

# LEADING UK MANUFACTURER OF CAST METAL STAIR NOSINGS & TREADS.

STEP BY STEP SAFETY

# WHO WE ARE.

**AATi Limited (formerly Antislip Antiwear Treads International Ltd) was formed in 1984 and is part of the FSE Group.**

AATi adopted the anti-slip cast metal stair nosing designs traditionally seen on the London Underground. These have been ever present and effective features on the UK rail networks for over 50 years.

Due to the continued successful growth of AATi Limited into new product markets a reorganisation of the company was necessary in 2012. AATi Rail Limited is now responsible for all projects within the UK rail industry. AATi Limited focuses on the international marketplace and AATi Commercial Limited all UK non-rail domestic clients.

AATi Rail Limited is the leading supplier of heavy duty cast metal anti-slip stair nosings for the UK Rail sector. Other products available include anti-slip floor plates, tactile corduroys, platform edge tiles and drainage grilles.

We have designed and developed a market-leading product range to encompass all requirements in modern stairway design, focusing on uses within public transport areas such as London Underground, London Overground, Docklands Light Rail (DLR), station terminals, Network Rail and Footbridges for the Access for All scheme.

ISO 9001 accreditation, in-house design, 3D CAD & 3D printing, metallurgic control and slip testing facilities are all key features ensuring a first class product and service are delivered every time.

All products are manufactured and designed in the UK.

**We have included some recent case studies to show the variation, complexity and attention to detail for every project we undertake. Please contact us for more information on all our products and services.**



# WHY US?

## Unrivalled Product Offering.

Bespoke UK manufacturing  
silicon carbide Anti-slip  
encapsulation  
Over 150 Designs  
3D CAD Visualisation

## Saves Money.

Cost justification is easily made due to the longevity of AATi products with nosings typically lasting 20+ years in extreme high footfall locations such as London Underground. Clear savings can be made through not having to buy and install numerous times over this period.

## Direct & Ethical Supply Chain.

Design, development and manufacturing is only carried out in the UK to ensure that quality, standards and public & transport regulations are maintained.

## Company Pedigree.

AATi products have been used in the UK Rail sector for over 50 years. Key supplier to Europe's largest infrastructure project Crossrail. The £14.8 billion project (Elizabeth Line) will be fully integrated with London's existing transport network.

## Safety.

Taking into consideration statutory and client design requirements, AATi has a stringent design philosophy; as inevitable wear takes place this only occurs in a non-catastrophic way ensuring that passenger safety is paramount.



# DESIGN.

All AATi products include a cast profile with encapsulated silicon carbide in the wearing surface. This ensures the pedestrian has the very best anti-slip foot contact on the stairway, both at initial contact and as full body load is put on to and leaves the step.

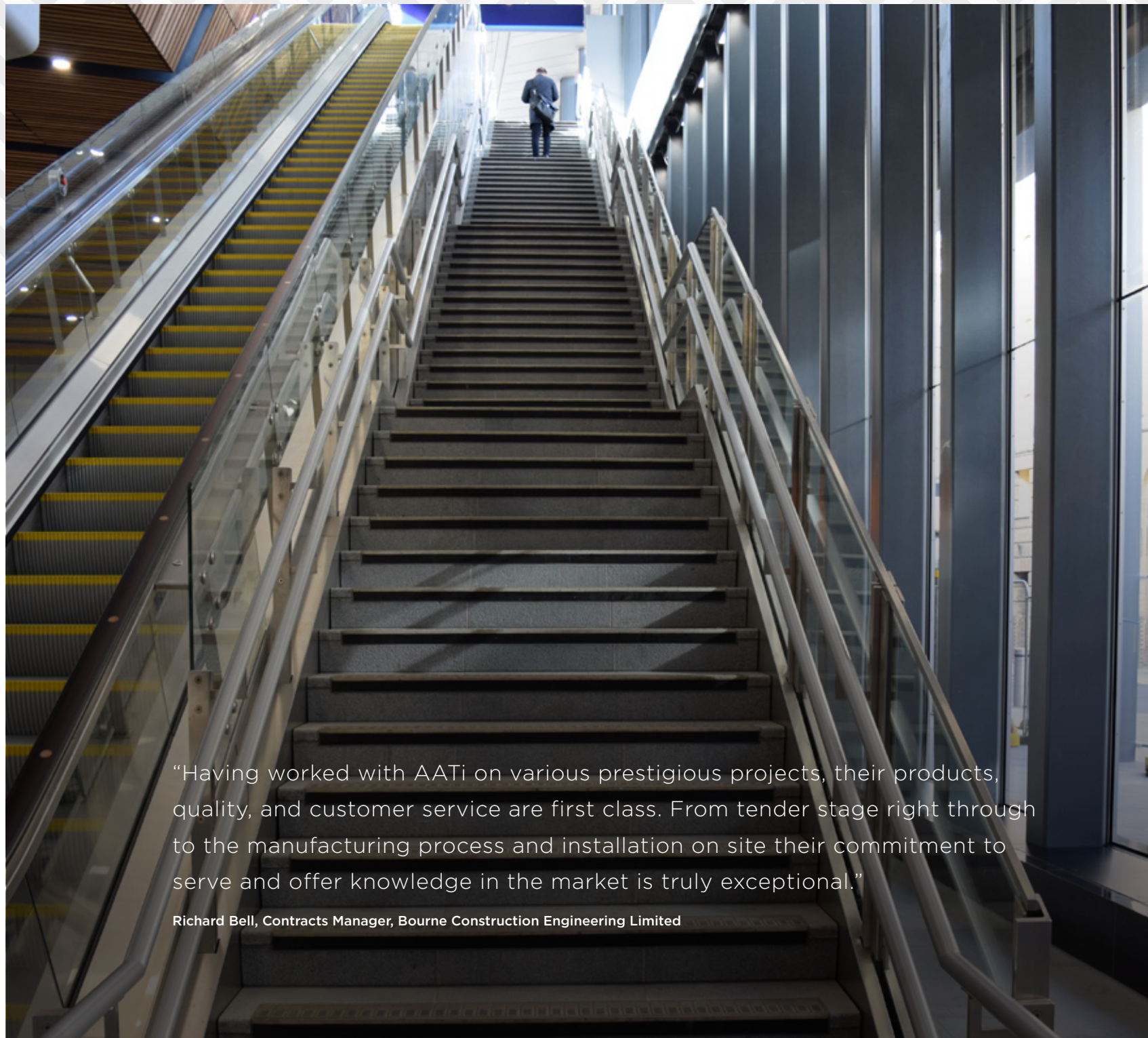
AATi products retain extremely high Slip Resistance Values (SRV) or more commonly referred to as Pendulum Test Values (PTV) in both wet and dry conditions, typically achieving PTV of between 40 & 70 points.

