

# The Railways of Kew and Gunnersbury

By JOHN C. GILLHAM



*Photo]*

*[J. C. Gillham*

**The old station at Kew (abandoned 94 years ago), between Kew East and Old Kew Junctions on the North & South West Junction Railway, showing the building on the westbound platform still in use as a house**

**I**N the early days of the railway era, various trunk lines were built from the Metropolis to important provincial points, with separate termini in London, and no physical connection between the systems. Thus, there were no railways to the west of London between the main lines of the standard-gauge London & Birmingham and London & Southampton Railways, excepting the isolated broad-gauge Great Western Railway (which does not greatly affect the present story). On July 27, 1846, a branch was opened from the Southampton line at what is now Clapham Junction, running through Putney and Barnes to Richmond, and on August 22, 1849, a branch was opened from this line at Barnes, over the Thames and through Kew, to Isleworth. This was extended through Hounslow on February 1, 1850, joining beyond<sup>1</sup>Whitton the Richmond line which had meanwhile been extended

through Ashford and Staines to Datchet on August 22, 1848.

The Birmingham and the Southampton railways soon expanded, and changed their names to London & North Western, and London & South Western. The need was felt for a link between them, so a North & South West Junction Railway was authorised in 1851 to run from what became Willesden Junction on the main line of the former, to the present Old Kew Junction on the Isleworth line of the latter, some 3 miles 63 ch. This was built rapidly, and opened to freight traffic on February 15, 1853, soon becoming an important route for coal from the north of England to the south. Passenger trains were begun on August 1, and, although the line was leased jointly by the L.N.W.R. and L.S.W.R. companies, these trains were always worked by the North London Railway. A station was provided at Old Kew, just short



of the junction. From its inauguration, the train service to Willesden continued thence along the main line of the L.N.W.R. as far as Chalk Farm, then running along the North London itself as far as Camden Town. For a time it terminated at Camden Town, connecting there with a shuttle service onwards *via* Hackney and Bow to Fenchurch Street. The intermediate station of Acton, between Old Kew and Willesden, was opened during 1853, rebuilt in 1876, and renamed Acton Central in 1925.

In 1858 a Bill for a Brentford & Richmond Railway was promoted, but the Lords rejected it after the L.S.W.R. had promised alternative facilities. Hence on May 20, 1858, the North London service was extended to Twickenham, which it reached by reversing at Old Kew Junction, running for 2 miles 67 ch. along the Isleworth branch of the L.S.W.R. as far as Barnes, reversing again, and then using the South Western line through Mortlake and Richmond for 4 miles 23 ch. To avoid the two reversals, two curves each 26 ch. long were inserted under powers of 1859 at Kew and Barnes, making two triangular junctions, and Camden Town to Twickenham trains began to use them on February 1, 1862. The old station at Kew, on the north side of the triangle and with access from Lionel Road, was now replaced by a new station at the south apex of the triangle alongside the station on the Isleworth line and fronting on to what is now Chiswick High Road. The platforms and buildings of the old station are still *in situ*, after 94 years of disuse, and in a fair state of preservation. The new station was renamed Kew Bridge in December, 1868, and is directly opposite the bridge approach, excellently accessible, with much better tram and bus interchange facilities (in later years) than any other station for miles around.

North London trains were extended from Twickenham to Kingston on July 1, 1863, along a newly-built line opened that day, but the route *via* Kew and Barnes was still too indirect even with the two curves, so a new line 3 miles 4 ch. long was built by the L.S.W.R. under 1864 powers from what is now South Acton Station (opened January 1, 1880) direct to Richmond, and was opened on January 1, 1869. This crossed over the Kew to Barnes line at right

angles, and then over the Thames by a five-span lattice-girder bridge, which shares with the other Thames crossing at Barnes the distinction of being the only major work on the railways in this area. New stations were provided at Gunnersbury (known as Brentford Road until November 1, 1871), and at Kew Gardens. At Richmond the new line used some new dead-end platforms on the east of Kew Road without fouling the Barnes to Twickenham tracks, the platforms of which were then to the west of Kew Road.

