

# 4th's Games

Presents

## The LNER Y6 Pack





## Contents

<b>Information</b>	<b>Page</b>
Contents	1
Introduction	2
History	3 - 4
Bringing the Y6 to Train Simulator	5 - 6
What's Included?	7 - 10
Controls	11 - 13
Sounds	14
The Bell	15
Final Thoughts	16
Thank You	17 - 18
Credits	19



## Introduction

Hello everyone! 4th's Games here, I just want to start by saying a hecking huge thank you to all who invested your hard-earned cash into this addon, unless, you got a naughty copy, then I'll judge you at the gates of hell.

This has been an oddly frustrating and equally rewarding learning curve which not only has opened my eyes towards the market for these products and the target audience for them, but the appreciation at the sheer amount of work that these products can require from you, if you, like me, are as well suited as a slug in a marathon. I hope you all see many hours of joy from this product and continue to use it throughout your time in the game going forward.

Why the Y6? Well it wasn't my choice at all in all honesty, this was taken on as a challenge to myself, a new year, new me sort of deal. Like, how hard can it be? As I take over a discarded project from another developer and see if I could push myself into learning new skills and abilities into bringing this to market, one which I hope is well received. It's funny to think that I once sat in a position similar to a large percentage of players purchasing this product - "Oh I wish I could do that? I wish I knew how to...." and here I am looking over the development cycle of this loco, the ups as well as the downs of course but it really does open your eyes to the enormous 'Must Have' features to the nitty-gritty details. In all seriousness, I do hope you enjoy this product.

## History

Now's the part where I become your secondary school history teacher, if history wasn't your strongest subject in school, then you might want to skip this part – unless you need new strange methods to fall asleep to, in which case, knock yourself out.

The best place to start, no pun intended is actually the start, who knew? Way back when (I feel like my IQ just went up by simply saying that) during the turn of the early 1800s our craving to revolutionise current infrastructure brought about new changes into how we could make the biggest workhorse (again, no pun intended) horses better at maximising their efficiency. The solution of course was rails, you know? The bits of metal on the ground that led way to big kettles that go Chuff Chuff?

Anyway...

The passing of The Mumbles Railway Act back then (*silly voice*) in the year of our lord 1804, by us, The Brits – because we are just superb in every way of course - led way to the world's first passenger tram in 1807 in Wales. For those of you who don't know what The Mumbles Railway Act was (he says whilst frantically googling) a specific act that authorised limestone to be removed and then transported from the quarries at Mumbles to the docks in Swansea. Not sure about you? But I think they cheaped out on the name, Personally I would have called it like "Dane's one of a kind, railway spectacular never before seen thrill of a lifetime act" but they are they and I remain, I?

In relatively quick succession the line quickly saw potential as it moved from limestone to passengers thus bringing with it the idea of using what was at the time an experimental form of traction: steam! As steam buses made their way into the world's perception it was very much apparent at the time, that road surfaces put up a restless fight towards this new kind of machinery. The level of which was brutal, simply looking out my window at some highways agency High Viz workman just goes to show that nothing has changed on that front for over 200 years.

*Quick reminder, if you're looking for the controls section, keep scrolling.*

Steam found its way across the globe over a number of different periods of time (think of it like using a 200-year-old AliExpress) as geography led to a number of different innovations. For example, European cities at the time and I guess you could argue that they still are to this day relatively well pathed meaning that issues with horse-drawn carriages saw relatively little challenge. When comparing to the USA however, difficulty was set in stone due to unviable surfaces commonly found among their streets. Needless to say, once the idea of a railed right of way was implemented it was quickly placed in the areas of high traffic to speed things up. Horse drawn carriages developed into railed hauled carriages which then retired to make way for the more powerful steam carriages and hey presto the demand for a city focused passenger hauled rail system became a thing!

For all you reading who are as confused as a fly on a window, to confirm YES this is an LNER Y6 DLC don't worry I'm getting on to that now.