AATi products optimise wet and poor-weather anti-slip performance by easily dispersing water, thawing winter products and cleaning fluids from the foot contact area.

AATi have also developed an extensive range of products to ensure that a suitable colour contrast can be achieved for any application. The Sightline™ and Wideline™ products have been tailor-made to exhibit a wide range of Antislip coloured inserts from the RAL colour chart. AATi can also provide Light Reflectance Values (LRV's) for all plain metal Antislip stair nosing products which are self-coloured. Client safety is paramount.



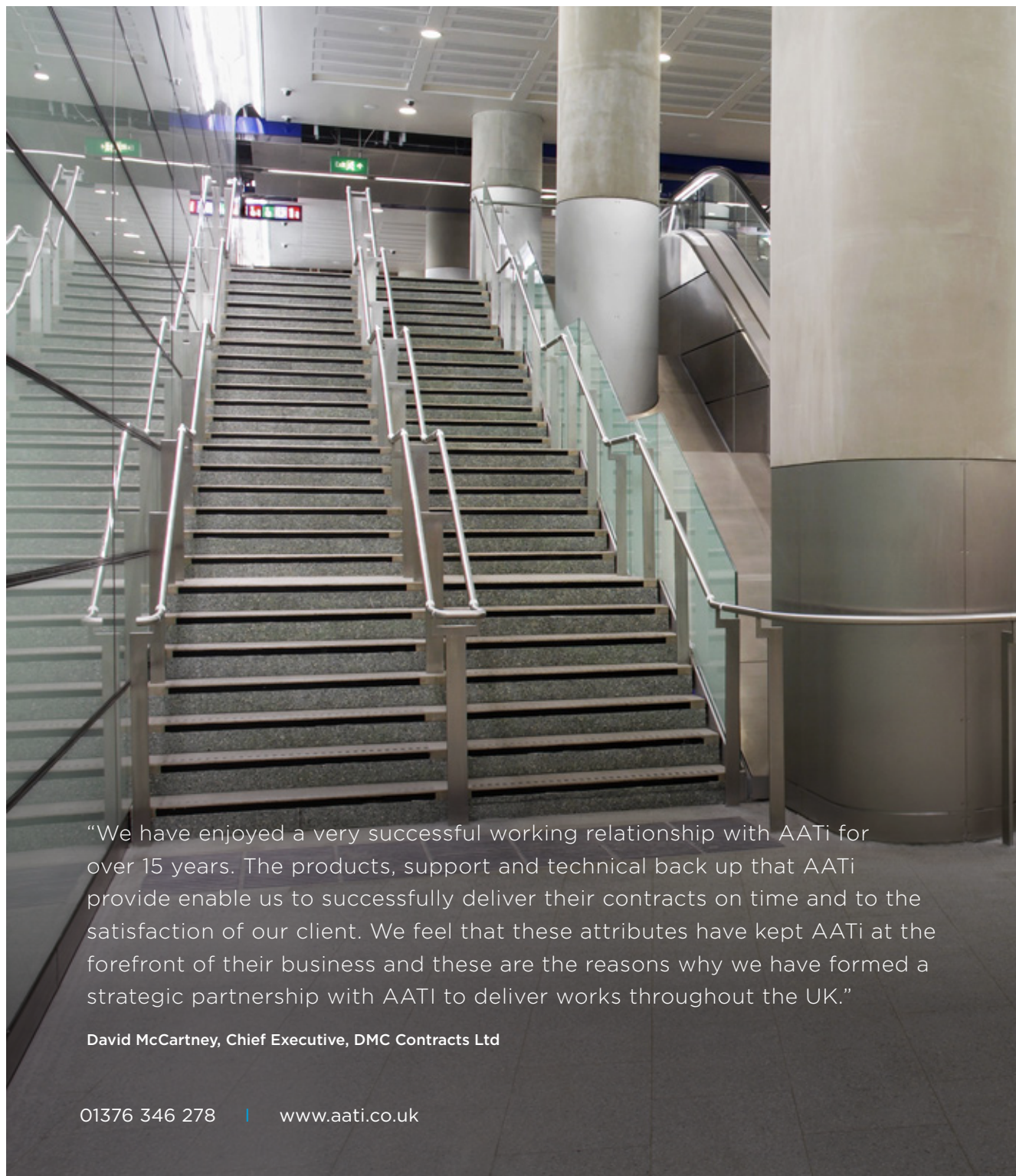




“Having worked with AATi on various prestigious projects, their products, quality, and customer service are first class. From