Reconstructing Selby’s Superstructure
The story of Selby Swing Bridge

The Selby Swing Bridge Blockade
Following Network Rail’s £14m renovation of Selby’s historic swing bridge.

Engineering for the Future
How Network Rail prepared for the biggest renovation of Selby swing bridge to date.

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Safety at Barlby Bridge
How Network Rail changed school children’s perspective of safety.

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Following Network Rail’s renovation of Selby Swing Bridge.

Community Heroes

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Deploying the river rescue boat to help a boat in distress.
Network Rail and the people of Selby came together in a series of projects aimed at ensuring the success of the £14 million restoration of the Selby rail bridge.
A Smarter Looking Landmark

Originally built in 1891 the historic bridge has long been a must see attraction for train enthusiasts, but it is also a vital link in the east Yorkshire rail network.

In urgent need of repair, the bridge was closed to traffic over a period of six weeks in the summer for essential - and major - engineering works. The scale of the task was immense, involving steelwork repairs, waybeam replacements and a complete overhaul of the hydraulics on the swing span - a challenge even for the experienced workers of Network Rail.

Before beginning work on such a significant local landmark, it was important to ensure that the people of Selby were fully briefed on the project and had an opportunity to ask questions, so Network Rail organised meetings around the town, visiting community groups and local schools and seeking consensus on a series of measures to ensure the smooth running of the operation.

The scale of the task was immense, involving steelwork repairs, waybeam replacements and a complete overhaul of the hydraulics.

In the two weeks prior to the bridge closure, railway timetables were reorganised, replacement buses were booked to ferry passengers around the blockade, a river rescue boat was deployed, and local taxi drivers were enlisted to run a shuttle service linking the parts of the community that would be affected.

Network Rail was also keen to involve local schoolchildren, so managers worked with teachers to organise an art competition based on a site safety theme. Announcing the winner at a special event at Barly Bridge Community Primary School, Project Manager Daryl White recognised the significant community contribution by presenting an outdoor classroom facility and new fencing to the school. As the bridge should need no further work for at least twenty five years, the children at the presentation might well be parents themselves before the engineers return.

Working round the clock to maintain modern transport links and enhance the environment, in six weeks Network Rail pulled off an engineering miracle. It wouldn’t have been possible without the support of the people of Selby.

“Selby swing bridge has given many years of excellent service but the structure and the hydraulics are due significant refurbishment. We’re investing £8m on steelwork repairs, work to the hydraulics on the swing span, waybeam replacements and wholesale grit blasting and painting of the entire structure. Once the work is completed the structure should be maintenance free for 25 years and we will be able to run trains at line speed, removing a speed restriction.”

Phil Verster, Network Rail
Managing Director
We’re serious about safety, we know you are too.

Building knowledge and appreciation of safety at Barlby Bridge Community Primary School.
Serious About Safety - The Barlby Bridge Community Primary School Project

School children in Selby got to enjoy a special art project outside of their usual lessons when Network Rail and contractor Kier asked pupils at Barlby Bridge Community Primary School to find the most creative way of getting across site safety to residents and visitors in the town.

The pupils’ designs came just ahead of the main thrust of Network Rail’s £14m investment in the refurbishment of Selby swing bridge, which is the most significant improvement made to the bridge since it was built in 1889.

At the same event, Network Rail and Kier also opened the school's new outdoor learning area, which was installed as a gift along with brand new fencing. This new, covered outdoor classroom will allow the children to learn and flourish in the great outdoors.

Darryl White, Network Rail’s Scheme Project Manager for Selby swing bridge, said: “It is great to be able to give something back to the local community that will make a difference for years to come; not only providing an outdoor learning area but also to support the school with new fencing.”

“We were very impressed with the standard of the entries of the poster design competition, and think the winner is a bright and colourful way of helping to remind people to stay safe near to the site.”

“It’s very important to us that children living and learning near our construction sites are kept safe, and we felt that the poster competition was a fun way to make sure those safety messages sink in.”