T.W. Worsdell designed a series of 0-4-0 steam trams specifically for the Wisbech & Upwell Tramway ready for its opening in the July of 1883, which unlike practically all other railways in the UK at the time, this one actually ran mostly over roadways. When comparing to other countries, tramways never really took off in the UK which meant they were an untapped transportation idea by the most part. Yeah of course a few notable examples came and went but when you look across the channel to see rails in the streets of practically all the cities across Europe it was quite a BIG deal back then, like that time when the French made amazing cheeses and wouldn't give us any.

With all that said and done, several considerations had to be built into the locomotives from the get-go, for example; cow catchers and side skirts, a governor (it's a speed restriction device not a beardy bloke) and a bell were required to address safety concerns. Ya know? Because nothing screams safety than being potentially ran over whilst someone drowns out your pleas for help with a big bell. All of these of course made what was the result, the Y6, to be a very unusual looking locomotive for its time and even still to this day, kind of like some thief jacked-up your dad's shed on a set of wheels.

In fact during the steam era, locomotives of tram classification had to comply with several legal requirements; no steam/smoke, no blast or clatter noises, a cab located at either end and even the concealment of all mechanical moving parts from 10cm above the rails themselves. Shame really because they concealed all the features in a steam engine that people adore the most.

When it comes to the Y6 in this DLC several 'meeting-in-the-middle' approaches have been decided, kind of like the family Christmas, you agree to disagree but you TOTALLY won that round of Monopoly (laps around the kitchen). After testing what the locomotive looked like with more realistic particle effects, it kind of came across as bland as my nan's cooking, so therefore I felt it best suited to have them as expected but dial them right back to a minimalist state to really provide the immersion on a game-play front. I will discuss this in more in detail during the "Bringing the Y6 to Train Simulator" section.

Despite being subject to the array of legal requirements these locomotives were actually very capable to perform as expected which led to a further two more locomotives to be added to the stock alongside the initial three locomotives two years after coming into service. In total, only ten Y6s were ever built from around 1883 to 1897 which saw life throughout a number of different liveries right up to the last one being withdrawn from service in the 1950s.

## Bringing the Y6 to Train Simulator

I briefly touched on some points above but I felt it worthy to mention for the more hard-core realism fans to talk about a subject that I feel isn't nearly as talked about as it should be, why have I made the choices that I did?

It's a simple and efficient discussion, rather like bringing up marmite at a vegan rally, but as far as the real-life legal requirements go, the Y6 in-game would actually be a rather difference experience if I tried my best to follow that to the letter.

We know from what research that can be obtained, indeed these locomotives were not permitted to expel smoke or steam like conventional steam locomotives did. This was addressed by burning of substances like coke which was almost invisible, burning more efficiently than conventional coal and by using condensing pipes over the safety valves among a few innovations to contain the blasts but also re-use the steam captured. Another crucial requirement that impacts on the immersion as far as the importation to the game, is the lack of clatter/clunking and exhaust blasts the locomotives made.

So let's have a look at a few notable examples:

- **Safety Valves** – I have made the particles and in this case the sounds more fitting to how they actually worked. Lowering the EQ creating a more 'muffled sounding' release, these sounds have been mixed in to the overall sounds of the locomotive to reflect how they may have sounded in real life.
- **Particle Effects** – The first version of the Y6 had no particles (as such) which as a player was very jarring, after experimenting and comparing with another particular locomotive of this kind, I dialled these particles back to reflect the minimalistic accuracy but fulfil the expectations and immersive quality of the locomotive in-game.
- **Exhaust Sounds** - The same for Safety valves to a degree can be said for the exhaust sounds which was an interesting road to explore in finding the correct type of exhaust that would best suit the locomotive. A wheezier sound would be better suited, like an asthmatic on a summer's day, however it didn't quite fit the in-game immersion. The way the loco drove felt disconnected to the sound it was producing so I found inspiration from notable running steam trams across the world and implemented a hybrid – a meet in the middle-esque approach you could say. What resulted is not only a lovely sound-set but one that I'd like to think players will agree is perfectly fitting but also pleasant to listen too.