tender stage right through to the manufacturing process and installation on site their commitment to serve and offer knowledge in the market is truly exceptional.”

**Richard Bell, Contracts Manager, Bourne Construction Engineering Limited**

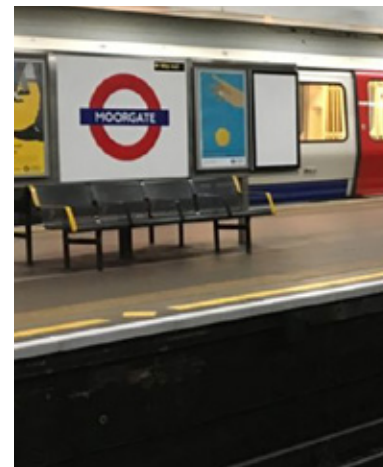
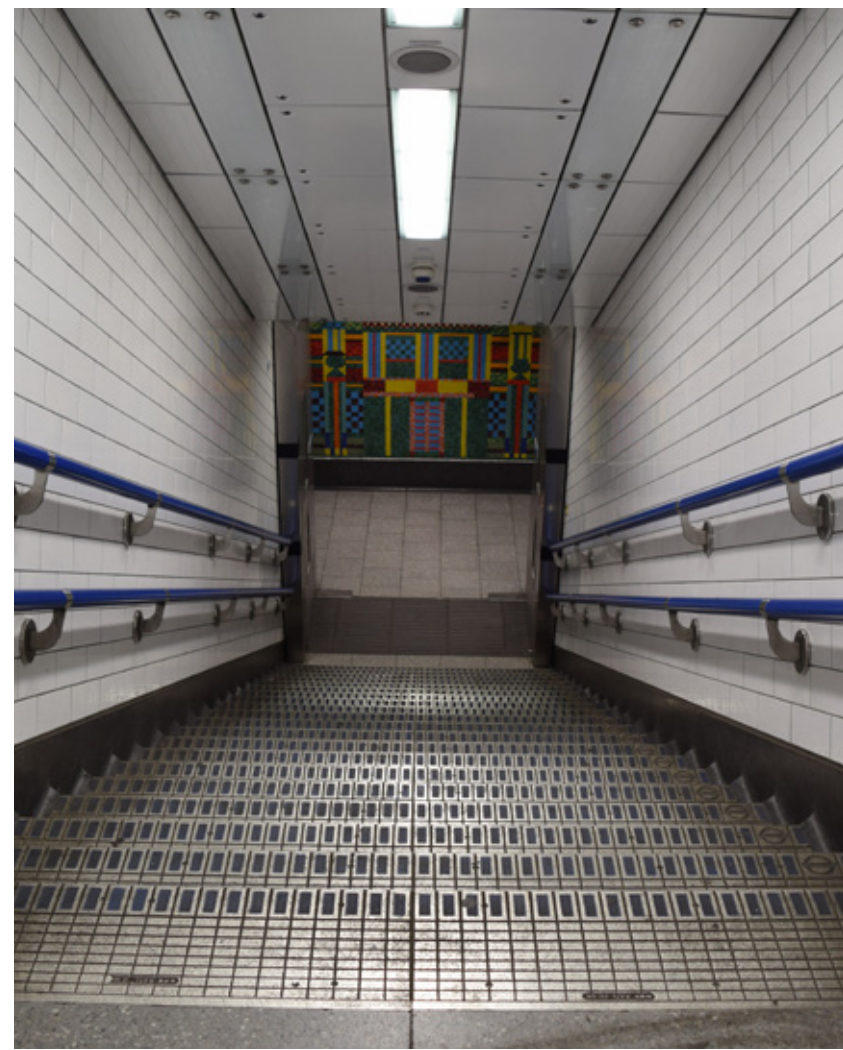




"We have enjoyed a very successful working relationship with AATi for over 15 years. The products, support and technical back up that AATi provide enable us to successfully deliver their contracts on time and to the satisfaction of our client. We feel that these attributes have kept AATi at the forefront of their business and these are the reasons why we have formed a strategic partnership with AATi to deliver works throughout the UK."