The Kew curve is still in use, but the Barnes one was abandoned in 1869 under the 1864 Act, and had been removed by 1894 at the latest, probably much earlier. At its northern end the road bed and a small bridge still exist, but all trace of the rest of the curve has now vanished, and the site is covered by allotments. The new South Acton to Richmond line was owned and built by the L.S.W.R. although used by North London trains.

On the same day (January 1, 1869) the L.S.W.R. opened another new line, also built under the 1864 Act. This left the Richmond line just north of Gunnersbury, ran eastwards through Turnham Green to Hammersmith (Grove Road), turned sharply northwards to run alongside the Hammersmith & City Railway (opened 1864), and then passed underneath this to run round a semi-circle of only about 440 yd. radius to join the West London Railway (opened 1844) at Addison Road, a total distance of 3 miles 14 ch. The L.S.W.R. began two services, each about hourly, from Richmond *via* this route to Latchmere Junction, whence one ran straight up the main line to Waterloo, and the other ran *via* Brixton, Loughborough Junction, and the L.C.D.R., to Ludgate Hill. Thus, as soon as the circuitous North London route to Richmond was straightened out, these two new services, especially the Ludgate Hill one, provided even more roundabout routes.

The block signalling on the Richmond to Addison Road line attracted considerable attention in the railway world in 1869, as the line was among the earliest to have diagrams of the signalling issued to inspectors, drivers, guards, signalmen, pointsmen, porters, and others. These diagrams, with day and night codes for engine head-signals, whistle codes, and

general instructions, filled 27 foolscap sheets.

A junction was inserted just north of Hammersmith, whereby on June 1, 1870, the Great Western Railway opened a service from Bishops Road (Paddington), *via* the H.C.R., Turnham Green, and Gunnersbury, to Richmond, but it lasted only until October 31. The District Railway was extended to Hammersmith (Broadway) on September 9, 1874, and terminated there until June 1, 1877, when it was further extended 38 ch. to join the Addison Road line at Studland Road Junction, involving a tunnel under the Broadway and then a very steep climb of about 330 yd. at 1 in 44. District trains from Mansion House were immediately extended over South Western tracks to Richmond, using running powers that were granted on condition of the abandonment by the District of its proposed line from Earls Court to Barnes, which had been authorised by Parliament in 1872. A branch to Ealing Broadway from the L.S.W.R. at Turnham Green was opened on July 1, 1879, and was both owned and worked by the District Railway; for 44 ch. this ran alongside the Richmond line, though on a rising, instead of a falling, gradient.

Yet a fifth company to work through Gunnersbury to Richmond was the Metropolitan, which on October 1, 1877, began a service from the City *via* Bishops Road and the Hammersmith & City line, which lasted until December 31, 1906; electric traction had been inaugurated on the H. & C. on November 5, 1906. On January 1, 1907, another Great Western steam service was inaugurated to Richmond over the same route, starting from Notting Hill (renamed Ladbroke Grove on June 1, 1919), but this service lasted only until December 31, 1910, though the terminal siding and extra crossover at Ladbroke Grove are still *in situ*.

Meanwhile the North London Railway had opened its branch from Dalston into Broad Street on October 31, 1865, and from the following day until 1916 maintained a half-hourly service of trains which ran from Broad Street non-stop to Camden Town, and continued as stopping trains *via* Gospel Oak and Willesden Junction to South Acton. At the last-named station the service was divided, and trains ran thence hourly to Kew

Bridge and hourly to Richmond. Between Camden Town and Willesden this service used the Hampstead Junction Railway (opened January 2, 1860) instead of the main line of the L.N.W.R. which the previous Camden Town to Richmond (and Kingston) trains had used. From 1865 another half-hourly North London service ran from Broad Street *via* the H.J.R. to Willesden, and then down the West London line to Addison Road or beyond, but in 1912 this was diverted at Willesden to run along the Acton line instead and thus doubled the frequency to both Kew Bridge and Richmond.

