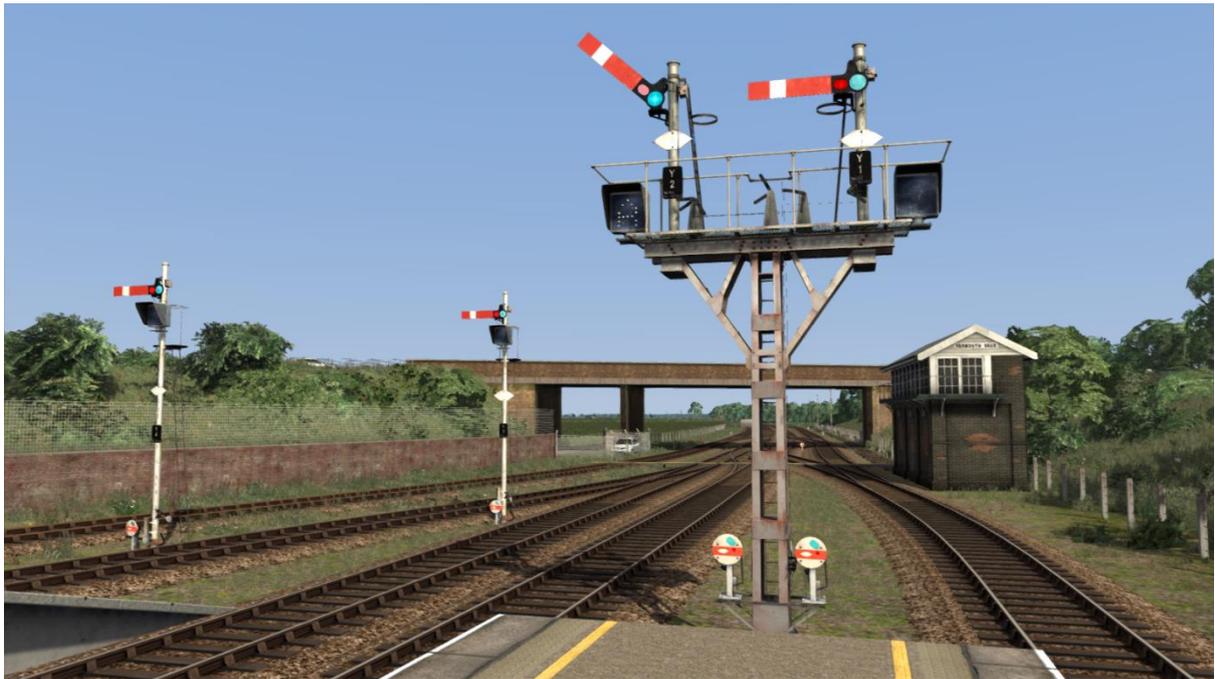


Wherry Lines

Norwich to Great Yarmouth & Lowestoft



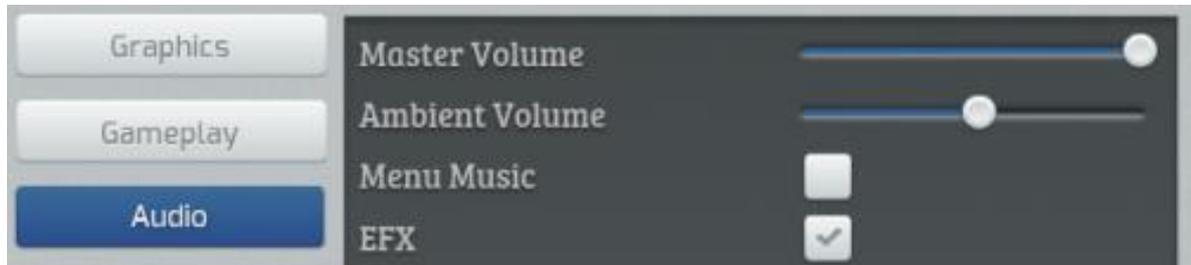
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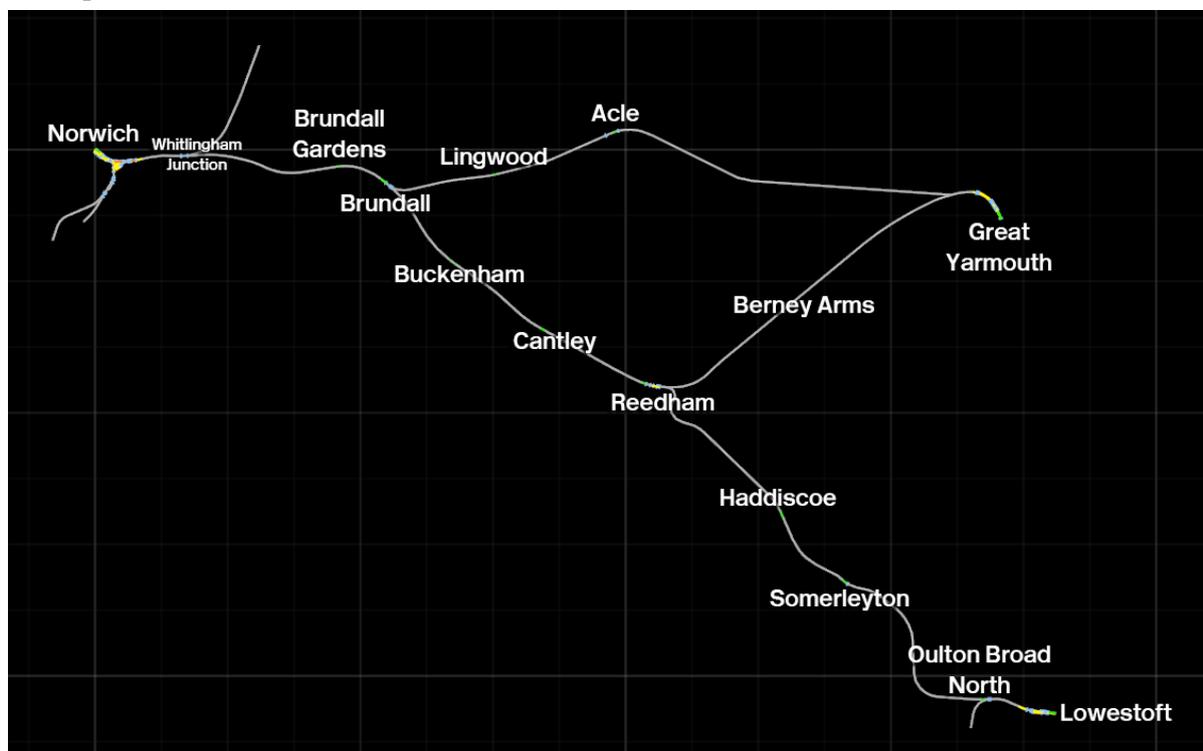
Recommended audio settings

When using this route, we recommend you use the following volume levels so as to have the right balance between the train sounds and ambient noise, which includes the sound of the semaphore signals moving. We also recommend having EFX turned on so as to take advantage of the reverb effects beneath bridges:



Route information

Map



Key facts

Norwich to Great Yarmouth via Acle - 18.4 miles

Norwich to Great Yarmouth via Reedham - 20.6 miles

Norwich to Lowestoft - 23.5 miles

Total length - 44.1 miles

Maximum speed - 60mph for passenger/40mph for freight

Era represented - 2007 to 2016

History

Opening in 1844, the Norwich to Great Yarmouth railway, via Reedham, was the first railway to be seen in Norfolk. Three years later, the branch from Reedham to Lowestoft followed and it wasn't until 1883 that the final piece of the jigsaw fell into place with the construction of the alternative route via Acle to Great Yarmouth.

Until 1923, this railway was operated by the Great Eastern Railway company and it was their fear of a competitor attempting to reach Great Yarmouth which resulted in the construction of the later route via Acle. The name of the line, Wherry Lines, originates from the Norfolk wherries which were once important in transporting goods and people around the broads before roads and railways became widespread.

