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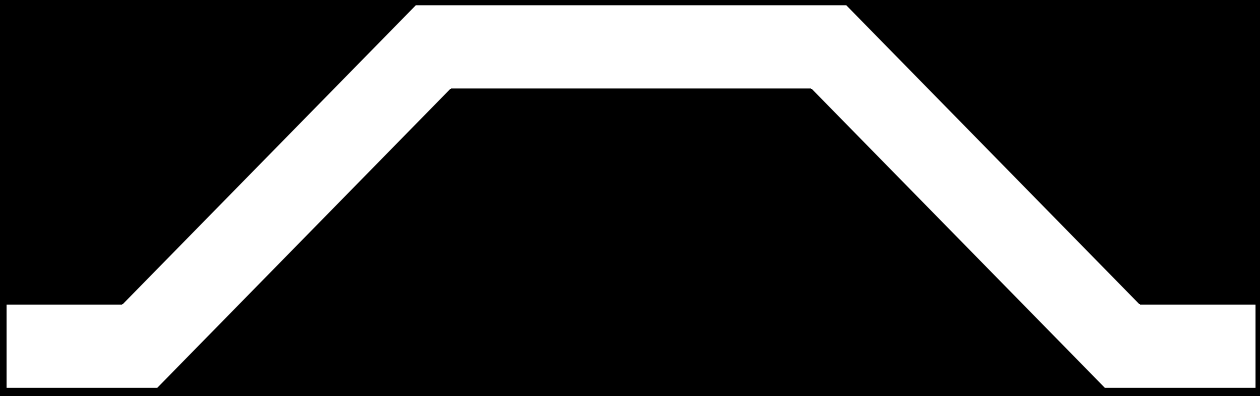


LINK
A study of Network Rail footbridges

Professional Head Buildings and Architecture
Anthony Dewar

Introduction
David Lawrence

Photography
Luke O'Donovan

Foreword

This is Network Rail's first retrospective study of our station footbridges. It ranges from some of our earliest 19th century footbridges, through to a selection of modernist 21st century architectural designs. It documents the rich and diverse portfolio of footbridges we currently have across our estate, whilst we embark on the development of a new catalogue of station footbridge typologies which will leave a design legacy at UK railway stations for future generations. This retrospective has been undertaken through a collaboration between Luke O'Donovan and David Lawrence, and we are very grateful for their combined work in reviewing and recording the diversity of architectural typologies and contexts of Network Rail's station footbridges.

My Buildings and Architecture team are leading a programme to elevate the importance of design for Network Rail's built environment. As part of this we are developing new footbridge typologies through both traditional contracting routes and an international RIBA open design ideas competition. The competition entries are presented at a public RIBA Exhibition in February 2019. We are very grateful to James Porter and Julia Davies at the RIBA competitions office, and to Jonathan McDowell at Matter Architecture Ltd and Chris Wise at Expedition Engineering, who have all given a great deal of time and attention to the competition and exhibition. We have been overwhelmed by the response to the competition and would sincerely like to thank all the organisations, design professionals and students who entered.

I would also like to thank Sir Peter Hendy, Chairman, and Andrew Haines, CEO, who have continually provided their support to elevate the importance of good design within Network Rail.

Anthony Dewar
Professional Head Buildings and Architecture

Footbridges
David Lawrence

Network Rail knows that every stage of the journey must be comfortable, safe and convenient. There is one part of the travel experience through the railway station to which we don't give much attention: the passenger footbridge. The footbridge is an elevated crossing over the railway, linked to ground level by stairways and/or ramps, and now increasingly offering enhanced access by the provision of lifts too. Footbridges carry passengers between platforms, and can link to station facilities. Others connect public routes across the railway, to provide safe ways across the railway at stations and along the lines. They have all been essential railway equipment ever since it was realised that moving trains and people should be kept separate.

In his prize-winning book The Railway Man, Eric Lomax begins his account of experiences on the Burma-Siam during the Second World War with a footbridge. Specifically, Park Bridge, Portobello, Edinburgh. He 'stopped on the bridge…and looked down - into a new world… suspended amidst the working engines, the branching rails and signal gantries, the station platforms and the brick warehouses.' Not all of us may find the environment of the railway to have so particular an appeal, but Lomax characterises well the footbridge as a functional and special moment near the beginning or conclusion of a journey by train. It is an architectural-engineering feature suspended between places and also its own particular place. In the transitional moment of crossing, the footbridge gives us a glimpse towards our destination, or a last look back at the place and people we are leaving. In contrast to the continuous ribbon of railway tracks - a kind of linear city - the footbridge is built to human scale. It brings order to the complex world of the railway. Its humble role of allowing travellers to cross the railway safely has protected it from the more extreme fashions in architectural design. There are almost 2,400 footbridges on the British railway system. Caught up in the haste of departure or the expectation of arrival, how much notice do we take of them? How have engineers, architects and designers worked to make the business of crossing the railway more than stairs and a passageway? What others functions might a footbridge offer?