Rob Marshall, Kier Operations Manager

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"As businesses, both Kier and Network Rail take our corporate responsibility very seriously, and we always aim to contribute in a positive way to the communities in which we work."
The Selby Bridge Story

Engineering new life into Selby’s landmark bridge
The Last Train Passes Over the River Ouse

One hundred and twenty three years – that’s how long Selby Swing Bridge had carried trains over the River Ouse, opening and closing several times most days since 1891 allowing boats to pass through underneath.

It cost around £31,000 to build, a fortune back then but a bargain in the long run. Once part of the prestigious East Coast Main Line and still a major rail artery linking East Yorkshire to the rest of the country, trains bound for destinations as northerly as Aberdeen and southerly as London had crossed its sturdy iron girders and wooden piers. But there was a catch. All that heavy use meant the bridge had begun to show its age. It needed a thorough overhaul or, in the words of one local resident, “a major dose of tender loving care.” Sooner rather than later, something had to be done.

On Saturday 26 July 2014 the 21.38 passenger train from Hull to Manchester passed over the River Ouse into Selby station. It would be the last train to cross Selby Swing Bridge for six weeks. At 23.00 the railway lines were officially closed and work began on a major £14 million project to inject new life into the bridge so that it could continue being used by rail and river traffic for many more years. Of course a scheme like this doesn’t just come together overnight. Behind the scenes Network Rail, the construction firm Kier and a number of sub-contractors required for their specialist skills had been preparing for this moment for months. The foundations, so to speak, had been laid. Now it was time for the hard work to begin.

Watching that last train pass over the River Ouse was Darryl White, the man in overall charge of the Selby Swing Bridge project. Since joining Network Rail in 2009 Darryl – a first class civil engineering graduate from Leeds Metropolitan University – had overseen more tasks than he could remember. However, none of them came close to matching Selby Swing Bridge in terms of size and complexity. “Most of the individual pieces of work that I am responsible for tend to last for a few hours or days at the most,” says Darryl. “This was a six week scheme to reinvigorate a marvellous piece of Victorian engineering spanning a tidal stretch of river in a town centre environment. It involved a number of different companies contracted to carry out the work and was going to affect local residents not to mention the passengers using the railway line. Every job is important and to some extent a challenge, but this was something out of the ordinary.”

Six weeks sounds like a long time. Given the scale of this particular project, it wasn’t.

Darryl knew the clock was ticking from the moment the Hull to Manchester train finished crossing the bridge. The work had to be completed by 05.25 on Monday 8 September, as simple as that. But Darryl also knew the people working on the project were among the best in the business. “With a job of that nature, no matter how well prepared you are, you sometimes have to expect the unexpected,” he admits.

“That said, I was always confident the trains would be back rolling over the bridge on the morning of Monday 8 September.”

“The Hard Work Begins

“Every job is important and to some extent a challenge, but this was something out of the ordinary.”

Darryl White from Network Rail
The Project Becomes a Local Attraction

By sunrise on Sunday 27 July Selby Swing Bridge already resembled more of a building site than a railway line.

A workforce of approximately 160 people were employed 24 hours a day, seven days a week carrying out the noisier elements of the project by day and the quieter by night. Why? Because rebuilding a 123-year old swing bridge bordered by homes on both river banks could easily cause one or two issues with the neighbours regarding sleep – or rather a lack of it. Within 48 hours the rails on the bridge together with the wooden waybeams that had supported them were gone. Three of the bridge’s five spans – the smaller ones located on the north and south banks of the River Ouse – had been demolished. Spans three and four (the latter swings open allowing boats to pass through) were covered in scaffolding and being prepared for their makeovers. In fact the project rapidly became something of a local attraction as locals gathered on the adjacent road bridge to see what was happening.

“The swing bridge is a major landmark around here but to be honest a lot of people had taken it for granted for years, the way you do when something is right on your doorstep,” says Selby taxi driver Alex Palframan. “You pass it every day and barely give it a second glance. Then it closes and suddenly you start noticing it again, partly because you can’t use it anymore, partly because you want to see what’s going on. To be honest the work needed doing. You only had to look at the peeling paint on the sides to see that it needed quite a bit of attention.”