- **Clanking** – As a player of the series since the very start back in 2007 and indeed 2009, clanking has been (in my opinion of course) a very hit and miss implementation. Some locos try to reflect the mechanical components whilst others seem to create a trippy over the top groove. Knowing it was either non-existent or minimal at best I wanted to create minimal clank that informed the player that mechanical components are moving but nothing too extreme to feel out of place or disjointed.
- **Governor** – The Governor is a vital component found in these locomotives, but how do I go about implementing it? The game in itself is very limited when it comes to locomotives and components that go outside the norm, so discussions between myself and Victory Works to look at the best and easiest way to implement took place and we settled on a very simple feature. Decrease the regulator from speed A until it reaches 0% when the locomotive hits speed B. A simple function that is in-part effective at what it does but not a perfect implementation but I hope it's enough for players to appreciate.

## What's Included?

Buying a TS DLC is quite like eyeing up a good cheese board, sure there's some colour going on with the packaging, but we all know that we just want to see all the good stuff inside. First of all, liveries! - The pack comes with 7 unique and enjoyable liveries covering all the appearances of the when the Y6 moved into the LNER era up to the final days in service – hence the name "LNER Y6" Just encase that wasn't self-explanatory enough for you.



### LNER Pre-War

As you'd expect to see with the recognisable red lining, the Pre-War variant adds a lot of charm and colour to the class.



### Fictitious British Railways

The Y6's never transitioned into the well-known 'British Railways' livery despite 68082 running with BR numbers this was a nice touch to include as a, What if?



### British Rail Crest

68083 was the only member of the Y6's to wear this livery once moving into BR days which makes this a special and recognisable skin to see brought forward into the game.





#### LNER E-Prefix

An unusual livery which the Y6's wore, not too different from its Post-War livery but in this case wearing an E for its classification.



#### LNER Wartime – BR Numbers

This livery represents number 68082 which transitioned into the BR Era but was never changed to a British Rail Livery as presumed but instead retained its Wartime appearance.



#### LNER Wartime

Another livery that you would expect to see is the Wartime livery with its prominent NE worn on the sides.



#### LNER Post-War

Following the Wartime livery the Post-War LNER livery saw the L & R painted back on the sides, proudly wearing the full LNER on their sides

Alongside the wonderful liveries the pack comes with 21 pieces of rolling stock ready to run from the start as a complete self-contained period bundle.

So let's take a look at the rolling stock;

## The Wisbech & Upwell – 4 Wheeled Passenger coaches

A pinnacle piece of rolling stock that was introduced with the Y6 from the very start of the lines operation. Two variants were built – a Composite and a Third - both included in their early teak and late crimson liveries



## The Wisbech & Upwell – 4 Wheeled Luggage Van

Alongside the 4 wheeled passenger coaches, the Wisbech Tramway ran with its own luggage van that, famously, were known for being *too* small to cope with the demands of the tramway. Here you have two versions to enjoy on your travels.

With the passenger and mail rolling stock out the way let's take a look at the freight wagons also included:

### Great Eastern Railway– Open Plank Wagons

The tramway was notable in the fact it ran for the longest time with both passengers and freight hauling coal, milk and food up and down the line. To represent that, the pack comes with five types of wagons, in both early and late liveries.

- Empty
- Coal
- Tarp
- Milk Churns
- Food Crates

Early



Late



### Great Eastern Railway – 4 Wheeled Box & Brake Vans

To compliment the freight stock further there are 3 box vans included, one of course being a standard universal box van, one being a cattle van and the last being a food crate van as per what was seen regularly up and down the route in its time.

Finally there are 2 10 ton brake vans included in both early and late liveries for you to enjoy.