Network Rail has reviewed its heritage and now looks to the future to explore the potential for passenger footbridges to be much more than infrastructure. Through Luke O'Donovan's photographic survey which provides the pictorial content for this study, Network Rail has discovered literally long-standing examples of durable engineering and diverse design features, and it has also noted places where the appearance and utility of the footbridge can be improved.

Early Railways

The earliest railways had no need of elevated railway crossings. Terminal stations like Euston had a platform for arriving trains, and one for those departing, joined at the same level by a circulating area or concourse at the street end of the train-shed. Stations along the line, when they actually had platforms, relied on travellers crossing the tracks on foot. Even now the problem of level crossings, where trains, pedestrians and road vehicles may potentially come into conflict, has not been entirely removed. Faster, more frequent trains made some sort of safe crossing desirable.

Passenger tunnels suited some locations and railway builders, but they were inflexible and could be difficult to maintain. Footbridges, made first from timber and quite soon afterwards from fireproof metal, proved an almost ubiquitous solution. From the examples in this study, and the accompanying exhibition, we see that the footbridge is a hybrid of engineering and architecture: iron, steel, wood and masonry. Railways were industrial engineering organisations, conceived in a time when almost every part of the infrastructure might be made by the railway operator: the trains, the track, the stations, and footbridges. The many independent companies which created Britain's rail network in the nineteenth century adapted ideas from other industrial and domestic settings - industrial waterways in particular. Early footbridges were cast, forged, riveted and welded in the heavy engineering workshops and open yards of railway companies and special metal workers, on industrial sites with expanses of space needed to cut and manipulate iron and steel near sources of great heat to soften metal for manipulation, or melt it for casting in moulds.

Prefabrication for Fast Construction

Railway factories could manufacture footbridge parts on a large scale, for deployment across the system using sets of similar parts assembled according to the particular context of the site. Isambard Kingdom Brunel made an art of prefabrication, ensuring that the Great Western Railway and related companies communicated a unified and distinctive corporate brand image in three dimensions through their trains and structures. Other railway companies used prefabrication too, ensuring that the investment of good design in the initial stages of development would bring benefits on a much greater scale. Some makers used wholly engineering solutions, fabricating these elevated crossings as plain metal plate girder structures with a basic roof canopy of corrugated sheet. Cuxton, 84, is an example of the plate girder type. More sophisticated lattice girder bridges combine strength and pattern, as we see at Lewes, 92, Muirend, 44, Loch Awe, 23, Aviemore, 32, Settle, 48. Many examples are free-standing and open to the air. Some are glazed and perhaps - where different road and rail levels make this possible - integrated into the passenger buildings: Chatham, 81, Bexhill 72, Preston, 101, Maxwell Park, 97, Torquay, 103. Even such prosaic monuments are often marked confidently with their maker's names, places and date.

Adding Decoration to Function

Any human-made object seems to invite embellishment. With the potential for making sophisticated patterns in the iron casting process, railway engineers and architects would frequently embellish the supporting columns, balustrades and stair treads with classical, gothic, floral or geometric motifs emulating stone carving traditions. Llanfairfechan, 43, and Settle, 48, feature ornamentation which is strictly unnecessary for function but appealing to the eye of a passenger. In step with the archaeological discoveries of the Victorian and Edwardian ages, diverse makers' and regional styles show a palimpsest of details taken from design pattern books and architects' imaginations, and a delight found in the potential of mass-production methods evolving as the industrial revolution spread railways

Ashford International, Kent, footbridge extends from the station across roads to a car park, all designed to be in harmony with the railway buildings.

across Britain. Overhead, stair and bridge canopies attracted their own decoration too, most commonly through the fitting of fret-work wood valances to match the platform shelter canopy edging. These flamboyant timber fringes, represented here by Stratford-upon-Avon, 116, have settled into a nostalgic image of the Victorian railway, so it is intriguing to discover that this particular adornment was inspired by the grand fabric tents of peoples in hotter climates overseas.

Mass Production

Once concrete was accepted as a structural and architectural material - aesthetic opinion had decided that concrete could work well and look good - mass-production became even easier. The Southern Railway, operating in areas now covered by Network Rail's south-eastern and south-western regions, established a reinforced concrete factory at Exmouth Junction, Devon, to make many thousands of items for the railway. When the railways were caught up with modernising in the 1930s, they experimented with ferro-concrete (reinforced concrete), moulding buildings on site to make bright boxy advertisements for railway - and social - progress. Surbiton, 102, and Woking, 67, still seem freshly made after several decades. In more recent times steel - lighter to transport and install, easy to relocate if necessary - has been used for mass-production of footbridges instead.

