

DERBY: ENGINEERING THE TWENTIETH CENTURY



Saturday 2nd September
9.15am – 5.00pm
The Twentieth Century
Society is a registered charity.

Above image: the former
British Rail Technical Centre,
now RTC Business Park.

Schedule

- 9:15am Meet outside Derby Station, beside the Midland Railway emblem
- 9.30am Begin City Centre Walk, taking in Midland Railway and interwar commercial development
- 10.15am Internal Visit: Art Gallery, look at Joseph Wright collection
- 11.00am Walk around the C.H.Aslin's civic ensemble
- 11.30am Internal Visit: Crown Courts
- 12.00am Lunch
- 1.00pm Board Bus at Derby Cathedral
- 1.15pm Internal Visit: Fresh Logistics, (former Olivetti building), Downing Road
- 2.00pm External Visit: Rolls Royce Marble Hall, 80 Nightingale Rd
- 2.30pm External Visit: Rolls Royce, Moor Lane
- 3.00pm External Visit: RTC Business Park (former British Rail Technical Centre), London Road
- 3.30pm Internal Visit: Derby Conference Centre (former LMS Transport School), London Road
- 4.00pm Refreshments provided by Derby Conference Centre
- 4.30pm Return to Train Station

Lunch

Lunch will not be provided but there will be an hour for lunch, and the following are recommended: The Exeter Arms Pub, Exeter Place; The Pyclet Parlour, Market Hall; Quad, Market Place; The Tap, 1 Derwent St. All locations on denoted with an 'L' on map 3.

Refreshments

Tea, coffee, biscuits and sandwiches will provided at the end of the tour, a the former LMS Transport School

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Midland Railway coat of arms at Derby station. The six quarters represent Birmingham, Derby, Bristol, Leicester, Lincoln and Leeds. The crest is a wyvern, said to be derived from the Leicester and Swannington Railway and also thought to be a symbol of the Kingdom of Mercia.



London Rd and Osmaston Road, shops designed by Sir Fredrick Bennett, 1934

Introduction

“Derby’s contribution to the national heritage has, appropriately enough, been concerned less with culture than with industrial endeavour and innovation.”

R. H. Osborne.

In the early twentieth century Derby town council pursued a policy of attracting new industry with low cost municipal energy. This successfully attracted Rolls Royce, who are today the largest engineering company in Britain, and the only one capable of delivering power for land, sea and air. The company’s progress was marked on the western side of the city, with Marble Hall (1912, 1938) and the Rolls Royce Engineering Centre (1961-8, Fry, Drew & Partners). Partly thanks to Rolls Royce, Derby’s growth during the interwar period was considerable, necessitating a significant improvement plan by the Borough Architect C. H. Aslin, (including law courts, police station, council house, swimming pool, gardens, housing), and commercial rebuilding. Derby gained city status in 1977, and The Assembly Rooms (1971-6, Casson, Condor & Partners), and Quad Arts Centre (2004-8, Feilden Clegg Bradley), are reflective of that continued ambition.

Yet Derby has often been conveniently sited for other industries too, in the nineteenth century it was home to the Midland Railway company, which was later submerged into the LMS and British Rail. The LMS Transport School (1937-8, W. H. Hamlyn), and BR Railway Technical Centre (1964, Dr F. C. Curtis with A. H. Cantrell), were billed by their propagators as the biggest and best in the world. Today, despite a relative decline in railway engineering, Derby is currently home to Bombardier, the only place in the UK able to design, manufacture, assemble and test new trains for domestic and export markets. Derby’s central location was also key in the siting of Olivetti’s regional offices (1970-1, Edward Cullinan), recently described by Hugh Pearman as a ‘pioneering building’ with its ‘rakish kit-of-parts plywood superstructure’.

In a negative sense the subservience of the town to its industries can be witnessed in its belligerent road engineering and negligent approach to conservation. But this is also an historic county town with a medieval street pattern, and many good buildings from the age of enlightenment onwards. In fact Derby’s contribution to the modern era and scientific thought has been significant, including the works of Erasmus Darwin, John Flamstead, Herbert Spencer and J.A. Hobson. The 1963 modernist art gallery and museum extension (by Borough Architect T. W. East) houses the most extensive collection of paintings by Joseph Wright – a late eighteenth century artist most notable for his depiction of science and industry.

References

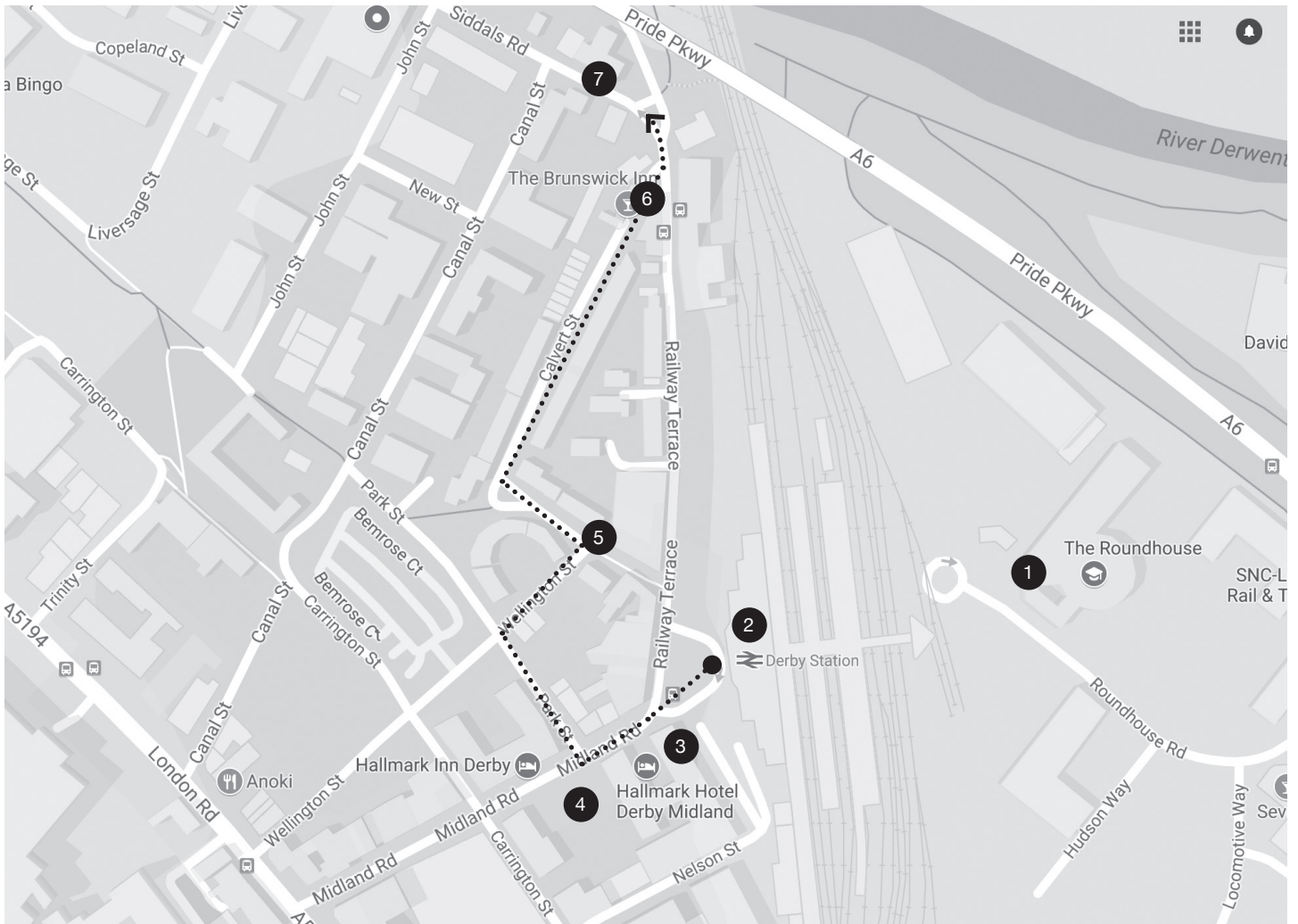
- David Lawrence, *British Rail Designed 1948-97*, Crecy, 2016
Colin J. Marsden, *Modern Railways Special: Derby Railway Technical Centre*, Ian Allan, 1989
Clare Hartwell, Nikolaus Pevsner & Elizabeth Williamson, *The Buildings of England: Derbyshire*, Yale, 2016
R. H. Osborne, ‘Derby’, in *The British Association for the Advancement of Science, Nottingham and its Region*, 1966, p.45
Kenneth Powell, *Edward Cullinan Architects*, John Wiley & Sons, 1995