The work affecting spans one and two meant Ousegate, the road situated on the south bank of the River Ouse, was closed to the public throughout the entire six weeks at the point where it dips below the railway line. A walkway bordering Ousegate was also frequently shut in daylight hours. During that time Alex Palframan and other taxi drivers performed a vital civic role by ferrying local residents around the blockade by way of a diversion, with Network Rail footing the bill (all told they made 1282 journeys carrying a whopping 3002 passengers). “That’s something people around here really appreciated,” adds Alex.

“Network Rail didn’t have to do it, but they did. Hats off to them. It was a big help and saved people a lot of stress and inconvenience, in particular the elderly.”

While Alex performed shuttles in his taxi Dave Hatfield, the Area Station Manager for Selby at TransPennine Express, was equally busy helping co-ordinate the dozens of coaches laid on to replace trains while the bridge was being refurbished. Every 20 minutes or so between 05.00 and 23.00 a coach would arrive or depart bound for Hull, Brough or Goole not to mention other smaller intermediate stations such as Hessle and Howden, with trains continuing to operate as normal west from Selby. “It really was a massive undertaking,” says Dave.

“Well before the work started I’d been out riding on the trains talking to passengers about what was going to happen and handing them timetables with details of changes to the service. It was all about keeping that flow of information going. Many of our regular customers asked ‘What would you do?’ and my reply was ‘Well, if I had two or three weeks holiday to take, then I would take it while the work is going on’. Passenger numbers were down while the bridge was closed but that was because people knew what was happening, so the work we did in advance to raise awareness seemed to pay off.”
A Welcome Investment

Like so many others Dave Hadfield, the Area Station Manager for Selby at TransPennine Express, welcomed Network Rail’s decision to invest in the bridge.

“Many of our regular travellers commute between Hull and Leeds,” he says. “On the way home they might decide to take a snooze but they always know when they’re coming through Selby because the train will slow and there will be that clunking and rumbling as it crosses the bridge. There’s something comforting about that. I, and a lot of other people, are very fond of Selby Swing Bridge. It’s unmistakable, it has served us well, but it did need a major refurbishment. What really impressed me was the way that everyone collaborated on the project, coming together with the common aim of giving it the refurbishment it deserved. That was quite something.”

So what did the Selby Swing Bridge project involve? Sure, the ageing structure needed a facelift, but how far does £14 million go in terms of making a nineteenth century piece of engineering fit for twenty-first century use? The A to Z of work required would have made even the great railway builder Isambard Kingdom Brunel rub his hands at the challenge. Cracks and defects to the bridge’s spans and piers – not to mention the cast iron turntable enabling the bridge to swing open – meant parts of the structure had to be repaired, replaced or strengthened. New walkways and steps were needed for the Network Rail employees who spend their lives manning the bridge (Selby Swing Bridge is operated from a control box situated directly above the railway tracks on span four). The railway tracks had to be replaced as did the waybeams supporting them. The gaps in the rails at either end of the bridge were excessive and needed reducing. The hydraulic motors that powered the swinging part of the structure were life expired and required overhauling. Spans one, two and five needed replacing. Oh, and the entire bridge had to be repainted. Throw in a number of other smaller but equally important tasks and you begin to grasp the size of what was involved.

While Network’s Rail’s Darryl White directed traffic at the heart of the project, alongside him civil engineer Tim Moss of construction firm Kier conducted the orchestra of workers charged with breathing new life into the bridge. Tim originally joined British Rail in 1991 straight from school, spending eight years working for BR in a human resources capacity before deciding to retrain and become a civil engineer. His skills saw him cherry picked to oversee projects at the 2012 London Olympics working initially for the Olympic Delivery Authority on transport schemes, then for LOCOG (the London Organising Committee of the Olympic and Paralympic Games) managing four sporting venues within the Olympic Park including the prestigious velodrome. A desire to return to the north of England in the wake of the Olympics saw Tim relocate to his native Yorkshire and ultimately join Kier where the vast majority of his work involves project managing schemes on the railways.