The New Electric Railway

All of these examples took on the challenge of resisting exhaust smoke and vapour from steam-powered locomotives. The thrill of standing on a footbridge to be enveloped in clouds of sooty white as a train passes underneath - an otherworldly combination of fire and water - is long remembered by children. When electrification allowed British Rail to run faster, cleaner train services, the additional space needed for overhead power lines required changes to footbridges too. A new railway space is named: the 'geometric box'. This is the seemingly open space below the footbridge and between its supports, a portal area of nearly 87 square metres set aside only for trains and their power supplies to prevent any electrical connection with passenger areas. The form of any footbridge must accommodate the geometric box, requiring adjustments to the scale and proportions of such structures. Milton Keynes Central, 61, opened with the station in 1982, is one architectural response to these constraints. Its pairs of porthole windows ensure safety for passengers and railway workers and match the austere modernity of the near mirrored glass buildings.

Footbridges as Architectural Landmarks

When British Rail invested heavily in rebuilding the railway network during the 1950s and 1960s, architects and engineers looked overseas for innovative ideas to inspire station design. These new stations would be icons of progress within wider urban developments, reflecting trends in making society better for everyone through democratic, efficient, attractive modern buildings. One smart concept, found at restaurants on North American and Italian high speed roads, is the combined bridge and passenger course area. Highway food chains created the mix of bridge and building with the aim of needing only one set of facilities for travellers in different directions, accessible by the simplest arrangement of stairs and lifts. British Rail adapted this general idea for Harlow Town, 59, (1960); it has been re-imagined by Grimshaw Architects using aluminium and high-tech plastic film at Newport, 62–63 (2010).

There are other interesting contrasts in combined concourse-footbridge design. The tough metal boxes of Dartford, 55, and Bristol Parkway, 124, treat the railway crossing as an enclosed pipeline for people. At Liverpool Street, 128, walkways are linked as an independent mezzanine, much like several European termini which have multiple layers and intersections of traveller routes. At Reading, 130–131, the escalators, stairs and bridges are an architectural fusion of sublime scale, their ramped canopies on steel and concrete supports gliding over the station.

At Cressington, Liverpool, of 1864–73, listed Grade II for its special architectural/ historic interest and restored by Network Rail's predecessor British Rail in the 1970s, the station has been arranged over three storeys, so that the footbridge emerges rather surprisingly from the first floor of the chalet-like building.

Access for All
The Department of Transport launched its Access for All programme in 2006 with funding to ensure that travellers of all abilities, perhaps with luggage, children, bicycles, or pets too, would have 'an obstacle free, accessible route from the station entrance to the platform.' With this resource Network Rail has provided two hundred footbridges including lifts and stairs. Lifts emphasise the verticality of the structures; stairs extend the bridge form horizontally. Exceptionally, as we see at Charlbury, 108, ramps of considerable extent are required to meet safety regulations and site conditions. Resulting examples of Access for All footbridges vary widely in appearance and design quality, as we can see at Denmark Hill, 34–35, Brockenhurst, 107, Coleshill Parkway, 53, and Crystal Palace, 109. The best combine bold architectural features with real convenience, and in restoring shelter to stations rationalised some decades past, shows positive investment for local community settings.

Footbridges can appear as landmarks in the wider setting, particularly where the railway borders an area of low-lying land or coastline. Then, as we see at Chalkwell, 80, Woodbridge, 28, Porth, 25, Betws-y-Coed, 14, Blackpool Pleasure Beach, 16–17, and Kinghorn, 41, they can link areas of different character, and mark the presence of transport design and architecture as topography. Through this infrastructure as sculpture, travellers and their companions can really be in more than one place simultaneously: they are on the journey; on the horizon; in the landscape; up with the sky.

In our own time structural ingenuity and good design, using materials, form, and good planning, can make beautiful, functional footbridges. That is the project for Network Rail: to establish ambitious design standards for fully accessible station environments, and to 'deliver excellent ordinary.' Its immediate impact on the passenger experience makes the footbridge a good subject to address first. Network Rail collaborates with Design Council CABE (formerly Commission for Architecture and the Built Environment) to convene a Design Panel which advises on the built environment of the railway. Network Rail has also worked with the Royal Institute of British Architects to promote an international competition which would attract new ideas for footbridge design and installation. From this competition will emerge components for a new pattern book of footbridge designs, to inform future developments?