Fast forward to the 1980s and the 'Yarmouth' route was thriving with summer services from all parts of the country, such as London, Liverpool, Manchester & Newcastle (the Lowestoft branch never attracted as much traffic so will be kept to the side for the time being). Come the early 1990s however, cheap package holidays abroad were starting to take hold and the demand to visit Yarmouth as a holiday destination steadily dropped. As a result, these direct services were gradually reduced and by the time of privatisation in 1996, only the London trains and a couple of services from Liverpool Lime Street remained. By 2004, the Liverpool trains were withdrawn, resulting in Yarmouth only being served directly from London & Norwich.

As loco-hauled services progressively disappeared around the country, these London trains held strong and, as a result, started to attract quite a following from enthusiasts. With the electric hauled set from London being dragged from Norwich to Great Yarmouth by a class 47, a run round procedure was required at Yarmouth to haul the set back to Norwich - something quite rare to witness by the end of the 2000s. This continued until 2014 and remained a popular day out for enthusiasts but, come early 2015, class 47s were being withdrawn by DRS in favour of class 37s. These locos were unable to haul the 8 or 9 coach sets from London due to having an insufficient 'ETH index' (the amount of electricity that can be supplied for on-train systems such as air conditioning and heating), so as a result, direct services from London were withdrawn and, after many decades, Yarmouth has been left with no direct services beyond Norwich. This might all sound rather gloomy but a new era was arriving on the 'Wherry Lines' and enthusiasts were in for a right treat.

So far, only direct services to Yarmouth from far off places have been mentioned but local services from Norwich to Yarmouth & Lowestoft have also offered plenty of interest in recent years. From the late 1950s, diesel multiple units (DMUs) replaced steam-hauled local services and this largely remained the case until the early 1990s. Since then, Norwich Crown Point depot has intermittently had shortages of DMUs so to combat this, they cobbled together a set of 3 or 4 coaches, plus a locomotive, to cover. Usually the locomotive in question would be a class 47 but in the early years, it wasn't unknown for a class 31 or 37 to do the honours. This loco-hauled train soon became known as the 'short set' due to its short appearance in comparison to the London trains, though in later years, it has had a second locomotive added to facilitate top and tail operation, which removes the requirement to run round. This arrangement continued until April 2014, but with the mk3 coaches undergoing refurbishment and experiencing lower availability as a result, mk2 coaches were provided instead from DRS, who had already been supplying class 47 locomotives for the set since 2009. As mentioned previously though, with increasing reliability issues, the class 47s were falling out of favour and by June 2015, class 37s had arrived to operate the short set. No longer on an ad-hoc basis depending on DMU availability but scheduled workings from Monday to Friday and extra Saturday services during the summer. This is the era we've chosen to focus on with the scenarios in this pack.

At the time of writing in early 2016, this route is somewhat of a time warp with semaphore signalling and manual level crossings surviving for most of its length. With the addition of class 37 hauled passenger services, it is a treasure trove for enthusiasts and oozes the character of yesteryear: one of the last places to truly experience the railway as it was. Whilst a date for re-signalling has yet to be set in stone, it is only a matter of time, so this add-on is our tribute to the line that time forgot. Enjoy it and, if you can, make sure to visit as soon as possible to see it for yourself. For now though, enjoy its delights in the virtual world!

Features

- Highly detailed models of Norwich & Great Yarmouth station
- 28 custom made semaphore signal models with sound
- 7 custom made signal boxes
- Accurate absolute block signalling simulation
- Reedham & Somerleyton swing bridges with corresponding rumble sounds
- Mechanical point rodding and signal cables where relevant
- Bullhead and flat bottom rail track in the correct places as of 2007
- Jointed and continuous welded rail in the correct places as of 2007
- Smooth looking cutting and embankment sides, rich in vegetation
- Dense looking fields, rich in grass or corn
- New and ultra-realistic fair weather cloud textures
- Realistic environmental lighting
- A variety of ambient sounds recorded on location in Norfolk
- Custom EFX reverb effects beneath bridges

Points of interest

Norwich

Being the largest and most important station on the route, we have not held back in representing it in all of its glory. Arriving here is always something to look forward to.