**David McCartney, Chief Executive, DMC Contracts Ltd**

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# OUR SERVICE.

## Surveys & Site Visits

AATi engineers and sales staff are available to consult on all technical aspects of product and installation. Where necessary site visits can be arranged, particularly to view and decide upon product selection for particular applications and venues, in accordance with level of footfall or environmental conditions.

## Product Design

Adaptation of existing products, or creating new ones to meet your requirements, means that product design features are not constrained by the extrusion process and therefore standard or bespoke features can be designed into a final product, often with the benefit of 3D CAD visualisation.

## Manufacture

Over 100 current designs are cast, manufactured and finished at our foundry in Braintree which is near Stansted airport. Visitors are encouraged to visit and view the manufacturing procedure and discuss application for current projects. Quality Assurance procedures are run in accordance with current British Standards, and product and raw material traceability is available on request.

## Installation

AATi product that has not been installed in the recommended way may lead to failure or conditions which are not optimum in terms of safety. The company recommends that contractors install to a very high standard and will provide installation advice if requested over and above data sheets which are available on the website or on request.

## Maintenance

A planned cleaning and maintenance programme is crucial to help maintain the performance, visual appearance and to maximise the lifespan of all AATi stair nosings and associated products.

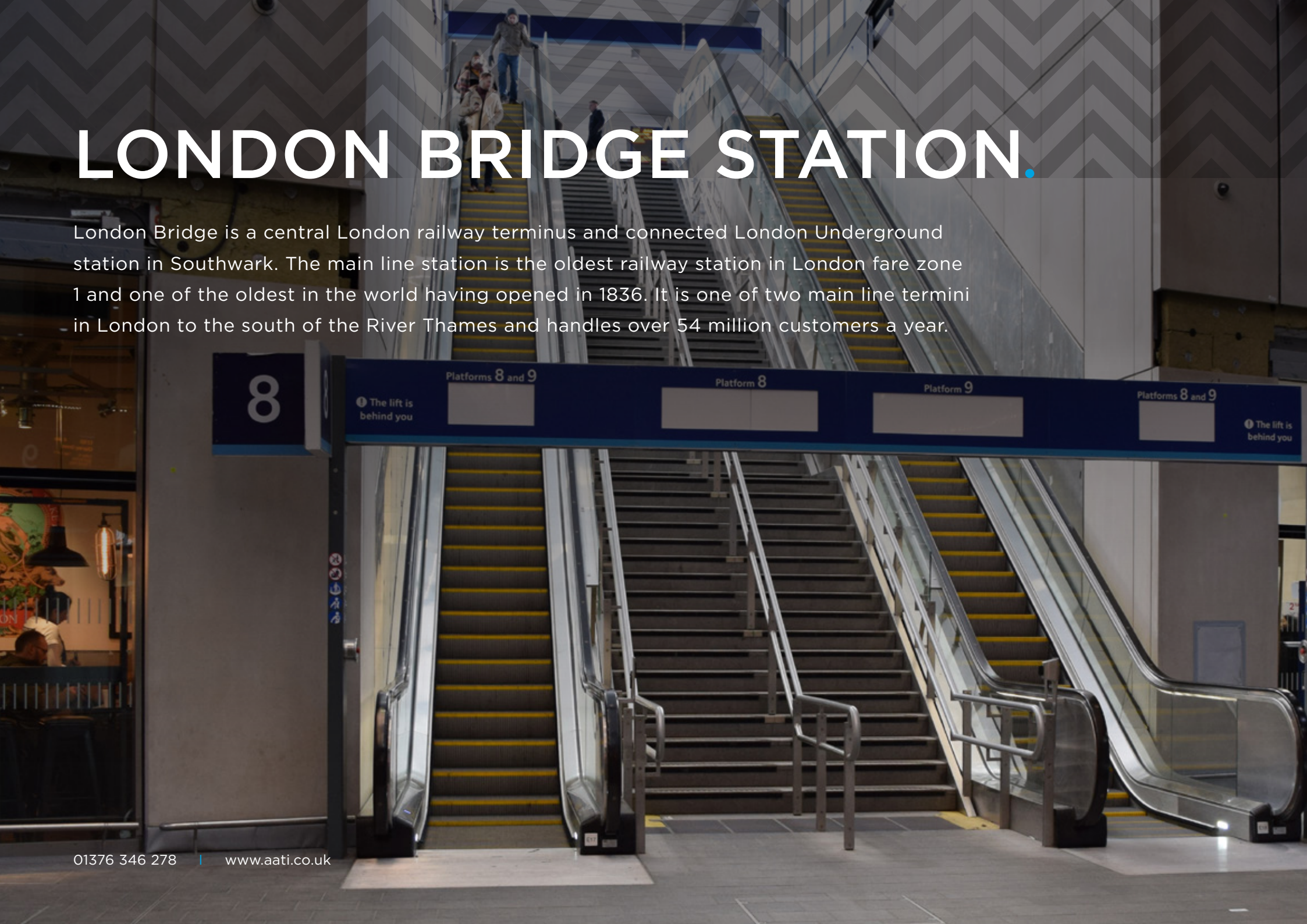
## Recycle Scheme

AATi offer a recycling scheme which helps the environment by reducing carbon footprint. The actions of recycling scrap metal decrease the depletion of natural resources but they also omit other types of pollutants that are produced due to mining activities. There are a lot of toxic gasses that are emitted during mining activities and recycling helps reduce this.



# LONDON BRIDGE STATION.

London Bridge is a central London railway terminus and connected London Underground station in Southwark. The main line station is the oldest railway station in London fare zone 1 and one of the oldest in the world having opened in 1836. It is one of two main line termini in London to the south of the River Thames and handles over 54 million customers a year.





#### CLIENT

Network Rail

#### MAIN CONTRACTOR

Costain & Laing O'Rourke JV  
(COLOR)

#### CUSTOMER

Laing O'Rourke (Vetter UK)

#### FOOTFALL

(PER ANNUM)

Approx. 54 million

AATi supplied a staggering 2500 metres (1.55 miles) of cast metal anti-slip stair nosings for the major re-development at London Bridge Station.

Working closely with Laing O'Rourke to develop a phased delivery schedule in order to hit key milestones during the projects construction from January 2016 right through to December 2017.