“To me there was absolutely no difference between the Olympics and the Selby Swing Bridge project,” says Tim. “Yes, London was a bigger value contract with the eyes of the world on it, but at the end of the day it’s still all about delivering on time and to the best of your ability. Once you’ve got the right team in place you can practically deliver anything, so long as you’ve got the right people at the right time and you’ve been given the right support by your own company. At Selby I had cracking support from people below and above me. Jobs like that are stressful but that made it easier.”
The induction

The induction covered everything from types of wildlife found on the site to the mandatory wearing of safety clothing (such as protective gloves, glasses, steel toe capped boots and hard hats). It also included information about the all-important rescue boat operated under the watchful eye of Kier Site Manager Jakub Golata.

“If you are involved on a job where people are working over a river, perhaps painting or erecting scaffolding, and there is the slightest chance that someone might fall into the river, then you need some kind of contingency plan,” says Jakub. “At Selby we decided very early on that we needed a rescue boat. However, we faced a big problem in terms of gaining access to the river. There was no slipway within a radius of 20 miles of the bridge for us to launch a boat from.”

“There was also nowhere in the immediate vicinity where you could transfer somebody from the rescue boat onto land for medical treatment. And so we built pontoons further down the river from where we could launch a rescue boat and get people up and down safely from the water to the river bank and vice versa.”

The large amount of debris carried by the tides of the River Ouse meant that a protective boom had to be planted in the waters surrounding span three of the bridge to protect the people working on it (span four remained in the closed position throughout the first four weeks of the project enabling boats to pass through and making it easier & safer for work to continue). Jakub realised that the boom would require a second rescue boat to be present at all times – one covering the area inside the boom, the other the waters outside it. Every week throughout the project the boat crews performed at least two safety drills with dummies substituting for real people. “It was all about keeping alert and finding out if there was any room for improvement,” says Jakub.

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The Civil Engineer Charged with Breathing New Life into the Bridge

So what kind of ‘stresses’ faced Tim Moss as he went into the Selby Swing Bridge project?

“You have to take into account that there may be flooding. You have to take into account that there may be really hot weather. You have to take into account that an industrial strike over in Germany might prevent you from getting a particular bit of kit.

Things might happen that you simply cannot legislate or plan for. To me they’re not problems. They are issues that arise that you have to get over. It’s about finding solutions to things and looking back afterwards and saying ‘We did it like that because it was the best way’. For me that’s part of the excitement of a project like Selby, and of course seeing it all come to fruition.”

Flooding, the weather and industrial strikes may come out of the blue but health and safety is something that can be planned in advance. In the UK health and safety is at the forefront of all major construction projects irrespective of size and location. Everyone except perhaps the wildest cowboy builder respects and understands that. Selby Swing Bridge was always going to present significant health and safety challenges, the kind you don’t necessarily find on the majority of construction sites. Take 160 people and set them to work around the clock in shifts restoring a 123-year old bridge spanning a tidal stretch of fast flowing river. Risks? There’s going to be a few.

With that in mind it was decided well in advance that anyone spending time on the Selby Swing Bridge project site, whether as a worker or simply visiting, should undergo an induction process. This was carried out by one of three Senior Site Managers employed by Kier, one for each eight hour shift.

“Before the work began we also staged a drill with the local fire brigade. They were delighted about everything we had provided and the way we operated. It showed them how much thought we had put into this and how seriously we took health and safety issues.”

“One of the first things you noticed about that stretch of river was how fast the water flowed,” adds Darryl White. “The tide meant that the levels rose and fell very quickly. You had all sorts of debris being carried through – rubbish, bits of trees, even dead farm animals – all of which presented hazards to the bridge and the people working on it. That’s why we had the boom in place and the safety boats. Having those boats there was so important. It gave everyone working on the project peace of mind. If the worst happened and you ended up in the water, then you knew help was close at hand.”

“Our workers had to have the right equipment and training. The boom was critical for safety. But we also had to think about the impact on wildlife.”

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“Oh but the boom has its benefits. It’s not just for safety, it’s also a great tool for the wildlife. It’s temporary and it’s there for only four weeks. But those four weeks get people thinking about the environment and the wildlife in the river.”

“I know it’s not a traditional civil engineering project. But that’s part of what makes it exciting. We’re trying something new and it’s a real challenge. It’s about finding solutions to things and looking back afterwards and saying ‘We did it like that because it was the best way’. For me that’s part of the excitement of a project like Selby, and of course seeing it all come to fruition.”