Brundall

This attractive station, five and a half miles from Norwich, is the junction of the line to Great Yarmouth via Acle. A fine array of semaphore signals have been modelled as well as the lattice footbridge & level crossing gates.



Cantley signal no.21

This co-acting semaphore signal is a rare breed these days, with only two others surviving on the mainline and is a good example of the lengths we have gone to in portraying these signals accurately. Both arms repeat each other to enhance visibility.



Reedham Junction

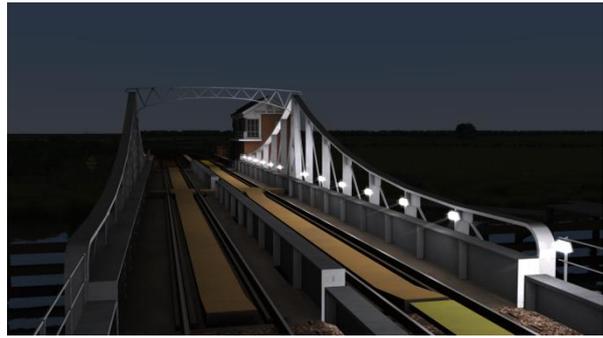
This is the halfway point between Norwich & Lowestoft and is the junction for the line to Great Yarmouth via Berney Arms. A good selection of semaphores are visible and on top of that, telegraph poles can be seen to really take you back in time.



Reedham & Somerleyton Swing Bridges

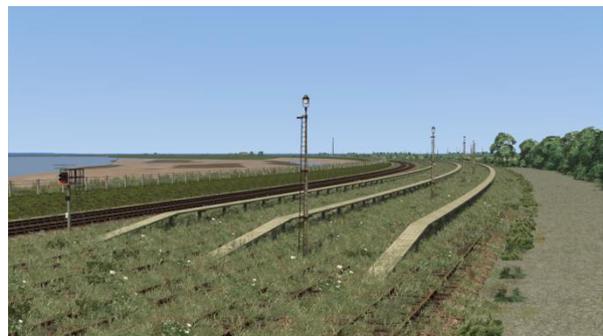
One distinctive feature of the route is the swing bridges at Reedham & Somerleyton. These are able to rotate 90 degrees to allow river traffic to pass, though this particular feature hasn't been included as it's something a driver would rarely, if ever, see. Dedicated models of both the bridges and associated signal boxes are included.





Great Yarmouth

With accurate semaphore signals, signal box, custom station building/platforms & disused carriage sidings, 'Yarmouth' has been well represented and is a satisfying destination to arrive at.



Rolling stock

Class 37



Features

- Blue livery with 4 numbered variants (37405, 37419, 37422 & 37425)
- 3D nameplates for 37419 & 37425
- Completely re-textured cabview with additional GSMR, TPWS & DRA fittings
- Detailed new sounds recorded from 37674 at the Wensleydale Railway
- Accurate acceleration physics as well as functioning self-correcting wheelslip protection
- Dynamic exhaust which reacts in time with the sounds
- Reverser with all four stages (off/reverse/neutral/forward). This must be moved out of 'off' by pressing the 'W' key before this loco can be used with the F4 HUD.

Keyboard controls

Additional keyboard controls are listed below:

- | | |
|----------|--|
| L - | Cab light ON/OFF |
| Y - | DRA (Driver Reminder Appliance) ON/OFF (this must be OFF (unlit) before the loco can take power) |
| Z - | Engine start button |
| Ctrl+Z - | Engine stop button |
| Space - | Horn (low tone) |
| B - | Horn (high tone) |
| I - | Instrument lights ON/OFF |

Mk2F coaches

Mk2F coaches are supplied in blue livery with both BSO & TSO variants.

BSO (Brake Standard Open)



TSO (Tourist Standard Open)



Class 170



Features

- 3 liveries: Blue, Blue/White & Dark Blue

Absolute block signalling

Overview

One major feature of this route is the accurate implementation of absolute block signalling. Whilst the Norwich end of the route uses standard colour light signals, from Whitlingham Junction onwards, absolute block is in place.