Derby Cathedral at the head of Iron Gate, Derby city centre



William Rogerson’s map of Derby, 1819, a county town on the eve of the railway age



City Centre Walk I: The Midland Railway

1 Locomotive Works

- Roundhouse (now Derby College)
- 1839 by Robert Stephenson
- Housed turntable for movement of locomotives and rolling stock
- Clock tower added 1850

2 Derby Station

- Derby was one of the most important railway centres
- North Midland, Birmingham & Derby, and Midland Counties Railway shared facilities at their Derby junction
- Francis Thompson designed the celebrated Trijunct Station on 1839-41, Italianate facade
- Cast iron shed by Robert Stephenson
- Demolished and re-built 1985 (modified 2007-9)
- Pediment & clock mounted in a wall in the car park

3 Midland Hotel

- Francis Thompson, 1840-1, renovated 2009
- Earliest surviving railway hotel built with a station
- By separate company but later bought by Midland Railway

4 Midland Railway War Memorial

- 1921, Sir Edwin Landseer Lutyens (1869-1944), Midland Road
- Portland stone, Catafalque on high pylon
- Grade: II* Listed
- The memorial comprises a 10m tall cenotaph in Portland stone. On top of the cenotaph an unknown soldier, partially



The Midland Railway War Memorial by Edwin Lutyens

covered with a greatcoat and with a Brodie helmet and bayonet at his feet, lies on a catafalque mounted on the heads of four lions. Beneath, to either side, is the Midland Railway Company's coat of arms set within a wreath.

- Lutyens designed 58 extant memorials at home and abroad including the Cenotaph in Whitehall

5 Railway Institute, Railway Terrace

- 1892, Charles Trubshaw, Midland Railway's chief architect
- Red brick, buff terracotta dressings
- Brunswick Inn originally a shop

6 Railway Workers' Housing, Railway Terrace

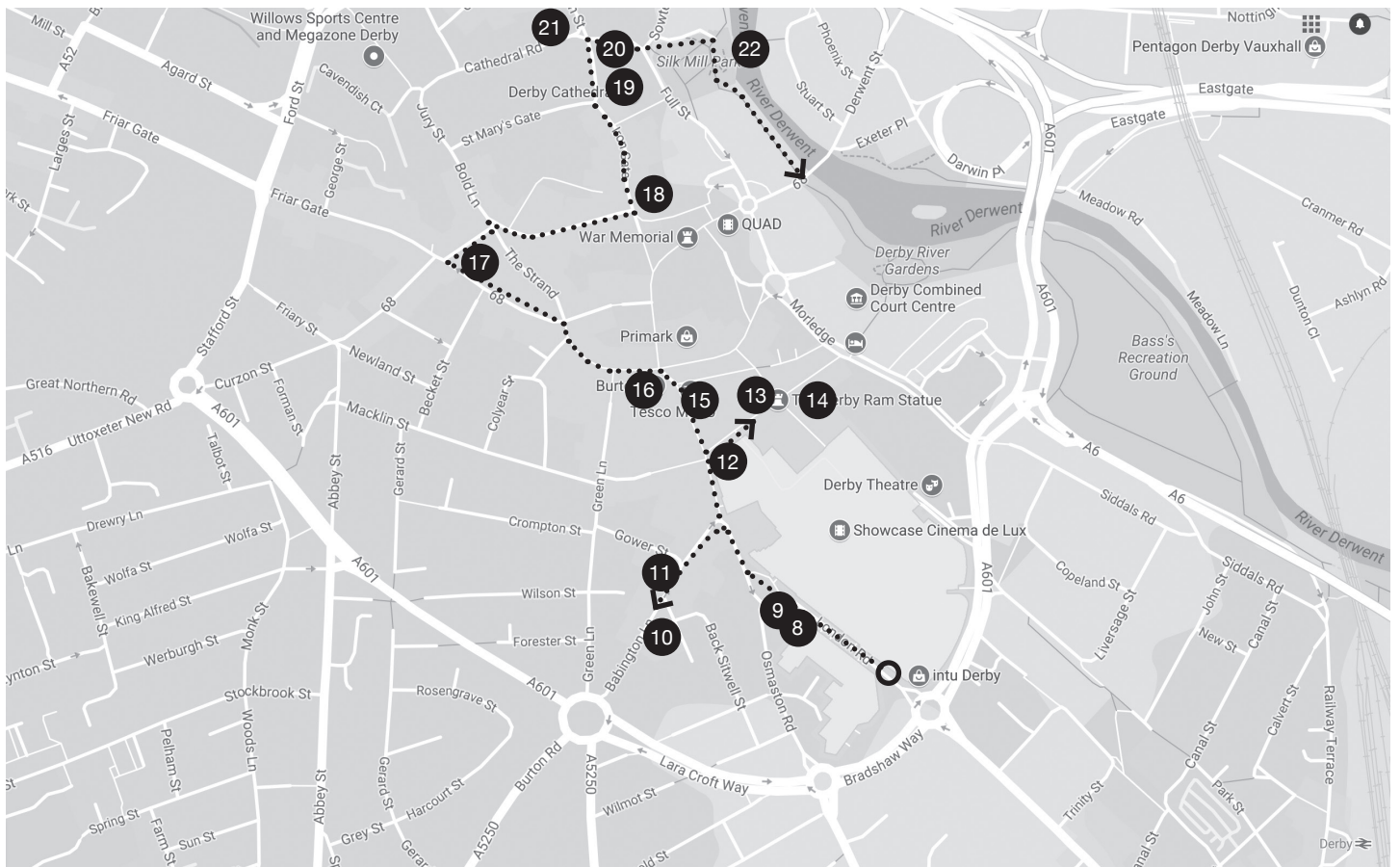
- Francis Thompson, 1840
- Considerable settlement, only Wolverton of similar scale
- Brick terraces with triglyph lintels over the doors