A sixth company to reach Gunnersbury was the Midland, which opened a branch for goods traffic from Childs Hill (now Cricklewood) through Dudding Hill and Harlesden to Acton Wells Junction (63 ch. south of Willesden Junction) on October 1, 1868. The Midland received running powers to Richmond over the L.S.W.R., and the latter secured running powers to Brent Sidings, near Cricklewood. On August 3, 1875, the Midland inaugurated by means of this link another, even more circuitous, passenger service to Richmond. This started in the bay platform at Moorgate Street and ran *via* the Widened Lines of the Metropolitan and the tunnel under St. Pancras Station to the Midland main line, which was followed as far as Childs Hill before turning south again along the new line to Acton Wells and Richmond.

On February 1, 1876, this service was withdrawn between Moorgate and Childs Hill, and also south of Harlesden (then known as Harrow Road), but on May 1, 1878, it was extended to St. Pancras (main line) and through Acton Wells and South Acton to a point immediately beyond the bridge beneath the Ealing branch of the District Railway. From this point (Bollo Lane Junction) the new Acton Curve, built in 1878, was used, which forked left from the Richmond line, ran parallel to the District for 28 ch. behind Chiswick Park Station (known as Acton Green until March, 1887), and joined the Gunnersbury to Turnham Green line midway between those two stations, at Acton Lane Junction. This Midland service then continued along the District as far as Earls Court, but on September 30, 1880, it was again withdrawn south of Harlesden and south of Childs Hill.

The third attempt of the Midland to



Acton Lane Junction from the east, showing the electrified Richmond lines on the left, and Acton Curve on the right. The freight train, one of about three daily, is proceeding from Brent (Midland) to West Kensington



Photos]

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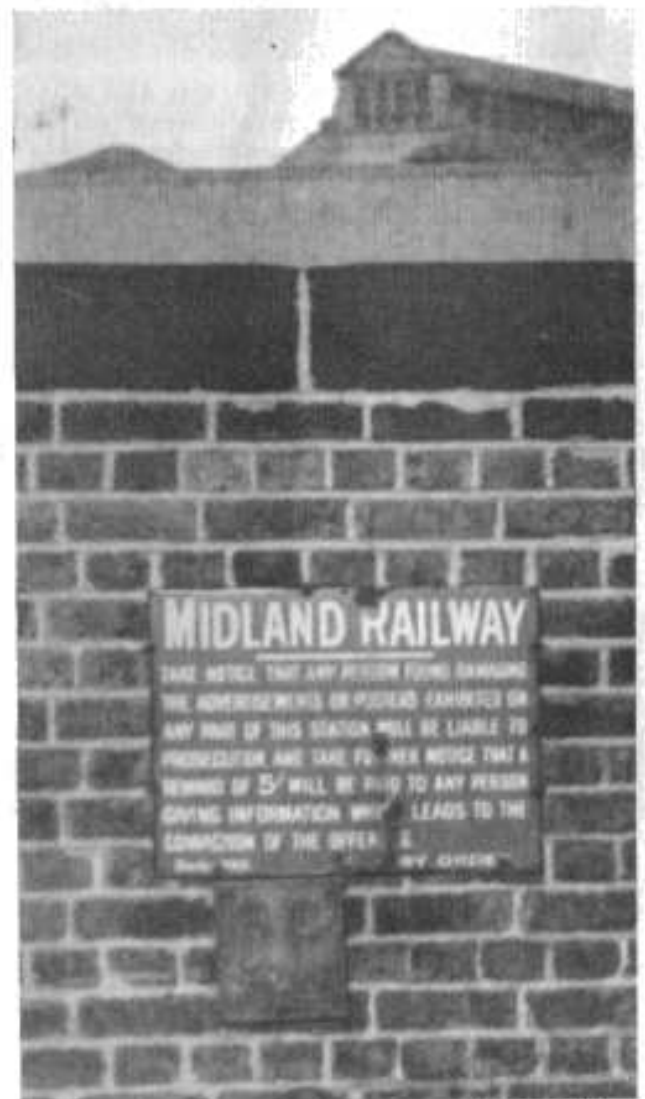
The above train passing through Acton Lane Junction, with the electrified Richmond tracks on either side. The line to Acton Town passes over the bridge on the left