Due to the unique ability to manufacture bespoke cast metal products, AATi were on hand to resolve an issue on the project by designing a bespoke nosing to fit around the handrail posts throughout the station.

AATi cast metal anti-slip stair nosings were selected on merit to cope with the enormous foot traffic serving 56 million passengers per annum.







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#### CLIENT

London Underground

#### MAIN CONTRACTOR

Vinci Construction

#### CUSTOMER

DMC Contracts

#### APPROX. INSTALL DATE

1992

#### APPROX. FOOTFALL PER ANNUM

73.66m - 2015

#### EST. TOTAL FOOTFALL

Up to 1694.18m

#### REPLACEMENT DATE

2017

Approximately 25 years ago AATi supplied Cast Gunmetal SN3/HDLT/140 and SN3/HDLT/280 stair nosings to Liverpool Street station. In that time frame you will see from the information on the left that over 1.6bn passengers have entered and exited the station!

As you can see AATi stair nosings offer a very cost effective solution with unrivalled performance when taking into account 'whole of life' costs. AATi nosings are heavy duty cast metal with cast-in Silicon Carbide to the wearing surface whereas other inferior nosing products are generally extruded aluminium or GRP. There are clear savings to be made through not having to buy and install numerous times over this period and also saving on passenger disruption which is key to train operating companies and Network Rail.

AATi supplied new stair nosings type - SN93/SL3/140 and SN93/SL3/280in cast Nickel Bronze as part of station upgrade/refurbishment works.

Due to the ever expanding network, Liverpool Street will accommodate a new line - the Elizabeth Line which forms part of Crossrail.







# LONDON LIVERPOOL STREET.

Liverpool Street station first opened in 1874 and by 1895 it had more platforms than any other terminal railway station in London. Liverpool Street is one of the busiest railway stations in London, serving as the terminus of the West Anglia Main Line to Cambridge, Great Eastern Main Line to Norwich, Stansted Express service to Stansted Airport and other trains serving East London and destinations in the East of England. Not forgetting the integration of London Underground lines; Central, Circle, Hammersmith & City and Metropolitan lines.



# KING CROSS ST. PANCRAS.

Following AATi's long association with LUL, and other major rail developments, bespoke versions of AATi's SN93/SL3/280 stair nosings with plain ends and landing plates all cast in Nickel Bronze were specified for the many stairs at St. Pancras Thameslink (as pictured right) along with other various products. The castings were all made and cut to specific widths & lengths, the coloured resin fill was stopped short at the ends to satisfy the architects exacting details.





#### CLIENT

Network Rail

#### MAIN CONTRACTOR

Balfour Beatty

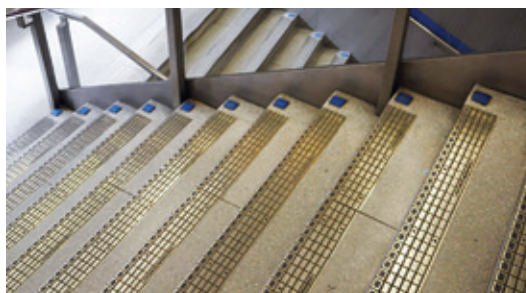
#### CUSTOMER

DMC Contacts  
& McNealy Brown

Bespoke nosings were also made for King's Cross Northern Ticket Hall which also included a fan shaped stair. This is an example of the "Sightline" product range developed by AATi to meet the requirements of the London Underground.