This introduction had considered the railway footbridge in sections relating to its purpose, history, manufacture, and evolution. In the photographic study which follows, Luke O'Donovan's images are arranged in six sections which characterise their salient feature: Pathway, Gateway, Landmark, Legacy, Retrofit, Space.

Dawlish has the first plastic footbridge to be listed Grade II for its architectural/ historic significance. Designers specified the material, actually a high-tech Fibre Reinforced Polymer, to resist corrosion caused by the proximity of the English Channel at this Devon town.

Pathway

In many cases, footbridges at stations are the fastest, safest, and often only way to cross over the tracks. This is most evident in smaller towns and villages, with the footbridge at Starcross allowing for access to a popular cycling route, and Woodbridge linking the town and boatyard. At Cosham, the footbridge allows for the continuation of the High Street over a busy level crossing, whereas the wider, street level footbridge at Birmingham New Street has become not just a well used pathway, but also an active public realm space in itself.

Betws-y-Coed
Birmingham New Street
Blackpool Pleasure Beach
Cartsdyke
Cosham
Garscadden
Garve
Harrogate
Loch Awe
Neath
Porth
Shrewsbury
Starcross
Woodbridge
Wylam

Betws-y-Coed

Birmingham New Street

Blackpool Pleasure Beach

Cartsdyke

Cosham

Garscadden

Garve

Harrogate

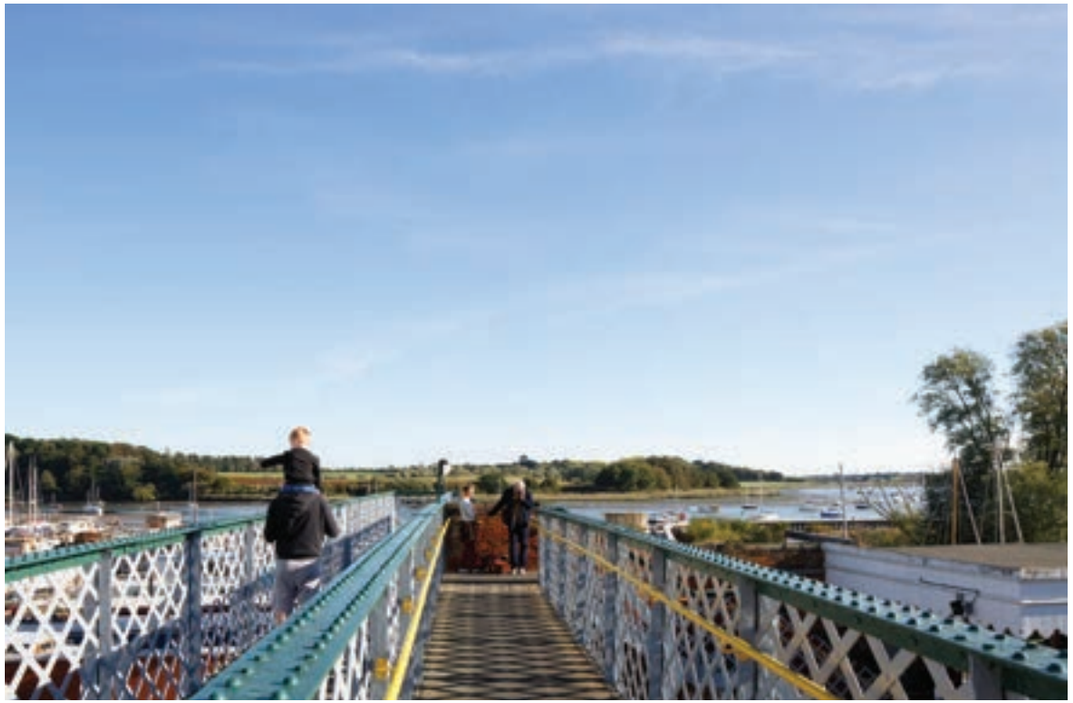
Loch Awe

Neath

Porth

Shrewsbury

Starcross



Woodbridge

Wylam

Gateway

Footbridges can provide a first impression, or a final glimpse of a location for railway travellers. Acting as a gateway between the railway domain and the destination itself, the elevation of the footbridge above the tracks creates a unique vantage point, with the likes of Settle and Aviemore offering picturesque views of the local scenery, or more simply a chance to find one's bearings in the industrial complex around New Hythe.

Within an urban context, Charlton gives panoramic views over the London skyline, whereas the view at Denmark Hill seems much more curated, with the glass-screened walkway leading towards Sir Giles Gilbert Scott's towering William Booth College building. The transparent glass balustrades at Drem and Dunblane prove popular with young trainspotters not quite tall enough to peer over the edge.