7 Enginemen's Lodging House, Siddals Road

- 1872, possibly by J.H. Sanders



Railway Workers' Housing, Railway Terrace



City Centre Walk 2: Commercial

8 Gaumont Cinema, London Road

- Former super cinema now restaurant, 1934
- Design by B. E. Jay
- Concrete framed, brick relief panels of dancers
- Now Cosmo

9 London Rd and Osmaston Road corner,

- Shop front, bold curves, Sir Fredrick Bennett, 1934

10 Babington Lane, Progressive Buildings

- 1939, moderne, patron?, architect?

11 Babington Lane & Gower Street

- Hunters Furniture, Interwar?, Architect?
Naylor, Sale and Widdows?

12 Former Boots (Costa)

- St Peter's St / East Street, Grade II Listed,
A. N. Bromley, Tudor
- Dated 1912, stucco, gables, Venetian windows
- Small statues of local worthies by Percy Morley Horder
- Extension 1936-7 by P. J. Bartlett of Nelson, Cartwright &
Waumsley.

13 The Co-opertive, Exchange Street

- Curved moderne
- 1938, Sidney Bailey, inspired by German modernist buildings

14 Regal Cinema, East Street

- George Cole, 1935
- Extension 2007 by Montague Associates, to form stop &
offices

15 Tesco Metro, St Peter's Gate

- Originally Marks and Spencer's
- R. Lutyens, 1936-7, strong horizontal lines, fluted mullions,
wavy lines

16 Burtons, St Peter's Gate

- Typical Burton, 1933

17 Art Gallery Extension

- 1960s, Borough Architect, T. W. East
- With paintings by Joseph Wright of Derby
- Library in Ruskinian Gothic style, by R. Knill Freeman of
Bolton, 1876, grade II listed
- Original gallery by J.S. Storey of Derby, 1883, grade II listed

18 Market Place & Irongate corner

- Former Department Store, next to the civic centre
- Shop fronts, 1923-4, Naylor, Sale and Widdows

19 Derby Cathedral

- Tower rebuilt 1520-1532, the rest rebuilt 1723-5 by James
Gibbs and similar to St Martin-in-the-Fields, London
- Of high architectural quality, Grade I Listed, see additional
notes attached

20 East Midlands Electricity Board Switching Station

- Sowter Road, 1963-91 Peter Coake
- Stepped brick perimeter, essentially a screen wall
- Groups well with the Industrial Museum

21 Cathedral Rd / Queen Street Commercial Buildings,

- C. H. Aslin, 1931-4
- Offices and shops with good detailing
- No 27-28 by T.H. Thorpe, re-fronting of C17 Flamstead
family house

22 Cathedral Footbridge

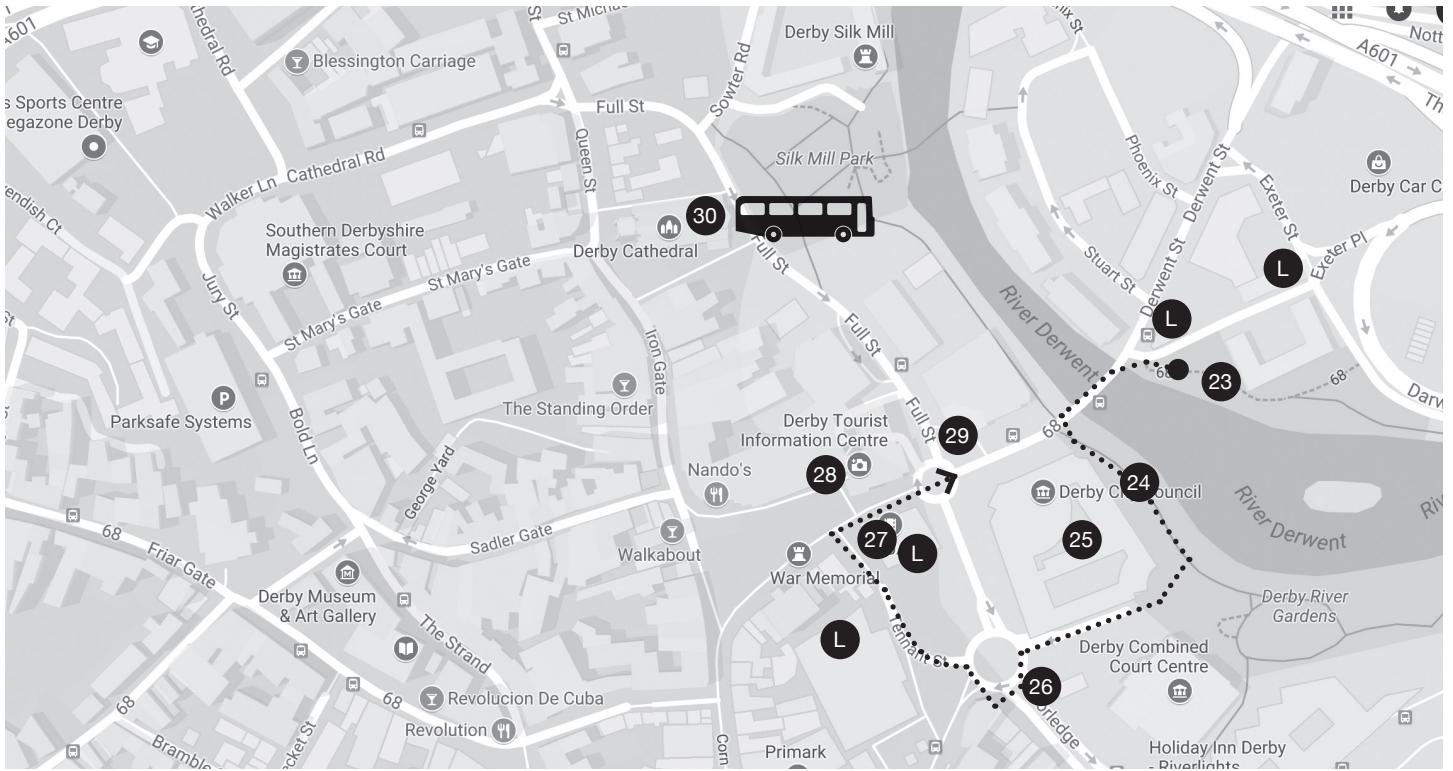
- 2009, by Ramboll UK Ltd
- A cable-stayed swing bridge with one leaning mast and only
three stays