enter the area under consideration was on January 1, 1894, when the Childs Hill to Harlesden service was extended to Gunnersbury, where it terminated. Gunnersbury was then a far more important station than it now is, for it had five platforms—two islands and one extra face on the west side. These five tracks converged into a double-track bottleneck to pass under the bridge carrying Chiswick High Road, before branching immediately beyond into the separate Willesden and Turnham Green routes. The Childs Hill to Gunnersbury service was withdrawn on October 1, 1902, but the same route was used by a long-distance service from Bradford to Portsmouth, *via* Hendon and Richmond, which the Midland inaugurated on July 1, 1905, and thus for a time Gunnersbury assumed main-line importance. Through coaches from six other northern towns joined this train at Leicester, but it ran only until October, 1908. A similar through service, but of L.N.W.R. carriages, was begun on May 1, 1911, between Manchester and Southampton, *via* the North & South West Junction Railway.

South of Gunnersbury there were four tracks for about 400 yd., but then the two on the west swung away to join the Isleworth line at Chiswick Junction, 39 ch. from Gunnersbury Junction. This Chiswick Curve was another of the lines opened on January 1, 1869, by the L.S.W.R. It enabled trains to run between Turnham Green and Isleworth, but from the Acton direction it duplicated the original Old Kew line of the N.S.W.J.R. This Willesden to Old Kew line was originally leased jointly by the L.N.W.R. and L.S.W.R., but the latter soon dropped out, despite owning the Gunnersbury lines, and in 1871 a new lease was taken jointly by the North Western, North London, and Midland companies. However, the North Western did not work local passenger services on it until 1916, nor did the Midland except as mentioned above, and the great bulk of the traffic was always worked by the North London, although no lines owned by the company directly adjoined it.

The Midland established coal depots on other railways all over London, and even as far away as Maidstone. One of these was opened during the eighties inside the triangle of railways at Kew,

and explains why, in an area where today it is taken almost for granted that everything is "Southern," there still exists at the corner of Lionel Road and Chiswick High Road (alongside the passenger station and some way from the goods yard) a notice headed "Midland Railway, Derby, 1901." There are four separate goods yards at Kew; the Midland one in the eastern half of the triangle, and the much smaller and older L.S.W.R. coal yard occupying the western half of the triangle on the other side of Lionel Road. Outside the triangle on the south-western side is the original yard of the L.S.W.R. for goods other than coal, now used for storing passenger trains, and outside the northern side of the triangle, stretching from the derelict Old Kew station to the Great West Road, is the much newer and larger goods yard



Photo]

[J. C. Gillham

Midland Railway notice on a wall overlooking Kew Bridge Station, at the corner of Lionel Road and Chiswick High Road

opened by the Southern Railway in the twenties. Other Midland coal depots were opened in 1878 at West Kensington and High Street, Kensington, access to both of which is *via* Acton Wells, South Acton, Turnham Green, and the main line of the District Railway. As both still flourish, steam-hauled coal trains may be seen using the electric tracks through Barons Court and Earls Court.

