

New South Wales, Australia

“Northern Illawarra” Route - Sydney to Wollongong

Version 2.0

- Full Installation
- Extensive beta testing by Allan Lownsborough
- Released: 25 December 2007

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1. Installation Notes

- You have successfully installed this "Northern Illawarra" version 2a folder named "AU_NSW_Ni2" in the "ROUTES" folder of your Train Simulator Game. You will find the route in MSTs listed as "AU NSW Northern Illawarra v2.0".
 - Note that if you are reading this readme.txt during the installation of "Northern Illawarra v2", a batch file installing required shapes from the six default routes will be called when you exit from this readme. When the batch file has completed (will take a minute or so), close the DOS box and away you go.
 - You will need to have installed Xtracks 3.19 or higher before this route will run (note that Xtracks 3.9 or any single .digit build is LOWER than v3.19).
 - You will need to have installed Newroads 3.2 or higher before this route will run.
 - The first time you run this route from a full install, MSTs will generate terrain buffers files which will take a few minutes: this only needs to be done once and subsequent use of the route will be as normal.
 - One activity is included - the Default activity (to ensure that it will appear in your MSTs installation. This activity uses the Class 32 Add-On Pack (and the original Class32 pack) and N-Type passenger car set – follow the following links: these are available from the Coals to Newcastle site:
 - [NSWGR 32 Class Steam locomotives](#)
 - [NSWGR 32 Class Steam locomotive add-on](#)
 - [NSWGR N-type Passenger Carriages](#)
 - [Bogie Passenger Carriage Sounds](#)You may see a non-critical error message on loading MSTs ("Error reading train database") if these items are not installed.
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2. Designer's Notes and Acknowledgements

Many thanks to

1. John Yelland who has made his excellent NSWGR semaphore signals available to enhance this route;
2. Peter Newell who has generously given permission to re-use the four Sydney end tiles from the 'Coals to Newcastle' route; and
3. Special thanks to Allan Lownsborough for his extensive beta testing and "polishing" of this route.

Add-Ons used in this route have been created by:

- Track system: X-tracks by Okrasa Ghia
- Track textures: Scottrax by John Scott
- Road system: New Roads by Bruce Bridges, Martyn T. Griffin, Steven Masters
- Platform kits: by Graham Pitt
- NSWGR Mileposts and Speedboards: by Peter Newell
- NSWGR Signalling: by John Yelland, Peter Newell

- Many custom buildings and scenery objects: by myself

- Australian trees: by David Rowe
- Kangaroo Hazard by Paul Gausden
- Other trees: by Ron Mays
- Shrubbery: by Trunda - <http://www.virtuallandscaping.net>, Reg Furniss
- Grass / reeds: by Michael Stephan, Dick Tarkington
- Flowers / flower beds: by Reg Furniss, Paul Gausden

- Motor Vehicles: by Trevor Burt, Jim Jendro
- Shipping: by Captain Bazza, Darwin Smith
- 3D People: by Reg Furniss, John Scott
- Backdrops: by John Milligan

- Miscellaneous scenery objects:
 - Caldrail
 - Frank Carver (Emu Farmer)
 - Paul Gausden (Decapod)
 - Larry Friddle
 - Tim Court
 - Peter Holton
 - Teemu Saukkonen (Enorcell)
 - Mike Simpson

- Various freeware 'community' scenery objects from UKTrainSim

- ADDITIONAL ITEMS USED IN V2.0
 - NSWGR Overhead Wiring Gantries: by Colin Cribb
 - NSWGR Colour Light Signals: by Colin Cribb
 - NSWGR Wrought Iron Truss Bridge (Como): by David Rowe
 - Bridges: Ron Picardi
 - Industrial Buildings: Ron Picardi, Paul Charland, Alan Garrett, Bill Bzak (Longhairedwizard), Nick Fitzsimmonds, Michael Stephan
 - Airport Objects: Cal Rasmussen, Captain Bazza, Grando Pascal
 - Static Locomotives / Tram: Joseph Spinella

If I have inadvertently used somebody's work without acknowledging them please email me so that I can credit your efforts.

3. Route Description

This route is based on the Main Illawarra railway lines running down the coastal strip of the Illawarra region of New South Wales, Australia, around the 1950 to 1960 period, from the Steam Platforms at Sydney Terminal to just south of Coniston.