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Jakub Golata, Kier Site Manager
Security Measures Employed Throughout the Project

Besides forming a protective cordon around the site on both sides of the river, the security measures employed by Network Rail and Kier throughout the project also fulfilled an important health and safety function.

Anyone stepping on site had to physically sign a book and have their fingerprints taken. That way security guards could tell at any given moment who was on site and whether someone was missing. The River Ouse is prone to flooding which, it goes without saying, can pose a serious threat to life. Over recent years sandbags and flood defences have become a way of life for the people of Selby who keep a wary eye on river levels when bad weather is forecast. With the tail-end of Hurricane Bertha dumping two months’ of rain on parts of the UK within the space of 24 hours during the second week of August 2014, so those working on the bridge learned to do likewise.

“On that Friday night there were some really heavy downpours and thunderstorms which meant that work had to come to a stop,” says Darryl. “When there’s that much water coming down and lightning flickering around it’s not only physically impossible to work but it’s also dangerous especially for the scaffolders and those whose job it was to cover sections of the bridge in special ‘EnviroWrap’ sheeting ready for painting to begin. All we did then was stand people down and add additional manpower to the following shifts when the weather had calmed down to make up for lost time. Just as much of a problem were the winds we experienced from the Saturday through to the Tuesday. They prevented us from using the crane which was needed to lift decks and Collision Protection Beams onto spans one and two over Ousegate. The Collision Protection Beams (known in the construction business as CPBs) were an important and significant part of the bridge improvements. In the event of a high sided vehicle hitting the structure, then it’s going to strike the beam rather than the actual bridge deck itself. They also prevent trains from falling off the bridge should one derail as it travels across. We just had to take whatever opportunity we were presented with when the gusts died down to lift them in.”

“I used the rail replacement buses while the work was going on and you could see it progressing day by day. There was always people working on it, not like on the motorways when you drive for miles through the road works and don’t see a soul doing anything. So that was good. You knew things were happening and the bridge would be open again soon.”

John Church from Hull
Drama Affects the Selby Swing Bridge Project

The rising river levels brought on by rainfall linked to Hurricane Bertha – not to mention a full moon – meant some workers had to be stood down for short periods of time on the Tuesday and Wednesday of the third week due to lower parts of the scaffolding becoming submerged during high tides.

As for a start on the painting work? Well that had to be delayed approximately 48 hours from Sunday until Tuesday 12 August because the ‘EnviroWrap’ protective sheeting was still being fitted due to the poor weather conditions. On the plus side the hold up gave those working on the bridge more time to jet wash the structure, a process that involved blasting the bridge with high temperature water to remove old paint and dirt. As Darryl put it,

“Hurricane Bertha caused us a little bit of disruption, but not too much. It was just a case of rearranging some of the work so that other things could get done instead.”

The weather wasn’t the only drama to affect the Selby Swing Bridge project. At around the same time as Hurricane Bertha interfered with the work schedule two men employed by contractors 1stinsrail Limited were hailed as heroes for coming to the aid of a local five-year old girl who had collapsed. When mum Laura Hardcastle ran screaming for help from a house adjacent to the site, John Smith and Andy Kelly dropped everything and rushed to assist. John, a qualified first aider, put Laura’s daughter Ellie-May Wilson into the recovery position while Andy called 999 and liaised between John and the emergency service control room operator until an ambulance arrived. Ellie-May was taken to hospital in York where tests revealed she had experienced a convulsion brought on by an ear infection. She was kept in overnight for observation and released, right as rain, the following morning.

“I can’t thank John and Andy enough for everything they did,” says Laura. “It was the scariest thing of my life and they were there for Ellie-May and me in our time of need. I think they are both heroes.”

Laura Hardcastle
Of course it was always going to be a challenge keeping everyone happy and we did have one or two local residents who for whatever reason resented the work taking place. On the other hand 99 per cent of people seemed to appreciate what we were doing, why we were doing it, and that ultimately the Selby Swing Bridge project would help improve the overall image of the town."