The main line of the District was electrified from Whitechapel to Ealing on July 1, 1905, and the Turnham Green to Richmond branch (3 miles 29 ch.) followed on August 1. This caused a rapid increase of traffic, and the use by District trains to Ealing, Hounslow, Harrow, and Richmond of the tracks owned by the South Western between Studland Road and the junction west of Turnham Green soon created a bottleneck. So this section was quadrupled on December 3, 1911, after which Studland Road ceased to be a physical junction, because trains from Addison Road direction were confined to the two northern tracks and those from Earls Court direction were confined to the two on the south side, with no connection. Beyond Turnham Green the two tracks for Gunnersbury now passed beneath the two to Ealing, and immediately beyond a burrowing junction was installed to take trains between the Earls Court and Gunnersbury lines, but it now became impossible to run to and from the Addison Road and Ealing directions. All tracks on the four-track section were owned by the L.S.W.R., although that company never used the two on the south side. On the latter pair (only) a new island station was opened at Stamford Brook on February 1, 1912, and the existing stations at Ravenscourt Park and Turnham Green were both completely rebuilt with two island platforms.

By this time the South Western service was declining, and that to Waterloo had been diverted to and from Clapham Junction as a shuttle service thence only, while the Ludgate Hill service had fallen to only three per day. Then on June 3, 1916, both were permanently abandoned, and, as the Metropolitan, and Great Western, services *via* Gunnersbury had been withdrawn some years

previously, it seemed that the money spent on the quadrupling had been wasted, for the two northernmost tracks ceased to be used and remained derelict until 1931.

On October 1, 1916, the North London and connecting lines were electrified throughout from Broad Street to Kew Bridge and to Gunnersbury, using the fourth-rail method (as on the District), and without interrupting the through service. Second-class accommodation was abandoned, and the Broad Street to Richmond journey time was reduced from 56 to 44 min. In the early twenties most weekday trains did not stop at Canonbury and Caledonian Road, thus taking only 42 min., but in 1956 the same journey with the same rolling stock takes 49 to 52 min. Although the North London Railway remained a separate and independent company until 1922, it had latterly come very much under the wing of the L.N.W.R., which owned the electric trains, and painted them in its livery, although they were operated by North London staff. Hence the L.N.W.R. became the seventh company to carry local passengers between Gunnersbury and Richmond.

The 1921 weekday timetable gave a half-hourly service from Broad Street to Richmond, and also a half-hourly service from Broad Street to Kew Bridge which called additionally at Canonbury and Caledonian Road. Morning rush-hour extras called at both these stations and ran to both branches, but evening rush-hour extras ran *via* the L.N.W.R. main line instead of the Hampstead line, and all went to Richmond but not Kew. A few of these morning extras called also at Mildmay Park, which otherwise was not served by any of the Kew or Richmond trains. The Sunday service, which began late and finished early, was half-hourly from Broad Street to Richmond only, and Kew Bridge had no service until one extra train came down from Willesden at 3.12 p.m. and then shuttled half-hourly between Acton Central and Kew Bridge until 9.40 p.m. At this time the District Railway service to Richmond was four trains an hour, every day.



Photo]

[A. R. Brown

**Electric train from Richmond to Broad Street passing Bollo Lane Junction, between Gunnersbury and South Acton**

**I**N March, 1931, reconstruction was begun of the two derelict tracks between Studland Road and Turnham Green, so that they might be incorporated in the quadrupling of the District Line from Hammersmith to Northfields, which was opened on July 4, 1932, by an extension of the Piccadilly tube service. This did not affect westbound District trains to Richmond, but for eastbound trains the Turnham Green junction was altered so as to burrow under all four tracks and emerge on the extreme north, instead of under only two tracks and joining the third from the north. On the four-track section District trains use the outer rails and Piccadilly the inner. A non-electric link was installed from Acton Lane to the eastbound Piccadilly tracks, and this is used three or four times a day by the Midland coal trains from Cricklewood *via* Bollo Lane Junction, which, after running through Turnham Green on the Piccadilly rails, then use an elongated crossover to reach the District tracks *en route* for Kensington; there is no corresponding connection from the

westbound Piccadilly track towards Gunnersbury.