AATi is part of the FSE Group (Finch Seaman Enfield Group Ltd) of companies who manufacture and supply Cast Metal Products for the engineering and construction sectors. The product range includes sand castings, antislip metal steps and safety surfaces.

Historically the group was well known for fine art sculpture castings and most famously 'The Meeting Place' or more commonly known as the Embracing Couple statue. Designed by Paul Day, the statue is a staggering 9 metres high and lies within the heart of the station, it can be seen from almost any location and even when exiting the Eurostar!







#### CLIENT

TFL (DLR)

#### CUSTOMER

T J Civil Engineering Limited

#### FOOTFALL (PER ANNUM)

Pontoon Dock

**1.1 million**

West Silvertown

**2 million**

Westferry

**6 million**

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AATi worked closely with T J Civil Engineering Limited to develop a strategic and durable solution for DLR. Both parties ensured all project deliverables were met as DLR is an operational light rail system, and must remain operational at all times whilst the alteration works are carried out.

The requirements included all of the existing nosings to be carefully removed and replaced with AATi SN293/WL/57 in Nickel Bronze with coloured inserts.

Cast in silicon carbide particles ensure safe performance in wet or dry conditions and suitable for many applications including heavily used public stairways requiring high performance; London Underground, DLR and Light Rail Stations.



# DOCKLANDS LIGHT RAILWAY (DLR).



The Docklands Light Railway (DLR) is an automated light metro system opened in 1987 to serve the redeveloped Docklands area of East London. With 45 stations across 7 lines and enjoying its 30 year anniversary, the DLR carried an average of 340,000 passengers per day, approximately 122.3 million passengers per year.



# TOTTENHAM COURT ROAD.

Tottenham Court Road or as its more commonly known TCR, is largely one of the busiest London Underground stations with 39 million passengers in 2016. Due to the sheer volume of passengers, this lead to overcrowding at the station in peak times, so in mid - 2010 TCR drastically reconstructed and upgraded to relieve congestion but also kept future developments in mind.



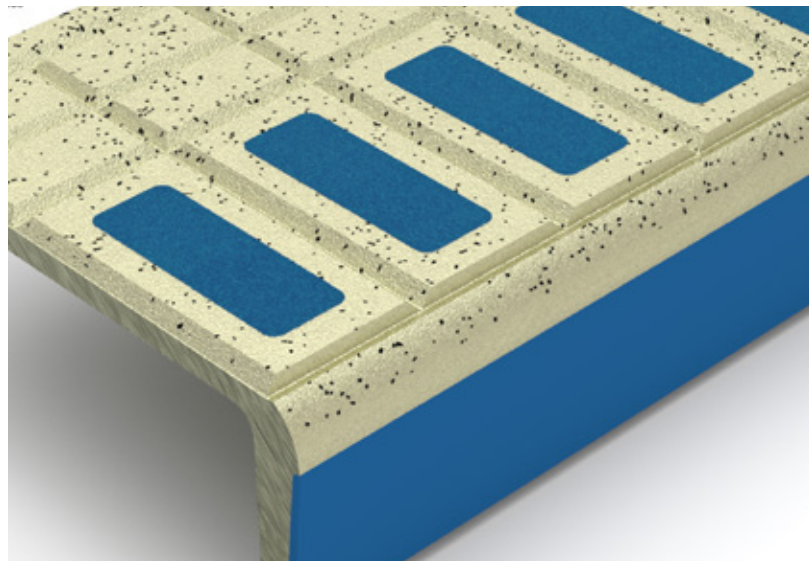


From April to November 2011 the Northern line platforms were closed for structural upgrade works and Northern line trains ran non-stop through the station.

In January 2015 until December 2015, the Central line platforms were closed, meaning Central line trains did not stop at the station. On 12 January 2015, the first part of the new ticket hall opened for the first time.

Further improvements consisted of larger ticket hall entrances, direct routes for commuters travelling to the Central or Northern Lines and the restoration of Paolozzi vibrant mosaics at the station that are widely considered to be one of the most spectacular examples of post-war public art.

AATi have supplied Cast Metal Anti-slip Stair Nosings from 2011 throughout the renovations and finally finished supplying towards the end of 2016. The final staircases to be installed connected the existing London Underground lines to the new Crossrail Elizabeth Line.



#### CUSTOMER

London Underground

#### MAIN CONTRACTOR

Vinci Construction

#### CONTRACTOR

DMC Contracts

#### FOOTFALL (PER ANNUM)

39 million





## CLIENT

London Underground

## FOOTFALL (PER ANNUM)

Approx. 28 million

Moorgate Station was long overdue modernisation to various areas of the station including platforms, stairways and the ticket office.