That appreciation also extended largely to those rail passengers travelling through Selby whose journeys were disrupted by the project.

"I have to admit that it all ran a lot smoother than I thought it was going to,"

admits TransPennine Express train conductor Michelle France who regularly covers the Manchester to Hull via Selby route. "Everyone was really great explaining to passengers what was going on and how it was going to affect them, and the staff working on the rail replacement coaches were also marvellous. There was the odd grumble from some passengers travelling east towards Hull because the journey took longer on a coach than it would have done by train, but the vast majority were aware that it was an old bridge that had been causing problems and needed repairing. By and large the grumbles were far outweighed by comments from passengers saying how glad they were that the improvements were actually taking place."

An Innovative System and a Giant Jigsaw Puzzle

By the end of week three much of the bridge had disappeared from public view beneath layers of ‘EnviroWrap’, the special protective sheeting that had taken longer than intended to fit due to the poor weather conditions. Out of sight, the painting began.

In the months leading up to the project Network Rail had decided to coat the bridge in a relatively new innovative paint system called ‘Termarust’. Pioneered in Canada by a chemicals entrepreneur called Wayne Senick, ‘Termarust’ has been used increasingly over the past two decades in North America and Australasia but until 2014 was a relatively unknown quantity in the UK.

“It really is quite something,” says independent coating inspector Alan Hickey who monitored the painting of Selby Swing Bridge on behalf of Network Rail. “For a start, it’s much quicker to apply.

With conventional coating systems you will blast and prime it one day, wait 24 hours, paint it, wait another 24 hours, then apply the second coat – all weather permitting, of course. With ‘Termarust’ it’s a one coat system where you can constantly apply wet on top of wet. You wash it with jets of hot water, dry it with air, and basically apply the coat there and then. Finished.”

“Forget about having to apply a new coat of paint every four or five years. This stuff really lasts”

Considering that the Selby Swing Bridge blockade had to be completed in just six weeks, using a quick solution such as ‘Termarust’ made complete sense. However, there were other advantages – and then some. Forget about having to apply a new coat of paint every four or five years. This stuff really lasts as structures in North America and Australasia coated two decades ago in ‘Termarust’ bare testimony.

“Everyone was really great explaining to passengers what was going on and how it was going to affect them.”

Michelle France
Then there were the environmental benefits. “When it comes to surface preparation there’s no need to carry out abrasive blasting so you don’t have the headache of spent grit and grime flying about contaminating the surrounding area,” adds Alan Hickey. “That means you don’t have to encapsulate an entire structure during the coating process. At Selby there was no need to cover the whole bridge with protective ‘EnviroWrap’ because there was never any danger of the river becoming contaminated during preparation or painting. There are also health benefits. If there is any lead paint in a structure then the preparation process involved with ‘Termarust’ will take it out in large sections, not tiny particles that become airborne and can be breathed in.”

“Like taking a giant jigsaw puzzle apart, creating new pieces to replace old worn out ones, then putting it all back together again” – that’s how one member of the team working on Selby Swing Bridge described the project. On Friday 22 August a significant piece of this colossal jigsaw puzzle, a brand new span five to replace the old life-expired one at the northern end of the bridge, was lifted into place. At around the same time painting on the adjacent span four was completed. Down came the scaffolding that had surrounded it together with the protective ‘EnviroWrap’. The time had come for span four, the swinging section, to move from its closed position for the first time in almost a month. This was a heart-in-mouth moment. Span four used to weigh 352 tonnes. It now weighed 428 tonnes due to all the new parts (such as steel weighbeams) that had been added. That’s a 76-tonne difference. Without steel weighbeams it would have been 428 tonnes but, in civil engineering terms, it may as well have been a mile. Still, as Tim Moss of Kier had said way back during week one, projects like this are so often about “finding solutions to things” that crop up unexpectedly.