At Studland Road, instead of demolishing the old viaduct round to Grove Road, it was rebuilt to allow the new eastbound District track to pass under it at a long skew angle, thus preserving the road bed upon which a rail link to the Hammersmith & City line could have been laid. In fact, no tracks were ever laid on this altered bed, although it was kept clear, and was even repaired after a small bomb fell on part of it during the second world war. Soon after the war some prefabricated offices were built on top of part of the viaduct, but the large lattice-girder bridge over Grove Road remained in position until Monday morning, June 28, 1954, when it was removed by a demolition gang. All trace of it had gone five days later, and 140 tons of steel were sent for scrap. During the same five days the old L.S.W.R. station buildings were also demolished, after having been used for many years as a banana warehouse, and now a large six-storey ferro-concrete block of offices has been built on

the site of the station, viaduct and bridge abutments.

In 1932 the Southern Railway removed three of the five tracks at Gunnersbury Station and demolished all the buildings on the three corresponding platforms. All five platforms are still *in situ*, but only the island on the west side is in use. South of the station the four-track layout was reduced to two in July, 1932, only a week or so after the quadrupling west of Turnham Green. The Chiswick Curve round to the Isleworth line was removed at the same time and no trace of it is visible today, the whole site having been covered by several large blocks of flats (Chiswick Village) just before the war. Although there were now only two tracks to cross instead of four, the new bridge for the Cromwell Road extension was built in 1938-39 with spans wide enough to cross seven tracks!

On the Isleworth line a circular service was inaugurated on January 1, 1883, with the opening of a new Hounslow to Whitton curve, and worked Waterloo-Barnes-Kew-Hounslow - Twickenham - Richmond - Barnes-Waterloo and *vice versa*. This service has continued ever since, though it was interrupted for six weeks in 1916 when the route was electrified in two parts, Twickenham to Waterloo being converted on January 30 and Barnes-Isleworth-Twickenham on March 12. Today the service is half-hourly, worked with the newest type of six-a-side eight-car trains, and headcode No. 87. There are 23 intermediate stops, and the journey takes 73 min. clockwise but only 67 anti-clockwise. At rush hours there are a few extra trains round the circle additional to the half-hourly ones, and a few non-stop Windsor trains which run *via* Kew instead of the normal Richmond route.

The line from Acton Wells to Old Kew has always been very important for freight, carrying a heavy traffic from the North Western, Great Central, and Midland lines to and from the South Western, which since the opening of Feltham marshalling yard in 1922 with its hump, and the concentration here of traffic from a wide area, has become even heavier. As long ago as March 31, 1870, a third track was added between Old Kew Junction and Windmill Road (the bridge just before Brentford Station), and this section was later quadrupled, giving access to Brentford goods yard without fouling

the Barnes to Isleworth tracks. To enable longer freight trains to stand on the northern and eastern sides of Kew triangle without fouling either of the junctions, the actual point of junction at Kew East has been set back towards Acton to give a short quadruple section, which, by reason of availability of land, had to be on the north side. So, although the original line here was quite straight and Kew Curve diverged to the left, the straight road at the junction is now that leading to Kew Curve and the old line to Old Kew makes a bulge to the right, swinging back to the former alignment further west.

In 1939 freight traffic from Acton Wells to Feltham grew so much that the electric passenger service was reduced from every 15 to every 20 min., and given low priority and hence subject to great delay. It was abandoned on September 12, 1940, and the trains diverted to Richmond, which now has a much better service than previously. The L.M.S.R. side of Kew Bridge Station was closed, though the buildings still exist. Because it is on the other side of Lionel Road it is quite separate from the station on the Isleworth line, but it never had its own booking office, and access was always through the Isleworth-line booking office and platforms and thence by a tunnel under Lionel Road. For 16 years a notice in the booking hall has told North London passengers there are no trains from Kew Bridge and they must take a trolleybus (*sic*) to Gunnersbury.