Put simply, absolute block divides the line into sections and within those sections, there can only ever be one train present. A section is defined as the stretch of railway between two signal boxes. Please see below for a comprehensive list of sections for the three possible routes on the Wherry Lines:

Norwich to Great Yarmouth via Acle

Whitlingham Junction to Brundall

Brundall to Acle

Acle to Great Yarmouth

Brundall to Great Yarmouth via Reedham

Brundall to Cantley

Cantley to Reedham Junction

Reedham Junction to Great Yarmouth

Reedham Junction to Lowestoft

Reedham Junction to Reedham Swing Bridge

Reedham Swing Bridge to Somerleyton Swing Bridge

Somerleyton Swing Bridge to Oulton Broad North

Oulton Broad North to Lowestoft

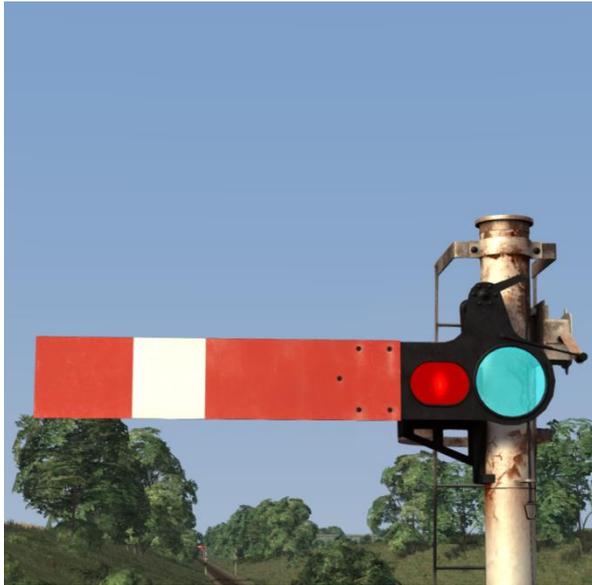
Signals

Semaphore

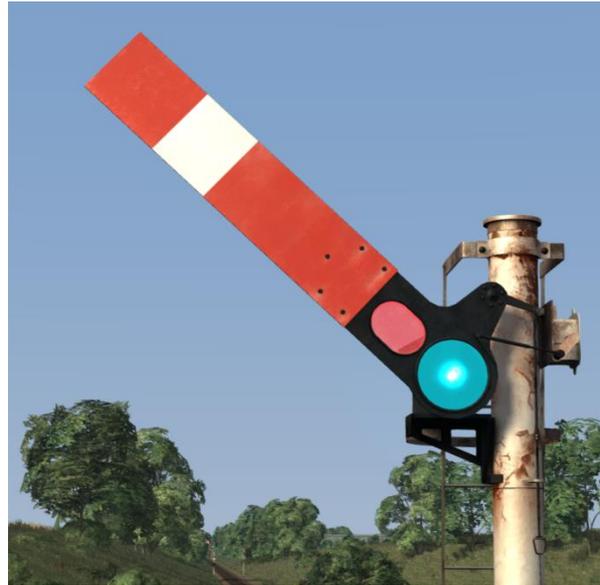
Most of the signals used within the absolute block area are of the traditional semaphore sort. Please see below on how to interpret these signals:

Stop signals

These signals have a red and white arm and can display two aspects; horizontal which means **danger**, or raised at approximately 45 degrees which means **clear**.