Aviemore
Charlton
Denmark Hill
Drem
Dunblane
Hatfield & Stainforth
Insch
Inverurie
Kinghorn
Leuchars
Llanfairfechan
Muirend
New Hythe
North Queensferry
Settle
Thornaby

Aviemore

Charlton

Denmark Hill

Drem

Dunblane

Hatfield & Stainforth

Insch

Inverurie

Kinghorn

Leuchars

Llanfairfechan

Muirend

New Hythe

North Queensferry

Settle

Thornaby

Landmark

Railway stations often form landmarks within their surrounding area, and with their raised height, footbridges tend to take visual prominence. In the new towns of Harlow Town and Milton Keynes, the stations act as central focal points by design, with Harlow Town's footbridge lift columns creating a distinctive landmark that shapes the town's wayfinding. At Shawfair, the footbridge has been built ahead of the planned new town, and stands as a landmark in the otherwise featureless landscape.

Footbridges are now being used to also create new landmarks in existing towns, with a prime example being Hawkins\Brown's East Croydon footbridge, which acts as a centrepiece to the big-budget regeneration of the area. These new footbridges rely upon statement contemporary architecture to set out the bold ambitions of regeneration projects, and the futuristic designs of the combined station and footbridge buildings at Port Talbot and Dalmarnock are frequently likened to spaceships by locals.

Alnmouth
Coleshill Parkway
Dalmarnock
Dartford
East Croydon
East Midlands Parkway
Harlow Town
Luton Airport Parkway
Milton Keynes Central
Newport, South Wales
Peterborough
Port Talbot
Shawfair
Woking

Alnmouth

Coleshill Parkway

Dalmarnock

Dartford

East Croydon

East Midlands Parkway

Harlow Town

Luton Airport Parkway

Milton Keynes Central

Newport, South Wales

Peterborough

Port Talbot

Shawfair

Woking

Legacy

As one of the most universal structures in railway architecture, footbridges are in many cases a major celebration of British Railway heritage, with historic ornament allowed to flourish at Preston, Newcastle and Lincoln.

However at smaller stations, in some cases these legacy footbridges can lead to problems, with heavy rust at Cuxton, Kennishead and Achnascheen creating maintenance headaches, not to mention the accessibility shortcomings and the lack of capacity as nineteenth and twentieth century stations get swallowed up by twenty-first century urban environments.

Achnasheen
Althorpe
Bexhill
Bingley
Birmingham Moor Street
Bishopstone
Bridgwater
Bulwell
Carlisle
Chalkwell
Chatham
Cressington
Crewe
Cuxton
Fairwater
Green Lane
Helsby
Kennishead
Kensal Green
Leicester
Lewes
Lincoln
Llandudno Junction
Manors
Martin's Heron
Maxwell Park
Newcastle
Penmaenmawr
Portsmouth Harbour
Preston
Surbiton
Torquay

Achnasheen

Althorpe

Bexhill

Bingley

Birmingham Moor Street

Bishopstone

Bridgwater

Bulwell

Carlisle

Chalkwell

Chatham

Cressington

Crewe

Cuxton

Fairwater

Green Lane

Helsby

Kennishead

Kensal Green

Leicester

Lewes

Lincoln

Llandudno Junction

Manors

Martin's Heron

Maxwell Park

Newcastle

Penmaenmawr

Portsmouth Harbour

Preston

Surbiton

Torquay

Retrofit

One solution to some of the problems caused by outdated historic footbridges is retrofitting older stations with brand new elements to meet modern day requirements. Recent additions to King's Cross and Crystal Palace bring the principles of the Access for All initiative to heritage interiors in the guise of sleek glass and steel architecture, a marked departure from the more industrial approach of Pontypridd and Dalmuir.

Elsewhere, new footbridges with brick lift towers stand alongside the stairs-only originals at Grimsby and Stratford-upon-Avon, and at West Brompton a steel footbridge with lift towers unceremoniously attaches itself to the pre-existing Victorian station building.