Marks and Spencer's by R. Lutyens,
1936-7



The Co-opertive, Exchange Street,
Sidney Bailey,, 1935



City Centre Walk 3: Civic

23 Exeter House, Exeter Place

- C. H. Aslin, 1929, Derby's first municipal flats, worn well,

24 Riverside Gardens

- Between Exeter Bridge and Holme Bridge, 1933, C. H. Aslin
- Part of the Council House scheme
- Flights of shallow steps follow the curve of the river
- Sculpture: Boy & Ram, bronze by Walter Dudeney, 1963

25 Council House

- Council House, Corporation Street, 1938-41 and 46-7, by Borough Architect C. H. Aslin, as part of central improvement scheme of 1932, Neo-Georgian
- Incomplete in 1939, the design was modified after the war
- Fine brown brick, stone dressings, giant portico facing the roundabout
- c18-style detailing with convex corners to the four ranges round a courtyard
- Restored & Remodelled 2011-12 by Corstorphine & Wright, a full height glazed screen was created on the west side, and courtyard remodelled to create a central hub

26 Morlege, Cafe,

- former Derby open market Entrance?
- C. H. Aslin?, 1931-4?
- Nearby was C. H. Aslin's bus station with island platforms, 1933, moderne, demolished and replaced by Riverlights designed by Fairhursts Design Group, 2010

27 Quad Arts Centre

- 2004-8, Feilden Clegg Bradley
- Cinema, exhibition, workshop spaces and cafe, Refreshments
- Steel framed, clad in stone in the form of interlocking shapes, with angled and corner openings
- Clare Hartwell, 'from the south the building looks as if it were topping on one side, the stone cladding following the line of trajectory'



Council House, Corporation Street, 1938-41 and 1946-7

- Glazed panels on North West entrance by Alexander Beleschenko
- The massing responds to the civic centre

28 Civic Centre

- Assembly Rooms, Civic Centre, 1971-6, Casson, Condor & Partners in association with the Borough Architect W.I.N.G. Doig, damaged by fire 2014.
- On site of mid-c.18 Assembly Rooms, controversial demolition
- James Stirling designs sloping glass wall around the Market Place which would have propped up the C18 facade
- Casson's design for the Civic Centre comprises multi-storey car park, two halls (one tiered for concerts), small internal court
- Cantilevered facade with covered walkway
- Brown brick, concrete, tinted glass, aluminium
- Clare Hartwell, 'fails to give the Market Place, as the centre of the town, any sense of visual climax, while the massing is alien to the scale of the other buildings'.



Derby Civic Centre, 1971-6, Casson, Condor, Market Place

29 Magistrates Court and Police Station

- Full Street, 1932-4, C. H. Aslin, as part of same scheme for which included the Council House
- Neo-Georgian exterior, Brown brick, stone dressings, bronze metalwork detailing
- Panel with relief of policeman directing traffic
- Expansive front to the river with elongated urns on top
- Plan is in the form of a quadrangle, with court rooms placed diagonally in the centre, letting light in on the sides
- Inside is a grand stair leading up to the entrances to the courts, all treated in a curvaceous moderne style and there is plenty of original detail such as the metalwork stair balustrade, fancy caps to the pilasters and scale-pattern lighting and ventilation panels.
- Converted to Derby Local Studies Library and private offices 2014-15
- Grade II Listed, 2000
- Cell block largely original, with white glazed brick lining throughout. This building is an important element of a major municipal redevelopment scheme, carried out between 1932 and 1949.



Detail from the interior of the Magistrates Court and Police Station, 1932-4, C. H. Aslin

30 C20 Work at Derby Cathedral, Notes by Ian Wells

Given the nature of the other buildings to be visited today, Derby Cathedral might seem a strange bedfellow for them. But it is worth certainly a quick look inside to see what the twentieth century did for the building.

A pre-Conquest collegiate foundation (ie run by a College of canons rather than by monks), the church was rich enough by 1520 to begin the glorious tower we see today, its master mason being John Otes who had worked with John Wastell on the chapel of King's College Cambridge.

After the Reformation responsibility for the church passed to the town council, which by the early eighteenth century they clearly were not carrying out, so much so that the incumbent, Dr Hutchinson, commissioned some Irish navvies to remove the chancel roof, thus forcing the council's hand regarding maintenance.

The nave of the building we see today was constructed by the Smiths of Warwick under the direction of James Gibbs, and completed in 1725. A Victorian restoration by one Julian Young

saw the removal of most of Gibbs's furnishings, including the nave pews (their height is clearly visible by looking at the nave columns); there was further work by Temple Moore, notably a pulpit with later tester by Comper, who also did the sedilia, and who may have done the plaque commemorating the arrival of Bonnie Prince Charlie in 1745 (contrary to popular belief his followers did not celebrate High Mass in the building, which would have interested the church's Catholic architect, but did assemble to say prayers prior to their retreat north).

In 1927 All Saints' church was raised to cathedral rank and designs were sought from Sir Ninian Comper. These appeared in 1939, not the best time for new building work, especially in a town busily producing engines for Spitfires. However the organ was rebuilt. A picture shows the instrument which stood on the west gallery from 1807 (with an earlier case) till 1939, and a design was made for a case with a similar vertical emphasis to replace it. The rebuilt and enlarged organ was the work of Compton's, a firm mostly by then producing cinema organs but able to build organs whose electrical arrangements made one stop do the work of several. Such instruments were to be found at Downside Abbey, the BBC concert halls at Broadcasting House and Maida Vale, and Wakefield Cathedral. Their consoles, like that at Derby, had what appeared to be stops; these however, instead of being pulled out when required, functioned as push-buttons and lit up when "on". This arrangement was kept at Derby in 1992 when the organ was rebuilt and modernised and the console made mobile so that it could be wheeled out in front of the screen for recitals.

The internal arrangements of the organ made it impossible to present a display of pipes; the similar problem at Downside was solved by Sir Giles Gilbert Scott's screen using the same designers who made the contemporaneous choir stalls in the abbey.

At Derby, some thirty years after the original installation, a Gothick screen with a horizontal rather than vertical emphasis (to conceal what lay behind) was designed by Comper's son Sebastian, who following his father's death had taken over the commission. He also set about the east end, which until then had culminated in a Venetian window like that at Gibbs's church of St Martin in the Fields, which has (or had) several resemblances to Derby Cathedral, where the east window was removed and the chancel extended with baldacchino in the centre and retrochoir behind with small organ in the apse; following Sebastian Comper's retirement this work was completed by Anthony New of the Seely & Paget Partnership. Since the site slopes at the east end a Song School and other offices were created at this point (elegantly if precariously visible from the urban motorway which passes that end of the cathedral).

