modules M31, M32 and M33 covering the two roundhouses at Broadmeadow, which would also be essentially unchanged.
- Modules M12 and M13, the Newcastle Peninsula, could be utilised but it may be easier to use the Newcastle Station Module currently under development plus new modules covering the CBD area.
- Modules M14, M15 and part of M16 can be re-used, including much of the trackwork with some modification. However, the blast furnace, gas holder, rolling mill, limestone plant, refinery, coke ovens, power/blower house and other steelworks structures (which can be removed easily) would be relocated. Additional blast furnace(s) and a scratch-built Basic Oxygen furnace would be needed as major new structures.
- Modules M7 and M8 (Kotara – Burwood) can be re-used with minor modifications.



Hands - on Activities

Hands-on activities allow kids to understand how flanged railway wheels or steam engines work.



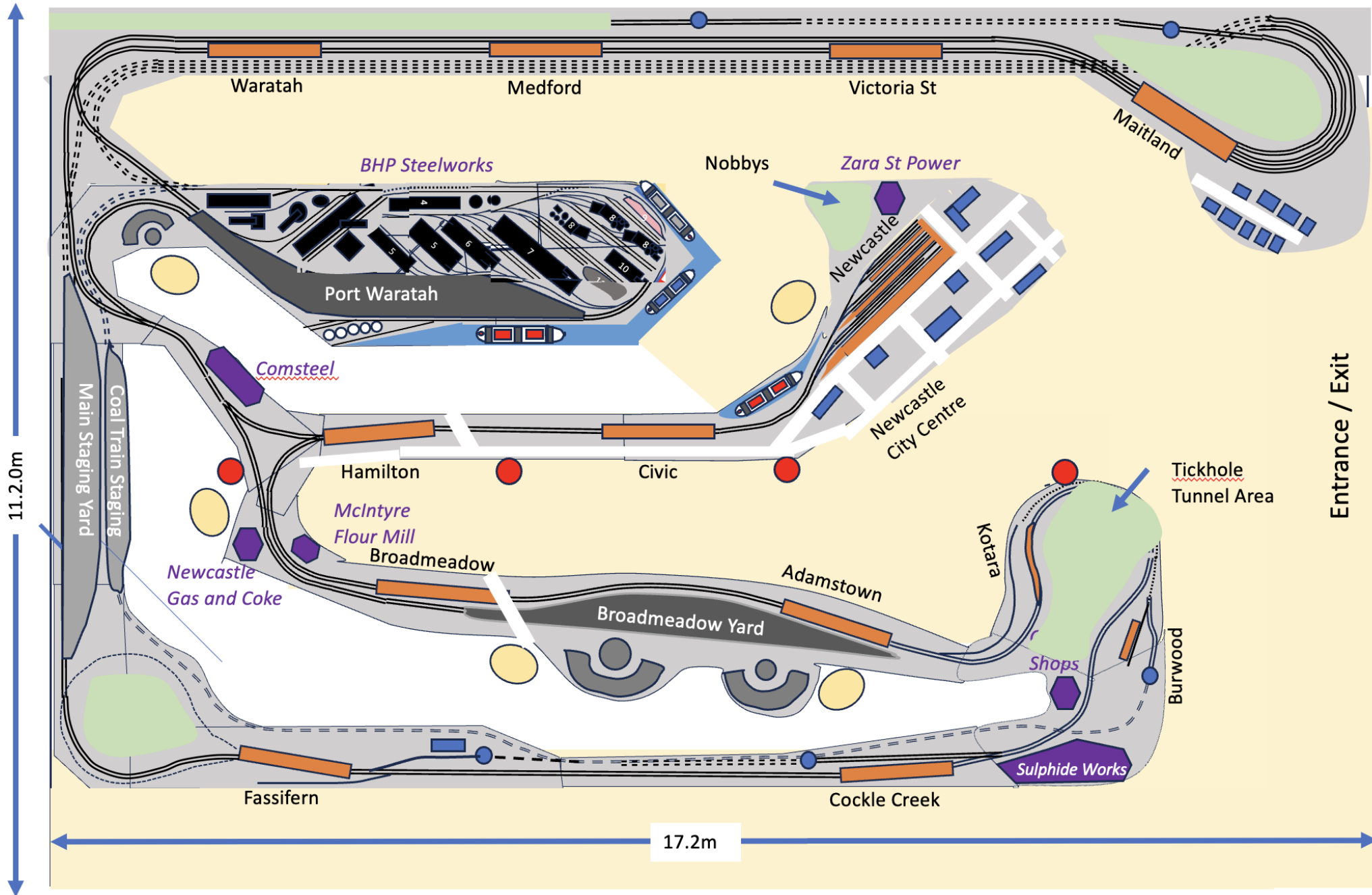
Another feature of modern museums is hands-on activities, especially for younger children, such as those found at Utrecht's Railway Museum in the Netherlands, or the "Traingamia" layout in Copenhagen.














Similar hands-on features could be incorporated into "Miniature Newcastle" if sufficient space was made available.



Utrecht's Railway Museum Café demonstrates its popularity with children and families.

Enlarged Model (11.2m * 17.2 m)



-  Visitor Space
-  Operator Aisles
-  Layout Modules
-  Potential Operator
-  Major rural scenery area
-  Station
-  Major Yard
-  Staging Yard
-  Column
-  Coal Mine
-  Industry
-  Key Buildings
-  Visible Track
-  Tunnel Track
-  Hidden Track
-  Major Road

Entrance / Exit

11.2.0m

17.2m

8 *Conclusions*

- There is now ample evidence of the appeal of a well designed, built and located model railway-themed museum.
- Experience from examples of similar facilities in Australia and overseas suggests that a “Miniature Newcastle” located in the Post Office building could attract in the order of 50,000 – 100,000 visitors annually.
- Key factors likely to underpin the success of Miniature Newcastle have been identified.
- A potential layout based on Newcastle’s key railway, industrial, maritime and architectural heritage has been designed to fit into the ground floor of the Post Office, with potential for further expansion in the future should it prove highly successful
- The task is now to develop it from concept to reality. Hopefully the Post Office opportunity will provide a critical step in that process.