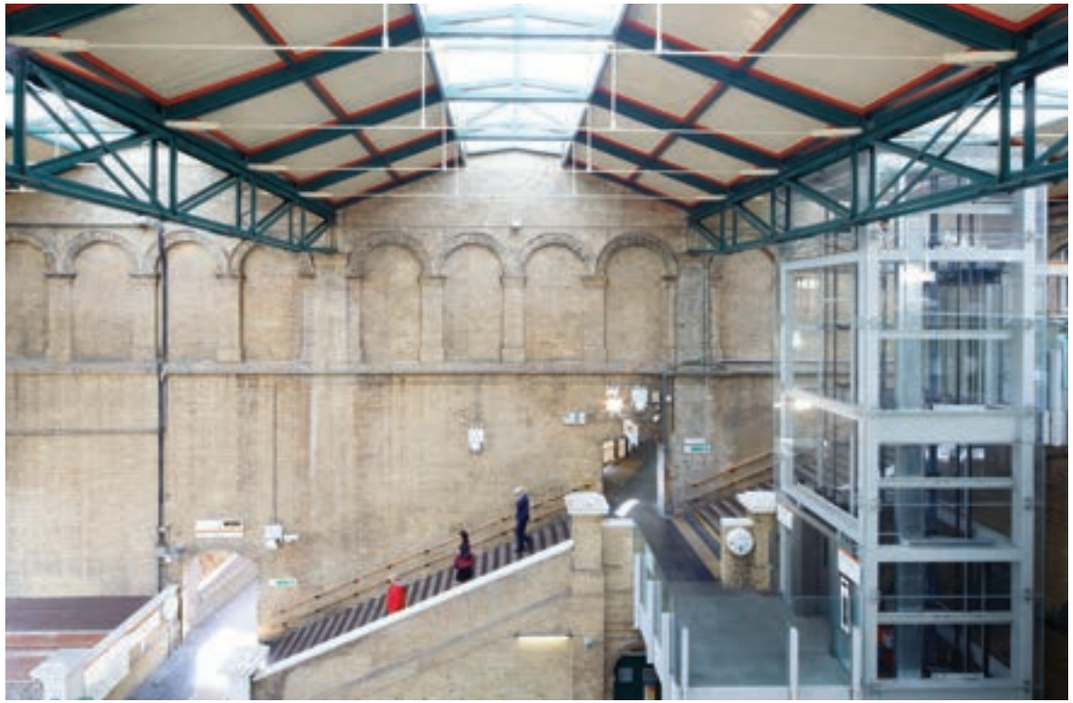
Dawlish combines a traditional typology with the use of fibre reinforced polymer, which has allowed for prefabrication and a swift installation compared to traditional materials, as well as resistance to the corrosion which has consumed so many other coastal footbridges.

Abbey Wood
Brockenhurst
Charlbury
Crystal Palace
Dalmuir
Dawlish
Grimsby
Kings Cross
Pontypridd
Stratford-upon-Avon
Strood
West Brompton

Abbey Wood

Brockenhurst

Charlbury



Crystal Palace

Dalmuir

Dawlish

Grimsby

Kings Cross

Pontypridd

Stratford-upon-Avon

Strood

West Brompton

Space

As railway capacity has increased, footbridges have become mass transit systems in themselves, creating a new architectural space in between the tracks. The Hawthorns, Eaglescliffe and Waterloo East hold departure boards or ticket offices within these spaces, whilst Reading, Leeds, Clapham Junction and Liverpool Street all have extensive retail offerings. The evolution of footbridges from transitional spaces into architectural spaces in themselves raises the question of how the footbridges of the future will progress - will they one day reach a point where they become destinations in their own right?

Ashford International
Bristol Parkway
Clapham Junction
Eaglescliffe
Leeds
Liverpool Street
Manchester Victoria
Reading
The Hawthorns
Waterloo East
York