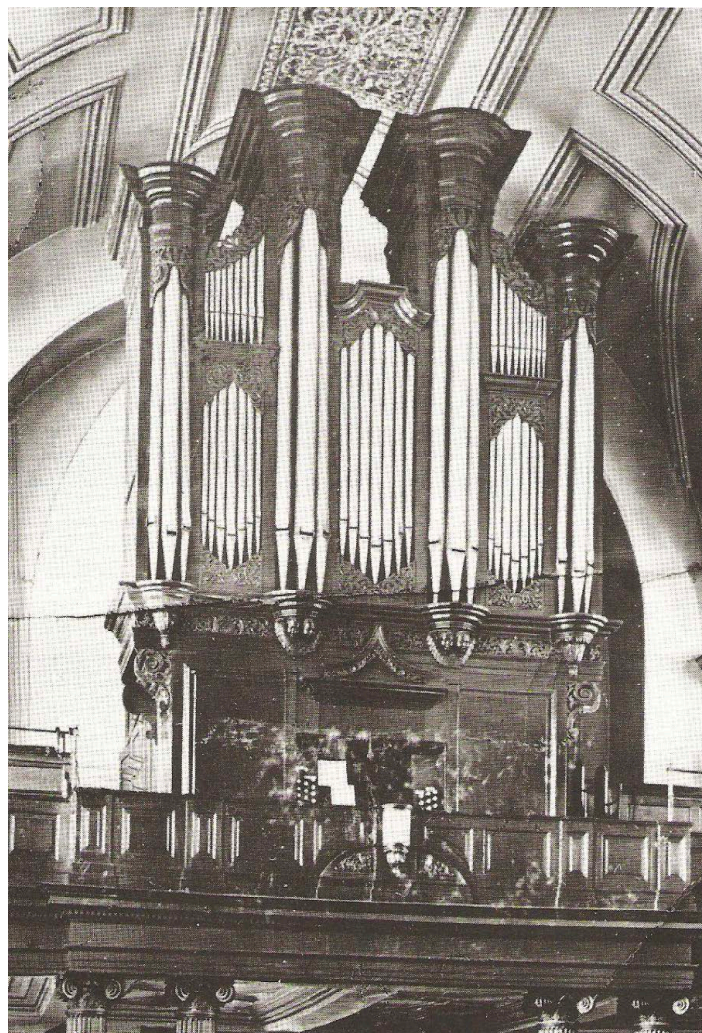
Should this work be considered "retro", do admire the two windows by Ceri Richards at the east end of each aisle, completed in 1967 and made by Patrick Reyntiens.

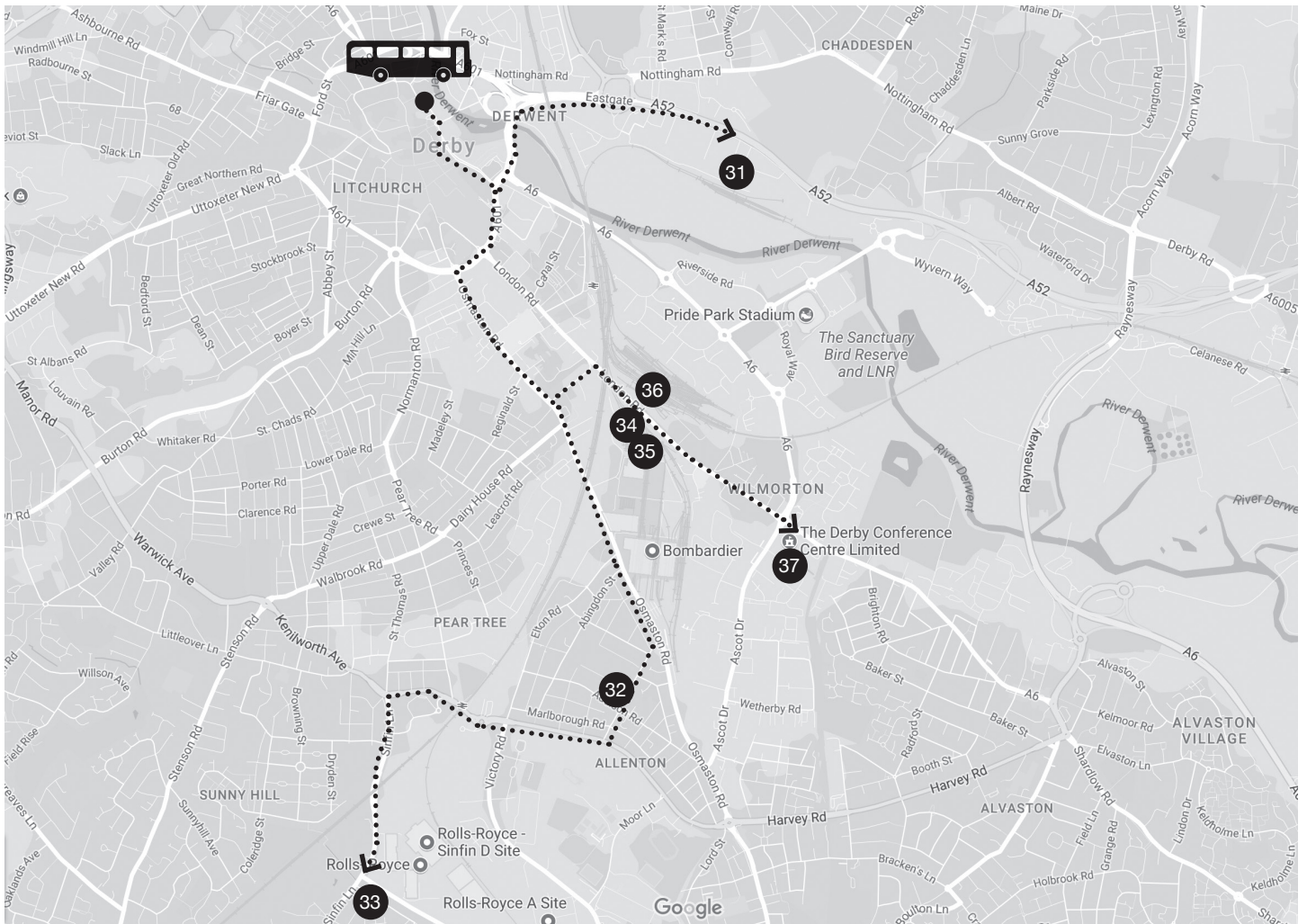
The illustrations which follow are taken from *Baroque Tricks*, the autobiography of Ralph Downes (1904-1993), designer of the influential post-war organs in the Royal Festival Hall and Brompton Oratory, plus those in Fairfield Halls Croydon and Gloucester Cathedral among others, but who around 1918 was deputy organist at All Saints' Derby.