## Controls

Regulator	A and D
Reverser	W and S
Train Brake	; and '
Blower	N and Shift-N
Damper	M and Shift-M
Sander	X (Toggle)
Governor	Ctrl+Shift+D (Toggle)
Cylinder Cocks	C (Toggle)
Handbrake	/ and Shift-/
Head lights	H and Shift-H
Spark Arrestor	E and Shift-E
Firebox Door & Stoking	F (Toggle)
Injector	O (Toggle)
Injector Water Feed	L and Shift-L
Whistle	Space
Toots	V
Bell	B – Press + Release (simulated pulling)
Bell Loop	Shift+B (Toggle)
Legacy Driving	Ctrl+A (Toggle)
Headcodes Cycle	1, 2 or 3 + Ctrl - Forward 1, 2 or 3 + Shift - Reverse

Like with most DLC, the more individual locomotive specifications, the more features it is possible to implement in relation to simulation and that is the case for the Y6 in offering variations of the locomotive for fans to enjoy.

### Numbers & Skirts

When placing the locomotive, double clicking will present the locomotive's default number which is fully dynamic which will apply in real time, if you so wish to change it. So if you're like a child and want to write 6969 or 8008 or whatever it be – Knock yourself out

With that functionality you can also adjust the Skirts, the following commands will change the appearance of the locomotive depending on your preference.

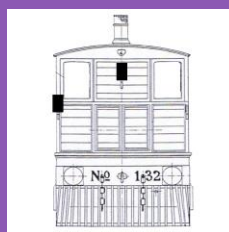
- E – Skirt Ends
- S – Skirt Sides
- A – All Skirts

### Mounting Points

The Y6 has 3 specific mounting points on either end which has been made fully dynamic in order to run the locomotive as you wish. This has been achieved by having a library of assets on each mount which you can cycle through. So let me talk over the various lamp positions you can run the Y6 with and what that means in terms of railway workings. One thing to note is that the Y6 being one of the first of its kind running in the UK, it is unclear if the following LNER headlamp codes in operation until 1923 transferred over to The Wisbech & Upwell tramway or if specific codes were designed instead.



Pretty self-explanatory but I wanted to include the option of running without lamps/head codes



Express meat or fish train



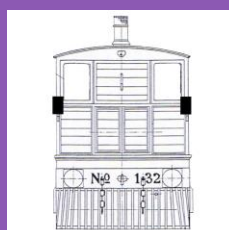
Ordinary stopping passenger service



Express general goods train



Empty passenger train



Express passenger

## Lamps & Disks Cycle

As mentioned on the previous page the Y6 has 3 specific mounting points on either end and for each of these mounting points is a library of assets that you can cycle through, having full control over custom placements for each, so let's take a look.

The Cycle:



CTRL + (1, 2, 3) = Cycle Forward

SHIFT + (1, 2, 3) = Cycle Backwards

Using Headlights – each press

H = Headlight on

H = Headlights Rear

H = Headlights OFF

Whilst running with the Headlights In the rear position, the lamp/Disks control system will apply to the rear of the locomotive.

## Sounds

Figured you'd be reaching the end? Nope, well I actually believed that I had it finished to tell you the truth. Now, after it's been proof read and signed off I've come back to add this chapter because I wanted to talk about it, problem? Good.

Maybe I just like the sound of my own voice.

Anyway, sounds? Where does that fit in with the manual? Well by trade/skillset I am actually a musician and sound engineer so sounds are my jelly as they say. When I worked on the J70 I started to devise a way of taking sounds to the next level. What's that I hear you ask? Randomization is the answer.

Since then I have perfected my method in order to add a whole new layer of freshness to the way TS has been handling sounds for the longest time, which has been a personal bug bear of mine. You see, sounds are either singular or random which you assign to certain controllers which you then add extra control using Curves in order to have them be affected by specific in-game inputs. Easy right? Well yeah it is however, you start to hear loops come around quite quickly and once you do it breaks the immersion. As many of you might have been eagle-eyed already (I see you over there The Southern Lad) people have provided some lovely feedback on certain WaysideWorks DLC sounds, like chuffs. The reason being that I have been secretly testing out this idea over on Yarrans products several months ago before I got to work on the Y6 and that in particular is a randomization feature for exhaust chuffs!

How does that work?