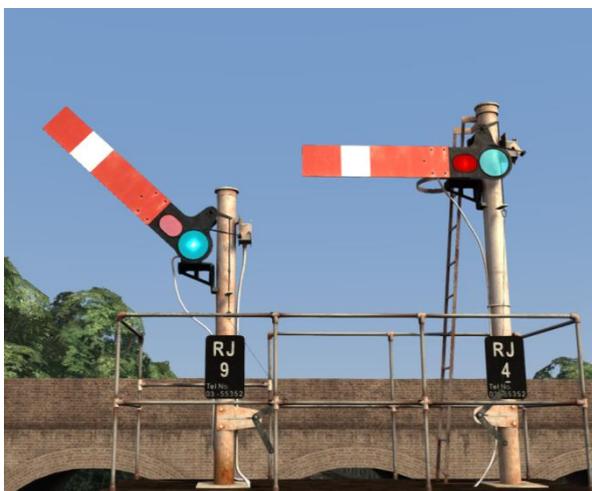


Danger



Clear

When there are two possible routes, there will usually be two arms to represent each one. The position of the arm corresponds to the relevant route so the left-hand arm represents a route diverging to the left and the right-hand arm represents a route diverging to the right. If one of the arms is at a lower height than the other, then this is treated as the diverging route and will often have a lower speed than the other.



Left-hand route clear



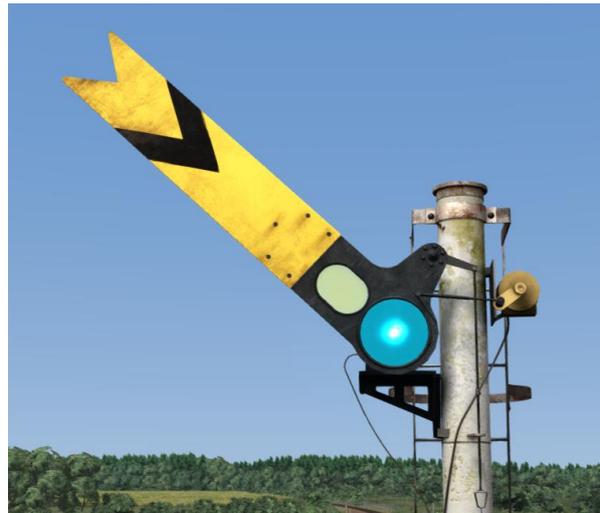
Right-hand route clear

Distant signals

These signals have a yellow and black arm and can display two aspects; horizontal which means **caution**, or raised at approximately 45 degrees which means **clear**. As a result, you never need to stop at these signals but they show the status of the stop signals ahead. Every signal box has a distant for each route entering its area and if the distant is at clear, this mean all stop signals in that signal box's area, which are relevant to you, are clear. If the distant is at caution though, you must assume that all relevant stop signals in that signal box's area will be at danger. Even if the first stop signal you encounter is clear, you must still assume all of the box's signals will be at danger unless you can see otherwise.



Caution



Clear

Shunt signals

These signals are a white disc with a red stripe and are provided for shunting operations. Like stop signals, they can display two aspects; horizontal which means **danger**, or swivelled by approximately 45 degrees which means **clear**.



Danger



Clear

Colour light

Over the years, some stop and distant signals have been replaced by colour light versions. These still operate under the same principles as explained above but in a different visual form.

Stop signals



Danger



Clear

Distant signals



Caution



Clear

3-aspect signals

At Reedham Swing Bridge & Somerleyton Swing Bridge, 3-aspect colour light signals are present. These have the ability to show danger, caution & clear. These should be treated as a stop signal so if caution is displayed, this means the next signal is at danger and if clear is displayed, the signal ahead is also clear.

Rule 39a

If the section ahead of the signal box you are approaching is not clear, the distant will show caution and you will be brought to a near stand at the first stop signal you encounter. Assuming the route is clear between that stop signal and the next, the signalman will clear the first stop signal once he judges you have been brought to a slow enough speed. This will then happen consecutively at each stop signal in the signal box's area until the section ahead is clear, or you reach the final signal protecting the section ahead which will remain at danger until it is clear.

This is rule 39a and the purpose of it is to safely bring a train's speed down when the section ahead is not clear.

Lingwood distant signals



At Lingwood there are two level crossings; Chapel Road & Station Road. In the down direction towards Acle, there are two distant signals (pictured left); CR1, which protects Chapel Road & L3, which protects Station Road. In the up direction towards Brundall, there is only one distant signal; L1, which protects both Chapel Road & Station Road. If any of these signals are clear, you can continue as normal but if any show caution, you must prepare to stop at the closest crossing they protect and the crossing gates act as the stop signal. If you see the gates are closed to road traffic, then you may proceed but remember, L1 protects both crossings so if you see Station Road is clear, you must still prepare to stop at Chapel Road until you see otherwise.