PLATE II All Saints' Church, Derby.

down the spine! The Full Organ, especially if heard while entering at the west door, resembled a brass band, the Pedal reeds having pungency and drive without actually being very loud, silhouetted, as it were, against the warm tone of the Open Woods. Bottom G of the Trombone had a slight 'back-curve' in the tongue, which gave a gratuitous 32-foot beat when it was held with the Full Organ: this I adored! From its position in the gallery this organ could give a firm lead to capacity congregations on Sunday nights, singing really heartily: and before Evensong began they listened attentively to a half-hour recital in which the varied resources of the organ were fully exploited. At the age of 14 I was for a time Deputy Organist [sic] and knew the instrument well, trying (albeit with quite insufficient technique) to copy Bennett's brilliant style of playing, which had a profound and lasting effect on my attitude to the organ. When he was removed from the post, and I had left Derby, his successors failed to appreciate the instrument; it was neglected and finally destroyed *in toto* about 1940. A contributory factor was the change in worship from very 'low' evangelical to a 'broad-church' Cathedral service, demanding niceties of musical expression which the incumbents were unable to extract from the instrument; also, its west-end position was deemed a serious handicap for choir accompaniment. Yet in the days of Bennett's tenure the choir sang anthems, and his competence was such that ensemble





Bus Journey

31 Olivetti Building

- British Olivetti Ltd, Downing Road, 1970-1, Edward Cullinan, stylish and extendable, system built, plywood, steel, timber, intention to create an oasis in an inhospitable environment,
- Between 1970 & 72 Cullinan produced four separate branch offices for the Italian company in Dundee, Belfast, Carlisle and Derby. All variations on the same type, a prefabricated construction system of modular components. This consisted of a lightweight frame on a masonry base. The lower floor was made of in situ concrete, contained service areas and parking bays. The workshops and offices were positioned above within a titled roof section. Around the perimeter of the U shaped plan ran a continuous worktop divided into bays and lit by triangular skylights and a desk level clerestory of sliding glass panels. This arrangement cast the view downwards, past the 'flying' gutter just outside the window. The effect is to make the space feel like an attic studio. In 1977 Cullinan reproduced the idea for the Highgrove housing development on the leafy edge of suburban Ruislip for the London Borough of Hillingdon Council.
- The tail ends of the building were temporary, from which the building could grow to use the whole site, thereby creating a courtyard. They were painted the colour of dried blood like a dismembered limb, as if to remind Olivetti to allow the building future growth.
- Beneath the working floor were service rooms and covered spaces for the salesmen's and mechanics' cars which nosed around the the edge. So in the those days you saw the tails



Exterior, British Olivetti Ltd, Downing Road, 1970-1, Edward Cullinan

of Lotus Cortinas and Mini Coopers like bicoloured piglets round a sow.

- Occupied by various organisations, Fresh Logistics have been resident here since 2015.
- 32 Rolls Royce, Nightingale Road, aka Marble Hall
- Motor car factory offices, 1912 by R. Weston and Son for Rolls Royce, with alterations of 1938 by Arthur Eaton and Son.
 - Steel-framed structure behind red brick, terracotta and portland stone with a slated north-light roof.
 - Rolls Royce Offices and Works, Nightingale Road, centrepiece of 1938, early buildings 1907-12, fine entrance hall
 - Of 1907-12 by Sir Henry Royce, Andrew Handyside Ltd and R. Weston & Son.
 - Remodelled 1938 by Arthur Eaton & Son
 - A long range fronting the street is all that remains
 - Centrepiece of 1938 is stone faced in stripped classical style, fine entrance hall with columns and double staircase
 - Empty since Rolls-Royce's relocation in 2007
 - Grade-two listed
 - £4m refurbishment programme to transform it into workspace facility and complementary facilities
 - Contractors Robert Woodhead, led by architects Bauman Lyons
 - The entrance hall, referred to as 'the Marble Hall' has Tuscan columns and is paved with Hopton Wood polished limestone. There is a ramped double staircase with metal open balusters and at half landing level is a tall, semi-circular-arched window which housed a stained glass window (Hugh Easton, 1949) commemorating the Battle of Britain (now removed to safe store and replaced by an image of the original).

RR History

- The Rolls Royce Company acquired the Nightingale Road site in Derby in March 1907 with a view to developing an automobile factory, and building work started in that year.
- To the south of Nightingale Road schools and other community facilities were developed to serve the expanding industrial suburb developing around the works. The changes in the pattern of manufacture and the relocation of the main business site to Osmaston have driven the current regeneration proposals for the now mostly vacated Nightingale Road site.
- The Rolls Royce factory was designed to produce the Silver Ghost car, but demand in the First World War for aircraft engine manufacture led to the development at the Derby works of the first Rolls Royce aero engine. The company's first aero engine was the Eagle, based on the Silver Ghost engine, built from early 1915. Around half the aircraft engines used by the Allies in World War I were made by Rolls-Royce. The Eagle engine was fitted to nearly 50 aircraft types requiring over 4500 engines to be manufactured in Derby and overseas. In 1919 it powered the Vickers Vimy in which Alcock and Brown crossed the Atlantic non-stop, for the first time.
- The Merlin was a powerful V12 engine and was fitted into many World War II aircraft: the British Hawker Hurricane, Supermarine Spitfire, de Havilland Mosquito (two-engine), Avro Lancaster (four-engine), Vickers Wellington (two-engine). It also transformed the American P-51 Mustang into possibly the best fighter of its time,
- The first assembly buildings, beginning with what is referred



Rolls Royce, Nightingale Road, aka Marble Hall

to as No.1 Shop in the original documentation, were constructed of prefabricated steel-frames supplied by Handysides of Derby, and were developed to specifications provided by Henry Royce, designed to allow rapid expansion of the factory to a modular format.

- Car manufacturing was transferred to the Crewe works in 1946 but the Derby site remained closely associated with aero engine development and manufacture until the development of the new Derby facility.