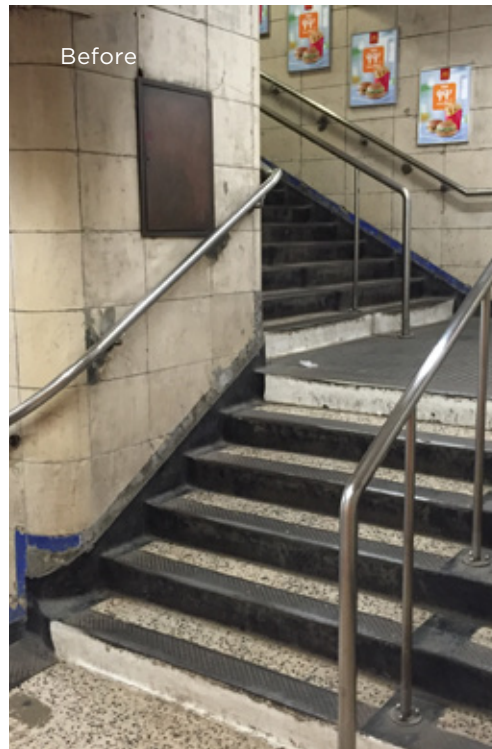
AATi supplied Tri Contracting Services Ltd with their extremely hard wearing; building reg. compliant cast metal anti-slip stair nosings to help with the station renovation. The preceding stair nosings had been installed in the early 1990's in Cast Iron.

The new modern stair nosings supplied were AATi type SN93/SL3R/140 and SN93/SL3R/280, both including the London Underground roundel. As you can see from the pictures before and after what a difference the new AATi nosings have made!

The new stairways provide a safe and visually contrasting stair nosing for all passengers, especially for those with impaired sight helping them recognise the edge of the step.



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Before



After





# MOORGATE STATION.

Moorgate is a central London railway terminus and connected London Underground station on Moorgate in the City of London. The station was opened as Moorgate Street in 1865 by the Metropolitan Railway and today it has an annual footfall of approximately 28 million. AATi worked closely with London Underground engineers to overcome a detailed staircase design for Moorgate station.



# VICTORIA STATION.

Victoria Station is a central London Railway terminus and is also known as London Victoria. This station is the second busiest station (after Waterloo) in London with over 81 million passenger entries and exits in 2015/16. Combined with the Underground Station and interchanges in the national rail station, London Victoria handled approx.170 million passengers in 2015.



#### CLIENT

London Underground

#### MAIN CONTRACTOR

Taylor Woodrow  
& Vinci Construction

#### CUSTOMER

DMC Contracts  
& Tri Contracting Services

#### FOOTFALL

(PER ANNUM)

81 million

Operationally the two main line termini are split between platforms 1-8 serving the South Eastern rail links and with platforms 9-19 attending to Southern and Gatwick Express services to Surrey, Sussex and Gatwick Airport.

The underground station serves the Circle and District lines with the area around the station being an important interchange for other forms of transport including; Victoria Coach Station and the local bus station in the forecourt.

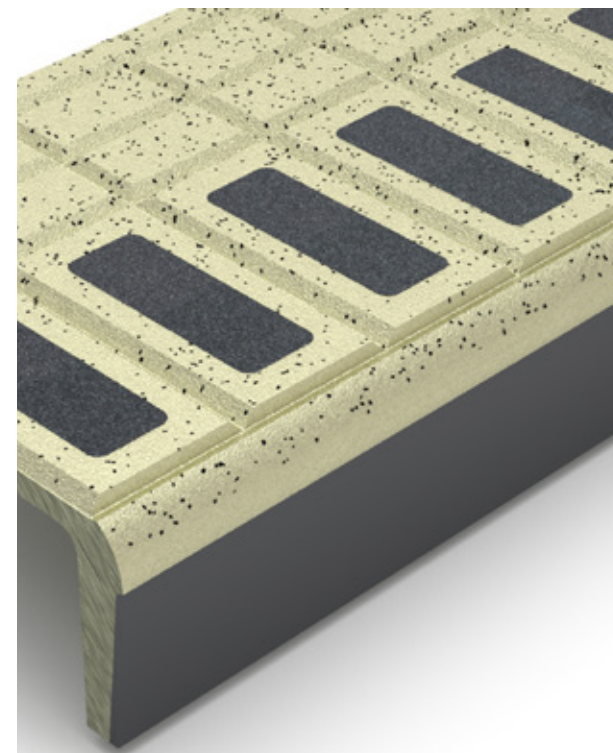
AATi supplied anti-slip stair nosings throughout a phased series of upgraded works starting from April 2015 until January 2018.





# STRATFORD STATION.

Stratford Station interchanges with various railway lines including London Underground, London Overground, Docklands Light Railway (DLR) and is also a National Rail terminus.

A photograph of the iconic London Underground roundel sign for Stratford Station. The sign features a red circle with a white border and a blue rectangular bar across the center with the word "STRATFORD" in white capital letters. It is mounted on a metal post in front of a grey metal fence.