Ashford International

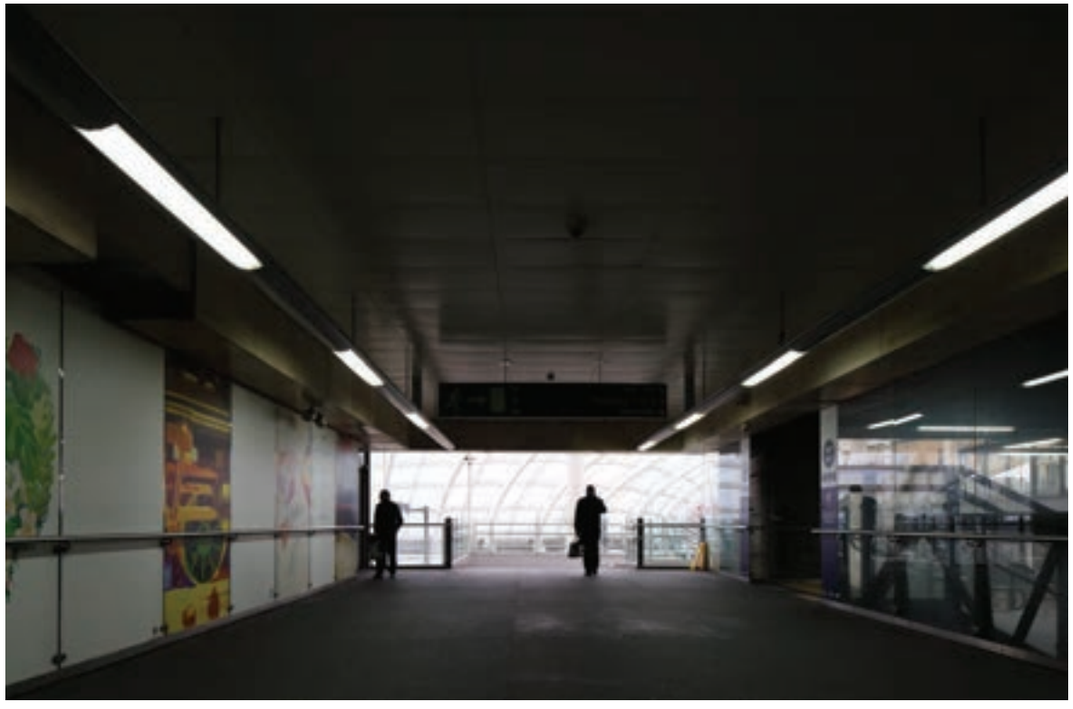
Bristol Parkway

Clapham Junction

Eaglescliffe

Leeds

Liverpool Street



Manchester Victoria

The Hawthorns

Waterloo East

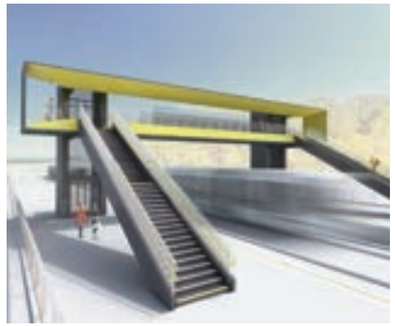
York

Network Rail & RIBA
Footbridge Competition

Winner

Highly Commended

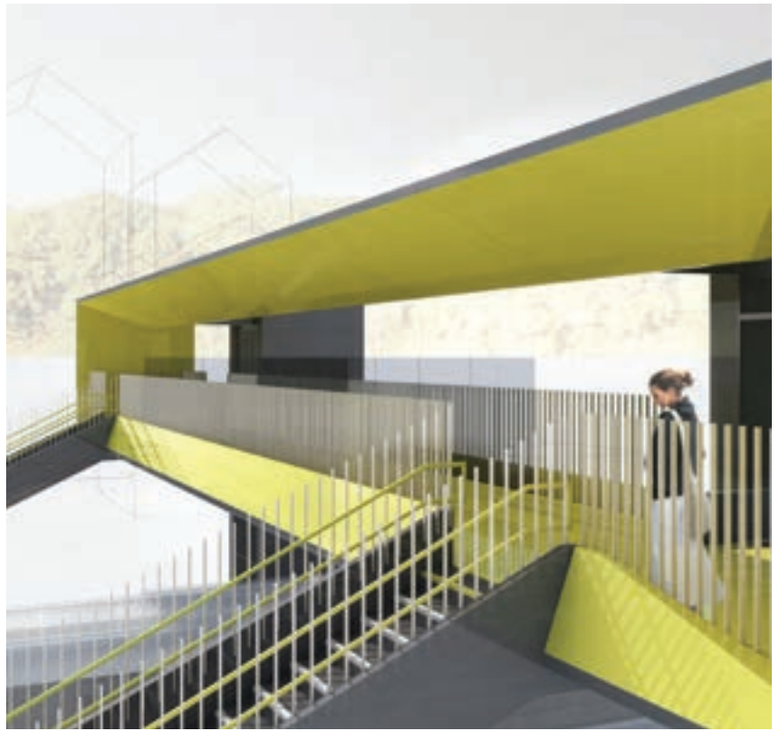
Network Rail & RIBA Footbridge Competition



Winner

Gottlieb Paludan Architects

Strasky, Husty and Partners Ltd



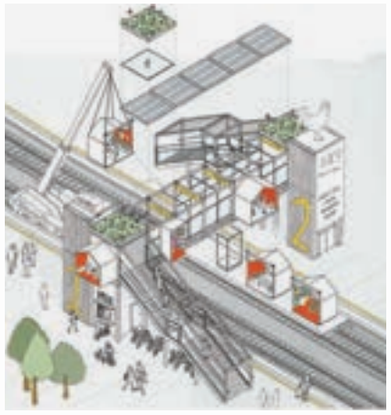
In launching the competition we were reaffirming Network Rail's commitment to good design across the nation, and the delivery of excellent ordinary. The remit we developed for the competition, in conjunction with the RIBA, outlined our technical parameters and sustainable design considerations for footbridge proposals. We worked hard to develop the brief in a way which expressed clearly the technical parameters of design within an electrified railway in a written form, without there being a long list of technical standards which would lead to stifled creativity in competition entries.