I have also included a small section of several branch lines which run off the Illawarra Lines - the Bankstown Suburban Line turns off at Meeks Road Junction and runs through to Belmore; the East Hills Suburban Line turns off at Wollie Creek Junction and runs through to Turrella; the Cronulla Suburban Line turns off at Sutherland and runs through to Kirrawee; and the Royal National Park Line turns off at Loftus Junction and runs right through to the terminus in The Royal National Park.

There is also a section of the Metropolitan Goods Lines from the southern end of Enfield Marshalling Yards, through Wardell Road and Meeks Road Junctions, and the single line goods only branch running to Cooks River and Botany Goods Yards. Also included is the section from Wardell Road Junction, past Great Western Milling and Mungo Scott's to Rozelle and Balmain/White Bay goods yards, with the connecting section from Balmain Road Junction through Glebe and Pyrmont to Darling Island (connecting to the northern end of the 'Coals to Newcastle' tiles).

These small sections of branch lines have been included to enable a user to setup Goods and Suburban AI Traffic in conjunction with working normal passenger and goods trains along the Illawarra Main Line. If so inclined, the user could also create short cameo activities that centre on the Metropolitan Goods and Suburban trains themselves. It is NOT anticipated that there will be any further extension to this northern end of the line.

The original Northern Illawarra V1.0 was extensively signalled with semaphore signals - all signalling has been done to conform with the original NSWGR Signalling Diagrams, as closely as possible, but bearing in mind the limitations of MSTs, there are some minor differences from prototype practise. My main interest in NSWGR stems from the steam era 1950-1965, and I have a very good understanding of semaphore signalling practise.

For the V2.0 extension north from Loftus Junction (apart from a small section from Sydenham to Erskineville and Marrickville to Belmore/Enfield), all the signalling is standard NSWGR colour light signalling - my knowledge of colour light signalling is not as great, so there are some compromises, especially in the quad-tracked sections from Hurstville to Eveleigh, to try and achieve the best performance with a signalling system that represents the standard NSWGR system. The signalling locations closely follow the original locations as shown in the NSWGR Track and Signalling Diagrams from the CD available from the ARHS bookshop.

One of the principal problems that will occur when making detailed Activities - it was not possible to use 'active' diamond crossings at all locations during the tracklaying process, particularly on some minor sidings, however ALL diamond crossings intersecting the main lines are fitted with 'active' diamond crossings. Any conflicting moves over these minor opposing crossings will not be protected by the MSTs signalling system and will be subject to occasional collisions, so activity writers will need to take care when programming activities that cross Paths. Also as part of this, MSTs was never designed to accommodate 'gantlet track', so the trackwork over the 'single lane' Como Bridge is not protected, and head-on collisions can occur here if the timing of activities is not carefully checked.

4. Version Information

Version 2.0: With the generous approval of Peter Newell, I have been able to merge the last four tiles from the 'Coals to Newcastle' route onto the top of Northern Illawarra. The 'Coals to Newcastle' route runs from the steam platforms at Sydney Terminal (and from Darling Harbour Goods yard), through Redfern, past the Eveleigh locomotive and carriage sidings via the Illawarra Dives, and turns down the Illawarra Line to Erskineville.

As the primary purpose in including a small section of the Coals to Newcastle route was to complete the Illawarra Main Line at the northern end, some of the detail from CTN has been selectively stripped to reduce the tile object overheads over this section of route, and try to improve the performance of MSTS. For example, in this section the Car Spawners have been removed, and the signalling simplified - i.e. the aim was not to waste object count having fully signalled tracks that are not part of the Illawarra Mains.

This is where the rest of the new Northern Illawarra V2.0 picks up, at Erskineville.

Version 3: A future upgrade will extend the line to the south from Coniston, certainly to Port Kembla (including the 1963 Inner Harbour Coal Loader) and down to Minnamurra to then be combined with Paul Wozzley's original Illawarra Stage I route. There will be a short section of the Moss Vale line, a couple of miles long, to enable authentic train workings over this line to and from Wollongong. However the thought of having to create over 30 miles of tortuous hilly single line through nothing but forests, does not appeal to me, and so will not be included. Some parts of the industrial lines around Port Kembla will be included to allow Traffic working interchange between the NSWGR and the private industries - these lines will include Lysaghts, Australian Iron & Steel, and some of the local AIS colliery lines west and south of Unanderra.