STRATFORD

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## CLIENT

TFL

## MAIN CONTRACTOR

Hochtief & Skanska

## CUSTOMER

DMC Contracts

## FOOTFALL (PER ANNUM)

London Underground

**67 million**

DLR **17 million**

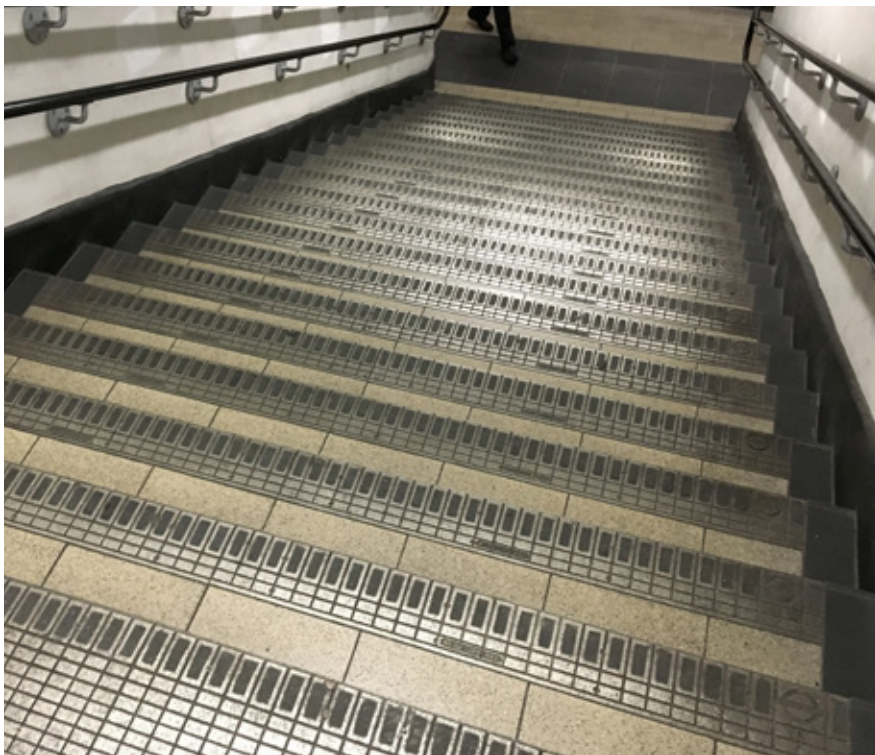
Network Rail **41 million**

With a successful reputation for the hardest wearing anti-slip stair nosing on the market, London Underground was under no illusion when selecting AATi products to cope with the increasing passenger footfall.

Some 8 years ago AATi supplied DMC Contracts with the high quality nosing combination, consisting of type SN93/SL3/140 and SN93/SL3/280, both in Cast Nickel Bronze.

After a recent survey of the station, the nosings are still performing to an exceptional standard all these years on.





#### CLIENT

London Underground

#### MAIN CONTRACTOR

TRI Contracting  
Services

#### FOOTFALL (PER ANNUM)

Approx. 4 million

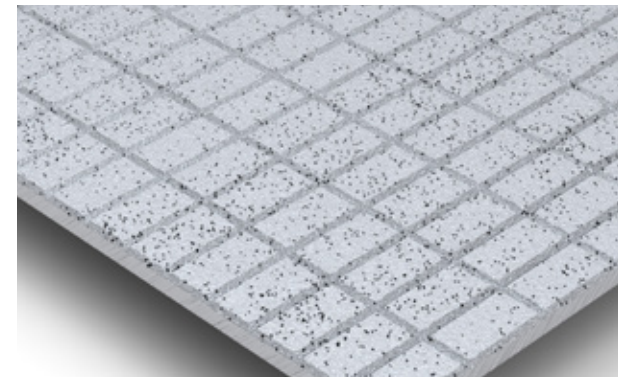
The unique spiral staircase required great attention to detail and design input from AATi, finding the right balance between practicality and functionality was key.

The curved steps required anti-slip material for the whole step and landing, AATi offered an anti-slip stair nosing and an anti-slip floor plate combination for the entire staircase. The products used were AATi type: SN93/SL3/140 anti-slip stair nosing and bespoke versions of the anti-slip floor plate: FP1/301. With several different angles AATi produced bespoke angled plates to suit. The Unique grooves from the SL3 design matched throughout the curvature completing a seamless design from top to bottom.

AATi have product design facilities and utilise the latest technologies from 3D CAD design to CNC machining and 3D printing.

# HOLLAND PARK STATION.

Holland Park is a London Underground station, on Holland Park Avenue. It is served by the Central line, lying between Shepherd's Bush and Notting Hill Gate stations and named after Holland Park, a park in west London which also refers to the residential area to the north of the park.







AATi Rail Ltd

11 Swinborne Drive  
Springwood Industrial Estate  
Braintree  
Essex  
CM7 2YP

Telephone: (+44) 01376 346278 | (+44) 01376 346666

Fax: (+44) 01376 348480 | Email: [info@aatil.co.uk](mailto:info@aatil.co.uk)