An open international ideas competition enabled us to challenge the global architectural and engineering community to generate new and innovative ideas for station footbridge structures, that would be both functional in form and sympathetic to the communities they serve. The design ideas competition was held in a single stage, with a design fund of £20,000 awarded to the submission judged to be the most comprehensive response to the design brief.

More than 120 entries were received from 19 countries. The Evaluation Panel were extremely impressed by the high quality of the submitted entries, the breadth of the approaches, and the interesting ideas developed in response to the challenge.

The overall winner was Gottlieb Paludan Architects, Denmark, with Strasky, Husty and Partners Ltd, Czech Republic. Their entry presents a bridge with a well resolved design aesthetic, which most convincingly addressed the wide range of practical challenges whilst proposing a bold, elegant and uncluttered response that would create an uplifting experience to suit many contexts.

Network Rail & RIBA Footbridge Competition



Highly Commended

Hawkins\Brown with WSP

The competition judges also decided to highly commend the entry by Hawkins\Brown with WSP. This design shows a strong strategic approach, proposing a modular ‘kit of parts’ that would enable a standardised bridge system to be adapted - through the use of simple pre-fabricated, clip-on modular elements - to different contexts and settings, with the footbridge being conceived as a ‘social engine’ focussed on people and place.

Contributor Biographies

Anthony Dewar
Professional Head Buildings and Architecture

Anthony has led on elevating the importance of design within rail infrastructure amongst his peers and the industry's leadership. His notable achievements include forming the Network Rail (NR) independent design panel, development of NR design principles and reinvigorating the NR design approach via design competitions with RIBA and RSA Student Design.

An experienced Civil Engineer and design professional, Anthony has almost 20 years of industry experience and has spent his career in a number of private and public sector bodies.

Anthony is a Chartered Engineer and Fellow of the Institution of Civil Engineers and the Royal Society of Arts.

Dr David Lawrence
Associate Professor

Dr David Lawrence is an architectural historian. He studies and writes about places where people, design and movement meet. David is the author of Underground Architecture (1994), Always a welcome (1999), A Logo for London (2000, 2013), Bright Underground Spaces (2008), British Rail Designed 1948-97 (2016), and British Rail Architecture 1948-97 (2018).

Luke O'Donovan
Architectural Photographer
lukeodonovan.co.uk

Luke O'Donovan is a young architectural photographer with a particular interest in portraying the link between people and place. Luke's new printed and exhibited work with Network Rail follows his début solo exhibition 'PLONK! - The Architecture of London's Infrastructure' as part of London Festival of Architecture (LFA) 2018, the Blueprint Architectural Photography Awards 2018, and commissions with the LFA which have been printed in publications including The Architect's Journal.

References

Access for All – improving accessibility at railway stations nationwide (Network Rail: networkrail.co.uk/communities/passengers/station-improvements/access-for-all/). Visited 10 December 2018.

All Stations: a journey through 150 years of railway history (London: Thames and Hudson, 1981).

Betjeman, John, and John Gay, London's Historic Railway Stations (London: John Murray, 1972).

Binney, Marcus, and David Pearce, Railway Architecture (London: Bloomsbury Books, 1979).

Bowers, Michael, and Patrick Watters, Railway Styles in Building (London: Almark Publishing, 1975).

Buck, Gordon A, A Pictorial Survey of Railway Stations (Sparkford: Oxford Publishing Co., 1992).

Clark, Linda, John Ives, Stuart Rankin and Paul Simons, Aspects of Railway Architecture (Bristol: City of Bristol Printing and Stationery Department/British Rail, 1984).

Department for Transport, The Inclusive Transport Strategy: Achieving Equal Access for Disabled People (London: Department for Transport, 2018).

Department for Transport and Transport Scotland, Design Standards for Accessible Railway Stations (Glasgow: Transport Scotland; London: Department for Transport, 2015).

gov.uk/government/collections/access-for-all-programme. Accessed 13/12/2018.

Hawkins, Chris, and George Reeve, Southern Nouveau: 'an essay in concrete' (Didcot: Wild Swan Publications, 1987).

Lawrence, David, British Rail Architecture 1948–97 (Manchester: Crécy Publishing, 2018).

Lomax, Eric, The Railway Man [first published 1995] (London: Vintage, 1996).

Meeks, Carroll L V, The Railroad Station: an architectural history [first published 1956] (Secaucus: Castle Books, 1978).

networkrail.co.uk/feeds/network-rail-footbridge-design-ideas-competition-launches/; http://www.ribacompetitions.com/networkrailfootbridge/. Visited 1 December 2018.

Wilson, Trevor, and Boaz Yariv, Station Design Principles for Network Rail (Network Rail, March 2015), reference BLDG-SP80-002.

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