33 Rolls Royce Engineering Centre, Moor Lane

- Sir Henry Royce Statue, by Derwent Wood, 1921
- Rolls Royce Engineering Centre, Fry, Drew & Partners, 1961-8, three storey office blocks with curtain walls and brick service blocks, very prestigious
- It has worn well. Seven three storey office blocks to form three parallel three-sided courts, with blue and brown brick, matching tiles and polished slate

34 Hartley House, 500 London Road

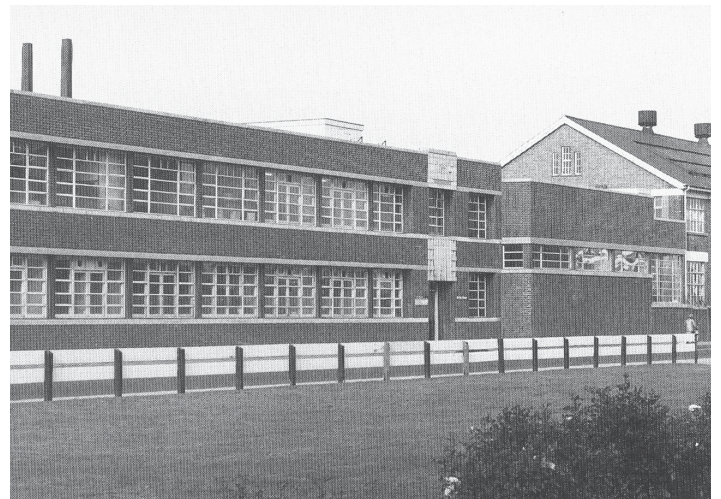
- LMS research facility, by company architect Harold John Connal, 1935, built by Greenwoods, of Mansfield, Notts.
- 2 stories, steel framed, clad in brown brick with horizontal glazing strips
- Panel over the entrance with stylised lettering
- Etches Park purchased by Midland Railway Co for carriage sheds, works and track, opened 1864
- The MR Way & Works Department based here. Responsible for tracks, bridges, tunnels, stations, sheds, works and even telegraph poles.
- MR absorbed into London Midland and Scotland Railway (LMS) in 1923. Various research and testing facilities Brough together and concentrated in Derby. This initiative came from Lord Stamp, a proponent of 'Scientific Research in Transport'.
- LSM Scientific Research Department set up in 1933 on the initiative of Sir Harold Hartley. New buildings constructed adjacent to older drawing and design offices.
- 5,600ft of floorspace, adjoining engineering test hall, workshop of 3,500ft
- Metallurgical and chemical analysis, instrumentation and measurement

35 Bombardier (behind Hartley House)

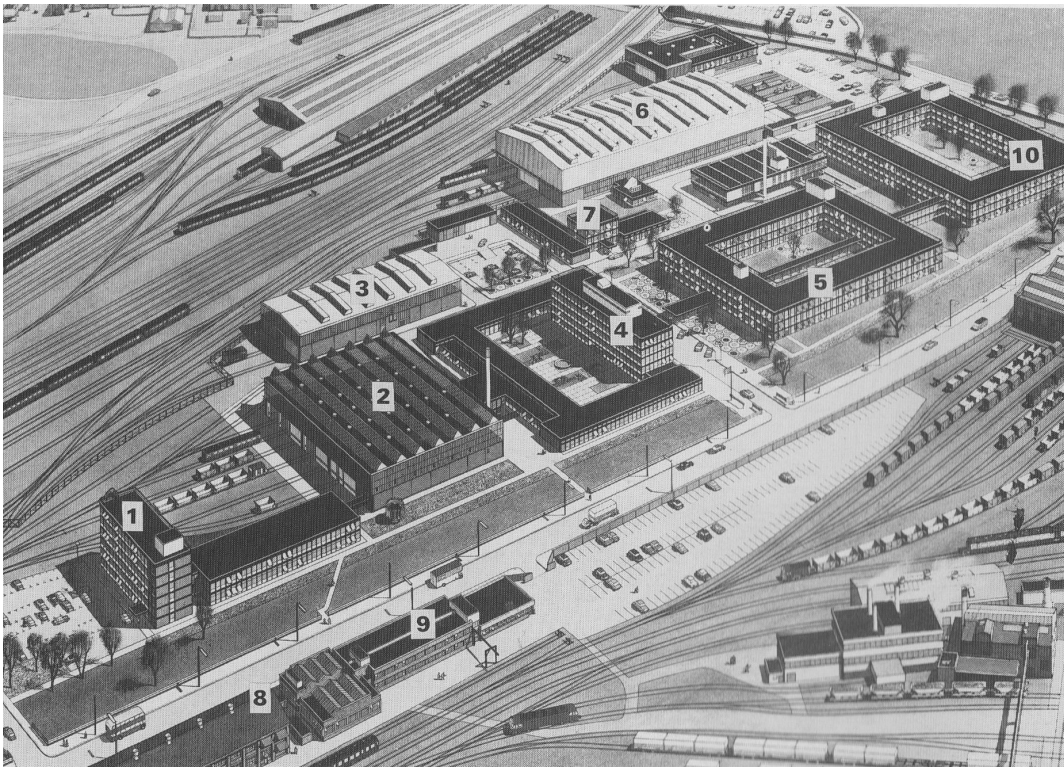
- Formally Midland Railway Co, LMS and British Rail
- 1989 BREL privatised and sold to consortium (ABB, Trafalgar House & Employees)
- 1992 ABB acquires 100% share of BREL Ltd to form ABB Transportation
- 1996 ABB & Daimler-Benz rail activities merge to form Adtranz
- 2001 Bombardier Inc. acquired 100% share of Adtranz Group
- Current Contracts: London Overground & Elizabeth Line
- Design, engineering, carbody manufacturing and vehicle assembly
- Dedicated testing facilities on site
- Site area: 340,000 m²



Rolls Royce Engineering Centre,
Moor Lane



Hartley House, London Rd



1. Brunel House & Laboratory , 1971, for field trials, fracture mechanics, aerodynamics, instrumentation, chemical research
2. Engineering Test Hall, 1964, machine shop, structural testing
3. Research Vehicles Laboratory
4. Kelvin House, 1964, administrative block, named after famous scientist, library at the centre, 1972
5. Derwent House, opened by Barbara Castle, 1967. HQ of BR Engineering Ltd. From 1970 responsible for all BR rolling stock and locomotive, new building and repair workshops. Also contained Central Purchasing Department
6. Engineering Development Unit, test hall, overhead cranes, prototype conversion work carried out
7. Lathkill House
8. Faraday House
9. Hartley House
10. Trent House, opened 1967, for design and drawing office staff

36 British Rail Technical Centre

- British Rail Technical Centre (former), London Road, 1960-4, extensions in 70s and 80s, original buildings by Dr F. C. Curtis (chief architect of the British Transport Commission) with A. H. Cantrell chief engineer, impressively simple, landscaped, courtyard, black frames, blue brick, vitreous panels.
- BY 1972 RTC grown to cover 23 acre site with some 2,000 staff
- Built by Willian Moss & Sons, and opened by Duke of Edinburgh 14th May 1964
- In 1948, the big four railway companies (LMS, LNER, GWR & SR) nationalised to form British Railways (BR), each had own design, research, labs and testing facilities
- 1961 a contract worth 1 1/4 million was placed for the construction of new engineering on the opposite side of London Road from the old LMS facilities. This major development was the first phase of a major development to be called the Railway Technical Centre, intending to bring together all the various separate facilities for research, design and development.