Features

As well as the fundamental principles mentioned above, this new signal scripting also includes further features:

- Sound of semaphore arm rising up and clattering down
- Signal doesn't return to danger or caution until a while after the train has passed
- In most situations, consecutive signals will be cleared in order, as per reality
- On single line sections, signals in the opposite direction to your train don't clear incorrectly when your train has passed.

Important note

These signals within the absolute block area should work properly 100% of the time, and 'Tab' should not be used to try to attempt to pass one at danger, unless specifically stated, as this could result in a collision.

Track infrastructure signs

As well as the usual signs seen on the railway such as speed limits and whistle boards, we have also included a few others which you may not be quite so familiar with.

AWS cancellation



On single line sections where a warning board for a speed restriction is provided, there is usually an associated AWS ramp to warn the driver of its presence. This type of AWS ramp operates in both directions though so this indicator is placed in the opposite direction to the warning board to let the driver know to disregard the AWS warning they have just received.

Temporary speed restriction

Temporary speed restrictions are featured in the scenarios supplied with this route. These are where a lower speed restriction than normal is in place; usually due to an infrastructure fault. See below for an explanation of the signage you will see, to warn and show where the temporary speed restriction begins/ends:



This sign serves as a warning to the driver that a temporary speed restriction is up ahead and is accompanied by an AWS warning 200 yards beforehand. The number shown is the speed of the restriction.



This sign denotes where the temporary speed restriction commences. Once again, the number shown is the speed of the restriction.



This sign denotes where the temporary speed restriction ceases and the driver may return to line speed.

Poor adhesion

In reality, areas of poor adhesion are denoted by the following signs. In the simulator, adhesion remains unchanged but the signs have been included to make it visually accurate.



Poor adhesion area starts



Poor adhesion area ends

Scenarios

20 career scenarios are provided with this route, which focus on the scheduled workings of the class 37/ mk2 coaches 'short set' and class 170. To access them, load Train Simulator, click 'Drive', click 'Career' and then scroll to the bottom of the list where you should find the following:

Wherry Lines - Norwich to Great Yarmouth & Lowestoft			
01. [37] 2G01 11:25 Norwich - Great Yarmouth	Class 37-405 Blue APWL	40	■ ■
02. [37] 2G03 12:14 Great Yarmouth - Lowestoft	Class 37-425 Blue APWL	60	■ ■ ■ ■
03. [37] 2G02 14:12 Lowestoft - Norwich	Class 37-425 Blue APWL	60	■ ■ ■ ■
04. [37] 5J67 06:40 Norwich Crown Point - Lowestoft	Class 37-405 Blue APWL	50	■ ■
05. [37] 2J67 07:47 Lowestoft - Norwich	Class 37-419 Blue APWL	55	■ ■ ■ ■ ■ ■
06. [37] 2P13 09:17 Great Yarmouth - Norwich	Class 37-419 Blue APWL	35	■ ■
07. [37] 2P18 10:36 Norwich - Great Yarmouth	Class 37-422 Blue APWL	35	■ ■ ■ ■
08. [37] 2J80 14:55 Norwich - Lowestoft	Class 37-425 Blue APWL	40	■ ■
09. [37] 2J83 15:48 Lowestoft - Norwich	Class 37-425 Blue APWL	45	■ ■

When using one of the scenarios, we recommend pressing 'F1' to check out the scenario briefing.

Credits

Kevin Mahon - Semaphore signals & Norwich/Great Yarmouth station buildings

'AndiS' - Absolute block signal scripting

Nicolas Schichan - Modelling of signal boxes, level crossings and numerous other scenery items. Also class 37 scripting.

Jordi Blumberg - Mk2F coaches and retexturing of class 37 cabview

Alex Riley - Acle, Brundall, Reedham & Whitlingham Junction footbridges

Joseph Pearson - Bullhead and flat bottom track models