5. Performance Tips

PLEASE NOTE: the Illawarra Main Line abounds with many sharp curves and steep grades - it will tax your driving skills.

- For Down trains, it will be hard to keep your speeds down to avoid exceeding the prevailing speed limits in various sections.
- For Up trains, it will be hard to maintain the momentum to avoid stalling your heavy goods trains on the steep grades.
- When driving on some sections performance problems maybe experienced due to the heavy object density. Lockups, reduced frame rates and stuttering screens may occur as well.

The following suggestions are offered to minimise these problems:

1. View the train from the side (i.e. look perpendicular across the train as this puts less load on the PC then looking directly forward along the direction of travel).
2. Make sure that you regularly de-fragment your hard disk drive that has MSTS on it.
3. Reduce your MSTS option settings. These settings may change from PC to PC due to difference in setup, etc. You may need to experiment by increasing or decreasing these settings.

Alternatively you can install the patch MSTS Bin v1.6+ which appears to have improved these performance issues in MSTS. MSTS Bin is available from the following website:

<http://mstsbin.uktrainsim.com/eng/eng.html>

6. Environment Settings.

To enhance the experience when running trains through the 'Northern Illawarra' route, several Environment Files have been updated to allow some new Weather Effects.

The main new effects are described below, but several others have only minor changes:

- for Summer Clear conditions, brighter and bluer water has been used, more typical of an Australian Summer.
- for Summer Snow conditions, snow has been eliminated, but a dense limited visibility FOG effect has been created instead. Visibility is about 100-150 metres, and driving will take some care and limited speeds.
- for Winter Rain conditions, a very dark overcast sky has been used with a change in muddy brown water effects to create 'local' flooding in several parts of the route, in low-lying areas.
- for Spring and Summer, the route is populated by various Wildflowers in full bloom, as well as the native Illawarra Flame Tree in full bloom - these effects are removed in the Autumn and Winter scenarios.
- for Night Time running - there are extensive night time lighting effects throughout the route - however, there is one minor problem associated with night time running - at night the water textures occasionally 'flash'. This is a problem with MSTS itself - I applied the common fix to stop this but the water then 'glows radioactively' all the time - I decided that dark water with the occasional 'flash' was better than constantly 'glowing water' !!!

As the area of the route covered was NOT subject to SNOW conditions during Winter, see the recommendations shown below as which Seasonal variations would be suitable for running trains in this route. I have eliminated the Snow effects in the Snow environments.

	CLEAR	RAIN	SNOW
Spring	MSTS Default	MSTS default changed to light Showers	NO SNOW Light Fog
Summer	MSTS Default Changed to brighter, bluer water effects	MSTS Default	MSTS Default Changed to dense fog with limited visibility
Autumn	MSTS Default	MSTS Default Changed to heavy thunderstorm	NO SNOW Light Fog
Winter	NO SNOW	Major changes to dark overcast sky and localised floodwaters	NO SNOW Light Fog

The changes to the Environment Files have been created by examining other Environment Files by Michael Vone, The 'Kosmos' and 'Sky Conductor' files, and the excellent environmental files created by John Kendrick in his UKFS Yorkshire Coast Railways route. The standard NI environmental files were then modified and adapted to incorporate similar weather features (please note the NI environment files are NOT direct copies of any other files).

PLEASE NOTE: PERFORMANCE CONSIDERATIONS - As the Northern Illawarra route gets more refined and additional scenery added, we are now pushing the boundaries of what MSTS can do. In some instances, if you have a slower processor, slower hard disk, older video card and limited RAM, you may find that you might have to lower some of the MSTS settings slightly to get a satisfactory performance - for example with highly detailed rolling stock moving through the landscape, all the 'car spawner' vehicles moving around the landscape, and all the rain effects, I found I sometimes have to reduce the Quantity of Objects setting to 8 to allow the selected weather scenario to run satisfactorily. Other settings worth considering are NO Dynamic Shadows, NO Distant Mountains, NO Specular Lighting and NO Overhead Wires - also setting Visibility to 1500m can help.

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