Well, normally (take a 2 cylinder steam locomotive for example) you have 4 individual exhaust sounds to map into the blueprints for your audio controller, for this example I am referencing the cylinder number and piston position:

(Cylinder 1 – Extend, Cylinder 2 – Extend, Cylinder 1 – Retract, Cylinder 2 – Retract)

However, like I mentioned above you will start to hear those audio samples loop quite quickly, so what is the answer?

What if you could map more than 1 sample for each of the 4 audio triggers?

Well that is what I have done, using random sound elements I have found a method in being able to provide 4 almost identically lengthened and treated samples for each audio trigger which now means the Y6 runs on randomized Chuffs, gone are the loops.

The downside? The workload is 4x the length of time to implement but the results are spectacular. To put things into perspective, a usual DLC uses between 10–20 individual exhaust chuff sounds. The Y6 I hear you ask? Well there are 96.

And it doesn't stop there, I have used random sound samples in almost every angle of the Y6 in order to provide a more immersive and enjoyable playing experience for every single player to enjoy. I hope you appreciate and explore the locomotive with how it drives but more importantly, how it sounds!

## The Bell

Having read over some feedback, I wanted to talk a little about the Bell and how it has been implemented on the locomotive so that players can have fun roaming around the 3D world like a pro rather than like the clinking sound of lost cattle.

As it stands there are 3 Bell functions added to the locomotive which are designed to cover 3 types of player and hopefully satisfy in the way they work

### **Bell 1**

The first bell is the simplest which you can activate using the 'B' key, B for Bell – easy right? It has been designed to simulate pulling in how you operate it, pressing B down to trigger the animation and play the first sound and then you release the key to trigger the other sound. With the right tempo you can get the bell sounding pretty nice (not that the local vicar is going to let you call the Sunday service) The way this is set up in the audio system means that each bell sound is random which adds a whole layer of immersion to the experience. Though it is not perfect, I fully understand that but that is where limitations to the game vs script come in.

### **Bell 2**

The second bell is far simpler and is aimed at players who want to trigger audio without repetition which is why it's a synchronized audio loop with the bell animation which you can active/deactivate on the toggle command – Shift + B

### **Bell 3**

The third and final bell is triggered by the player by hand (manual labour I know right?) You can do this using the mouse inside the cab itself by clicking and dragging the bell rope which takes control of the same audio setup from **Bell 1** in that it uses randomized sounds. Note you can leave the bell in any position and it will remain.



## Final Thoughts

When I began this project, I looked over the multiple products on the market and I felt like our ties to nostalgia has lost its way a little over the many years of which products have been developed for this long-standing simulator. Looking back at the old days, it was quite common in purchasing locomotives that you would also acquire rolling stock and have a nicely knitted bundle (not like those wheaty treats, they are knitted by the grandmothers remember?) a model that needs to come back more than ever. I didn't want to release the Y6 with an array of requirements of locomotives and routes like some mad blooded DLC maniac but more, something that stood on its own. I wanted a pack that was self-containing and allowed the consumers to see endless fun in what they had by being able to expand further pleasures with coupling up with other DLC, routes and use in personal scenarios. I really do hope this pack is well received as it's had a fair share of love put into it, as I hope it to be a nice simulated playable little loco with a lot of charm and fun.

One thing I'd like to briefly mention is that the scope of the project has unfortunately changed more or less at the 11th hour which led to some major decisions which include splitting up the content in this pack. I've witnessed other developers split the rolling stock with the locomotive and that wasn't an option in my eyes so I have decided to split all the GER Y6's out into their own expansion pack that is in the works and will be coming *not too* long after the release of the initial pack. Of course, reception depending, I may or may not expand further into what else is included but for now I have focused all my time and attention into completing this pack which for some is a breath of fresh air. All updates of course will be posted via the social media outlets so please make sure to keep an eye out in order to find out more and support the other developers.

## Thank You

Against popular belief, making content like this is not an easy accomplishment and making matters even more complicated and long winded than it needs to be, I being smart as a rock went into this project without any knowledge in how to 3D model or use Blender in any way shape or form. I did say I was dumb right ? Anyway..... the point I am making is this entire thing would be impossible if it wasn't for a small selection of specific individuals with the patience of a saint putting up with my barrage of questions:

*“no Dane repeatedly clicking left mouse will not magically solve the problem PUT the mouse DOWN”*

So let's name and shame them, for all their kind guilt – like the positive criminals they are!