History

- Research divisions responsible for all mechanical, electrical, civil engineering and scientific research, including track structures, vehicle dynamics, mathematical studies, computer technology, motors, signalling, chemical
- Main research facilities: engineering test hall, vehicles laboratory, track laboratory, ancillary testing (building, structures, materials and chemicals)
- Major Projects: Signalling, Computer Aided Timetable Enquiries, Advanced multiple unites, Aerodynamics, Vehicle Dynamics, Rail Flaw Detection, Track Aligment, Advanced Passenger Train, High Speed Train
- The RTC Derby was established in 1964 to concentrate engineering expertise and look at the rapidly developing jet aeroplane industry. Director of Research Dr Sydney Jones planned the Advanced Passenger Train Project, for future speeds of 200-300mph, Dr Alan Wickens worked on systems of tilting vehicles so that they could take curves



Engineering Test Hall, built 1964,

faster, Interior design by Basil Spence. APT trains used on London - Glasgow line by the 1980s, but abandoned by government in 1986 – bad publicity over ‘queasy rider’ trains and HST considered more effective

- Another group at the Research Department worked on the next generation of diesel-electric HST locomotives. Not all railway lines were as curved as West Coast Main Line, so other lines resorted to more conventional means.
- In 1982 Fiat Ferroviaria purchased BR’s active tilting patents for development of their own tilting train concepts. For its second-generation machines, the company used BR’s active tilt. These entered service between Rome and Milan in 1988. This led to a series of newer designs, known collectively as the Pendolino. Italian Pendolino systems incorporating original APT technology have since been sold internationally, including, ironically, the British Class 390 Pendolino now used by Virgin Trains on the West Coast Main Line.
- “Where BR Research invented Pacers and patented a flying saucer. Meanwhile the glorious DM & EE dept created the industry-saving HST.” Nick Brown, Rolling stock Engineering Consultant.
- At privatisation, most of the facilities were taken over by commercial railway engineering companies, and it was marketed as the RTC Business Park renting space to a range of small consultancy firms.
- Today: most work at RTC Business Park is maintenance of Network Rail’s infrastructure monitoring fleet & the locos that pull it around. Occasionally new trains undergoing tests



The British Rail Technical Centre, London Road, where today's HST and Pendolino trains were developed.

37 LMS School

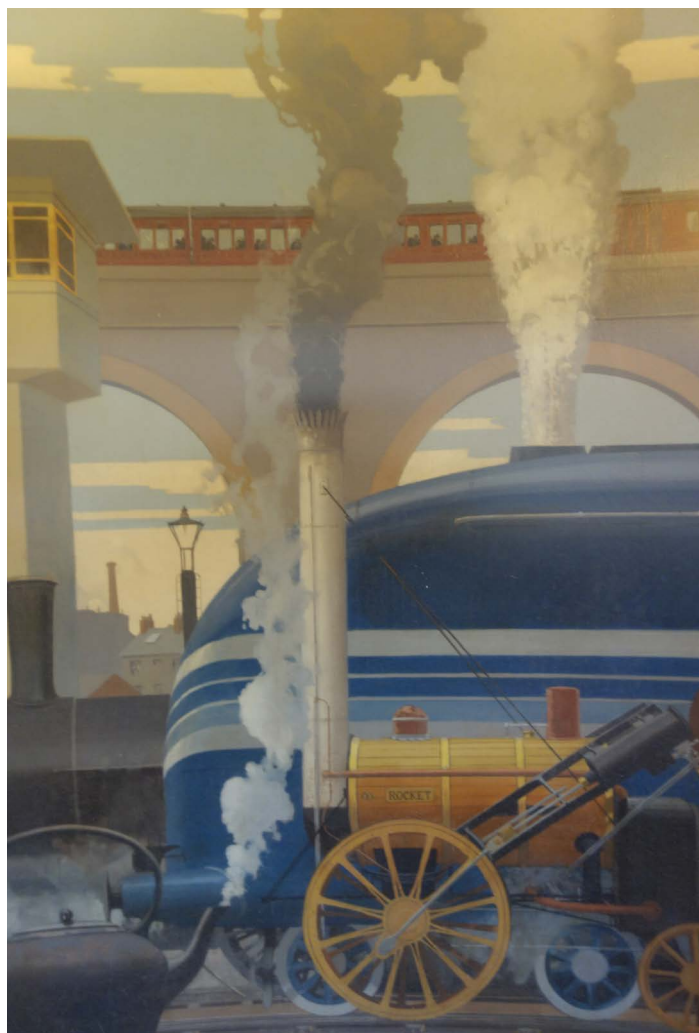
- School of Transport, now Conference Centre, London Road, 1937-8, W. H. Hamlyn, for LMS, first railway staff college in Britain, Art Deco Neo Georgian Swedish style, themed reliefs, ‘the Age of Steam’ murals by Norman Wilkinson, ‘History of Transport’ mural by William Hamlyn.
- The first railway staff college in Britain, friendly Art Deco cum Neo Georgian style. Swedish angular lantern, very fitting. Brick on a base clad in stone
- Reliefs on railway and engineering themes by Denis Dunlop
- Cantilevered stairwell
- Hall of Transport, large, top-lit, with ordinal chrome lighting standards with a raise platform – this was for a ‘0’ gauge railway used for teaching purposes on which students could learn the rudiments of signalling and train operation. The working model railway was removed in the 1960s.
- Combined garage and boiler house with pylon-like chimney
- Laterly ‘Catalist Railway Training’, then ATA Recruitment
- Sold 2013, becomes Derby Conference Centre
- Hotel, 50 bedrooms, office space
- Still railway training on site
- Network Rail key client, so still used for original purpose
- Grade II Listed, but updated bedrooms
- At one time, Indian railway engineers were trained here for 36 months
- Brick, Crittall windows
- The central entrance portico, also in Portland stone, bears the motto STET FORTUNA DOMUS (‘may the fortune of the house endure’).
- Most striking are the two painted mural panels, set to either side of the double doors leading through into the heart of the building. The painting on the left is of an LMS ferry leaving port, the one on the right of three generations of locomotives spanning a century of steam, embodied by the LMS in 1938: the Rocket, a late-19th-century coal



Hall of Transport at the LMS Transport School

engine, and a then-new streamlined Princess Coronation Pacific, in full blue and white livery. The artist, whose signature survives on both murals, was Norman Wilkinson CBE (1878-1971).

- In the former lounge's south-east wall is a large rectangular painted mural designed by William Hamlyn and executed by three of his assistants, John Carter, John Ferguson Cooper and Harold Haynes Matthews. It shows the development of road and rail transport 1838-1938, with an architectural backdrop centred on the Euston Arch and a range of other famous buildings and structures. The final room worthy of note is the lofty lecture theatre with original seating and a projection room.



Mural by Norman Wilkinson at the LMS Transport School