Over the coming days the discrepancy was remedied by redesigning the newly installed plastic packs which had been fitted to help cushion the railways lines on the bridge, adjusting their height until the spans were finally level. Problem fixed, it was time to test the all-important lock-in mechanisms connecting span four to spans three and five, holding it rigidly in place so that trains can cross. Once they were aligned work began re-attaching the signalling cables which also cross the River Ouse via the swing bridge. “To be honest I really didn’t expect it to go as well as it did,” says Tim Moss. “There was a lot of new cabling and pipework on the underside of the bridge and I thought something might snag. One or two loose pipes did need to be tucked out of the way as it came to rest on the nose end of span three, but that was all. We just gingerly brought it off its resting blocks, slowly swung it round bit by bit over the river and bingo! It’s funny. I spent days beforehand thinking ‘It might do that’ or ‘It might do this’ because it was the first time span four had moved for four weeks and we’d done all this work on it. It panics you slightly because you are aware of all the possibilities. But, of course, there was no need to worry. Cards on the table, I was over the moon. For me, that was a major milestone on the project. It was a statement that we had done our work well. All in all, that was a good day.”

On the afternoon of Thursday 28 August further tests were made on span four as it opened and closed at steadily increasing speeds. Once everyone was happy with its performance span four was locked into position up against span three and the process of laying the ‘permanent way’ – the rails over which trains travel – began. The backbone of the project had been broken. That said, there were still issues that needed addressing. Chief among these was a slight height discrepancy where span five met the swinging span four, and where span four met span three. We’re only talking 30 millimetres but, in civil engineering terms, it may as well have been a mile. Still, as Tim Moss of Kier had said way back during week one, projects like this are so often about “finding solutions to things” that crop up unexpectedly. Over the coming days the discrepancy was remedied by redesigning the newly installed plastic packs which had been fitted to help cushion the railways lines on the bridge, adjusting their height until the spans were finally level. Problem fixed, it was time to test the all-important lock-in mechanisms connecting span four to spans three and five, holding it rigidly in place so that trains can cross. Once they were aligned work began re-attaching the signalling cables which also cross the River Ouse via the swing bridge. “It’s a bit like the words to that song about all the types of bones that you find in your body,” says Darryl. “The lock-in on span four connects to the nose bolt on span five. The lock-in at the other end of span four connects to a hole on span three. Once they’re in place and the bridge is locked the signals are connected to Selby station, acting like a sort of plug. That plug basically says ‘I’m in line, the rails are in line, the bridge is in place, therefore the signal can turn to green and the train can cross safely’. That’s how it all operates.”
One By One All The Jobs on the Check List are Ticked Off

Test that the signals work. Fix the road traffic maximum clearance warning signs to spans one and two over Ousegate. Test the permanent way on the bridge. Remove scaffolding. One by one all the jobs on Network Rail’s check list were ticked off.

At 22.45 on Sunday 7 September, after six weeks of intense work, the curtain officially came down on the project. Selby Swing Bridge was, once again, part of Britain’s railway system. The following morning the 05.49 from Hull to Manchester became the first passenger train to cross the newly refurbished structure, travelling at 25 miles.

“I think everyone involved on the project who watched the first train go over the bridge on that Monday morning felt an immense sense of pride,” says Darryl White. “Pride that we had got the job done on time and to the best of our ability. Pride that the bridge had been restored to something like

Community Comments

“It was a bit of a disruption but it needed doing. They said it would be finished by the 8th of September and it was. They chose the best time to do it, when a lot of people were away on holiday, and now everyone’s back at work and school they can use the train again.”
Peter Shaw from Brough

“I used the rail replacement buses while the work was going on and you could see it progressing day by day. There was always people working on it, not like on the motorways when you drive for miles through the road works and don’t see a soul doing anything. So that was good. You knew things were happening and the bridge would be open again soon.”
John Church from Hull

“I rely on the train to get to work in Leeds. I’m glad it’s back working again. It was only when it closed that I realised just how important it is to me and everyone who uses the line.”
Samantha Gardner from Brough

“Call me a sceptic but when I heard exactly what they doing to the bridge I thought ‘There’s no way that’s all going to get done in six weeks’. But I was wrong, wasn’t I?”
Mike Greer from Leeds

“It felt smoother as we went over the bridge, and it’s nice to go faster and not have to crawl across at walking pace anymore.”
Andrew Franklin from Hull

“It’s an old bridge but you wouldn’t know that by looking at it. It looks smart.”
Paul Cousins from Selby
The First Train Heads Over Selby’s New Look Bridge

Improved rail service for the people living in the Selby area for many years to come.