### **Yarran Berkhout**

More commonly known as Wayside Works, Yarran has just been so kind without any form of pre-constructed judgments or opinions other than wanting to do the best job he can in any way to help complete a project, and without whom this project would have never got past the first gate. His endless knowledge and work ethic is a great deal to inspire those to want to carry on and to want to know more about developing for Train Simulator. So go to WaysideWorks and download his work it's a true testimony to his skills – Thanks Man!

### **Peter Gillam**

Known more commonly as Victory Works, Pete has been so understanding and supportive with this product, with more patience than everyone combined. He's been a great help In getting the Y6 to work in the first place and I literally couldn't have done it without his help. A true professional TS Developer and I really appreciate his time to assist, Thanks Pete

### **Elias Dobner**

What can I say? A true hard working enthusiastic skilled individual who loves doing what he does. His insight and ability to create models out of what appears to be thin air is mind boggling. Working together on the Rolling Stock Elias came back with what I was hoping for – 2-3 Wagons and a Passenger coach but no. 21 Pieces of completed stock and it's truly wonderful. Without which, this pack seriously lacks charm and content. Thank you bud!

### **James Littlewood**

One particular individual who I haven't spoken about is the man behind The Forge Simulation who, from the start of the project has been sat in the wings answering questions and showing support. Born from none-ideal circumstances, this project quickly found a home with TFS and without a host as warming as James I find it hard to imagine where the Y6 would have ended up. Thank you.

### **Mathew Walmsley**

Commonly known as Steam Sounds Supreme, Matt has been very supportive as one sound artist to another in the Y6 project which has opened the door to host the pack on SSS itself, which is an enormous privilege. The resulting exposure is nothing short of positive as it helps bring awareness players of new and old as well as breach the gap between SSS and TFS in being able to bring the Y6 to players together going forward. Matts kind words have been motivational and a huge slice of validation for me to feel at home with my skills, knowledge and the product I have provided. Thanks Matt!

### **Jimmy <3**

The one who shall not be named, he said whilst proof reading this "get thi name off that manual" so I did – Happy Now?

But yeh, Jimmy has been truly wonderful in being a wonderful boyfriend with so much love and support who has helped me be able to tackle some of the limitations I ran into quite quickly into the project with what little knowledge I had. Hes taught me a lot and motivated me to complete the project to prove that point to the people it needed proving too and it's been lovely to work together and experience this DLC come to life together.

Thanks Boo

Love you <3

## Credits



**Sound Artist:** Dane Forth - (Me)

**Decals:** Tiana Gregson, Yarran Berkhout

**Quick Drives:** Dane Forth - (it's Me again)

**Scripting:** Peter Gillam

**Liveries:** Yarran Berkhout

**Rolling Stock:** Elias Dobner

**Research:** James Crouch

**Lamps & Disks:** Jimmy – Better now ? Mr "I want my lamp credit Boi"

### Testing Team

A big super shout out to the small testing team who have really been constructive in helping me shape this DLC to be the best of my abilities and I thank them for the time they have invested into the multiple test versions over the past few months

-

Owain Kell, Yarran Berkhout, Beth Prior, John Astley, Jimmy <3, James Crouch, Thomas Holyhead

Thank You

The logo for '4th's Games' is centered on a purple background. It features the text '4th's' in a purple, rounded, bubbly font with a white outline, positioned above the word 'Games' in a blue, rounded, bubbly font with a white outline. A horizontal purple line is drawn across the middle of the text, separating '4th's' from 'Games'. The entire logo is set against a bright green, glowing, triangular shape that points downwards.

# 4th's Games

4th's Games  
© 2022

This product is protected under copyright and must not be redistributed or modified without seeking permission to do so from 4th's Games.

This product is distributed by The Forge Simulation Ltd and Steam Sounds Supreme and is sold subject to the terms and conditions of their respective distribution platforms.