“I think everyone involved on the project who watched the first train go over the bridge on that Monday morning felt an immense sense of pride,” says Darryl White. “Pride that we had got the job done on time and to the best of our ability. Pride that the bridge had been restored to something like its original glory. Pride at the way everyone had collaborated successfully on the project. And also pride for the people of Selby because, after all, the bridge has been part of their town for longer than anyone can remember. This was something that could only help improve the image of the town. Not only did the bridge look a hundred times better cosmetically but it also provided people living in the area with an improved rail service.”

As far as Darryl is concerned there is only ever one down side to all the projects he oversees for Network Rail. “You complete a job. The trains start running again, thousands of people travelling at speed over your handiwork. Everyone is happy. It’s just that sometimes you wish that the people on the trains could get a better understanding of all the work that goes into these projects – the months of preparation, the engineering involved, the problems we encountered along the way and how we solved them, the testing to make sure that everything works properly. Selby was no exception because of the size of the project. At the end of the day Network Rail is there to maintain and improve Britain’s rail infrastructure. That’s our job. But the next time you are travelling on a train, why not take a minute to look out of the window and think about all the work that has gone into getting you to your destination, and the people responsible for carrying it out.”

Selby Swing Bridge has opened and closed for boats and trains since Queen Victoria was on the throne. It predates the welfare state, the motor car, penicillin, radio and the first manned trip in an aeroplane. The most famous steam locomotives ever built – Mallard and Flying Scotsman – crossed it on almost a daily basis for decades. Thanks to the small army of people who spent the summer of 2014 refurbishing it, Selby Swing Bridge will continue carrying trains over the River Ouse for many more years to come.

“Next time you are travelling on a train, why not take a minute to look out of the window and think about all the work that has gone into getting you to your destination.”
River Rescue

A boat helping to safeguard workers employed on Network Rail’s £14 million project to refurbish Selby Swing Bridge ended up performing a dramatic rescue to help save the occupants of another vessel that had got into trouble.

The pleasure craft ‘KitKat’ had been sailing upstream on the River Ouse through Selby when its engine stopped working, prompting the two people on board to issue a radio distress call.

That call was picked up by a special rescue boat patrolling the waters around Selby Swing Bridge where up to 160 men are working around the clock in shifts on a six week project to inject new life into the 125-year old structure.

“This was a serious incident which could have had fatal consequences.”
Darryl White, Network Rail

Rescue boat helmsman Jonathon Sutton answered the SOS and immediately went to the other craft’s assistance, using his own boat as a buffer to steer the drifting vessel until power could be restored to its engine. By doing this Jonathon prevented the other boat from colliding with the river banks or, worse still, the piers of a nearby road bridge.

Once the other vessel was safely on its way the rescue boat returned to Selby Swing Bridge where work on the project, which had been temporarily halted when the alarm was raised, resumed. “This was a serious incident which could have had fatal consequences,” says Darryl White of Network Rail, Scheme Project Manager on the Selby Swing Bridge project.

“The River Ouse at Selby is an extremely dangerous tidal stretch of water.”
Darryl White, Network Rail

“Once the distress call went out everyone pulled together to make sure that the rescue boat could be deployed without jeopardising the safety of anyone working on the bridge. The rescue boat is, after all, there to protect them in case they should fall into the water.”

“Jonathon deserves an awful lot of praise for the way he handled the situation. The River Ouse at Selby is an extremely dangerous tidal stretch of water. The people on board the boat were fortunate that Jonathon was on hand and came to their assistance so swiftly. The rescue boat crews are trained for all eventualities and perform emergency drills on the river to perfect their techniques. This incident just goes to show that they are the best in the business.”
On Saturday 26 July 2014 the 21.38 passenger train from Hull to Manchester passed over the River Ouse into Selby station. It would be the last train to cross Selby Swing Bridge for six weeks.

This is the story behind the major £14 million project which was undertaken to inject new life into the Selby Swing Bridge to ensure that the bridge can continue being used by rail and river traffic for many years to come.