The conductor rails between South Acton and Kew Bridge were removed as soon as the passenger service ceased, and I believe they were urgently needed for repairing air-raid damage to the Liverpool and Southport line, but 16 years later there still exists at Bollo Lane level crossing on the Kew line a notice saying "Keep off electric live rails." Today the chief use of the Kew Curve is by freight trains from the *ex*-Midland yard at Brent to the *ex*-Brighton yard at Battersea, *via* Barnes and Clapham Junction, but there is very little freight traffic on the Gunnersbury to Richmond line.

There are now 62 passenger trains every weekday between Broad Street and Richmond, all *via* the Hampstead Junction line, about every 15 min. until mid-evening and then half-hourly. On Saturdays they are every 15 min. before

noon and 20 after, while on Sundays they are every 30 min. before noon and 20 after. The best service of the year is on bank holidays, when trains run every 10 min. to take vast crowds to Kew Gardens, Richmond Park, the River Thames, and (by taking a bus from Richmond) Hampton Court. The North London service is not entirely self-contained, for on weekdays a few trains from Richmond on arrival at Broad Street do a trip to and from Queens Park or Watford before returning to Richmond. The car sheds and power station are at Stonebridge Park, with a sub-station at Kew Gardens. There are four terminal roads at Richmond, of which the two on the south are used solely by North London trains and the two on the north solely by District trains; in both cases the outer road is used only at rush hours.

In 1938 the District service to Richmond was six an hour all day, irregularly spaced, except four an hour in the late evening, with a regular 15-min. headway on Saturday afternoon and evening and all day on Sunday. On weekdays most trains went through to Upminster, but on Sundays all terminated at Charing Cross, leaving Upminster to be served solely by Ealing trains. After 1939 the Richmond service was every 15 min. by day, every 20 in the evening, every 10 in the morning peak, and irregular in the afternoon peak. Most of the peak-hour extras were to and from Mansion House only, but the normal service went in sequence to Bow Road, Barking, Bow Road, and Upminster, so through trains from Richmond to Upminster ran only hourly.

Today the normal service is every 15 min., rising to six an hour in the morning peak and eight an hour in the afternoon peak (both irregularly spaced), and falling to every 20 min. in the evening. The normal service runs alternately to Mansion House or Upminster, and most of the extras are to Mansion House only. On Sundays trains run every 15 min. all day, alternately to Charing Cross and to Upminster, with a 10-min. service on bank holidays. The Richmond service has never been kept separate from the rest of the District Line, and on arrival at its eastern terminus a train from Richmond will return to Ealing, Wimbledon, or Hounslow, rather than go back to Richmond. On May 2, 1955, the Ealing

slack-hour frequency, which a few years ago was dropped from every 10 min. to every 15, was stepped up to every 7½, but this did not affect the Richmond frequencies. On Saturdays, many trains from Richmond now terminate at Dagenham.

At rush hours there is no constant sequence for the five different services (Richmond, Wimbledon, Ealing, Hounslow, and Inner Circle) using the main line, as all five have an irregular headway. A Richmond train usually follows after a Circle or a Wimbledon, which leaves its path at South Kensington or Earls Court and gives a clear road ahead for the Richmond train to pass non-stop through West Kensington and Barons Court. But at slack hours trains stop at all stations. All trains stop at Gunnersbury, where there is a 15-m.p.h. speed limit which would reduce the value of passing non-stop. The journey time from Richmond is 35 min. to Mansion House and 84 to Upminster. Richmond and Kew Gardens stations are 1.33 miles apart, a distance which on the whole District Line is exceeded only by Elm Park and Dagenham, and Boston Manor and Osterley. Kew Gardens to Gunnersbury comes seventh, at 1.06 miles.

Mileposts on the direct South Western line through Barnes and Chiswick are measured from Waterloo, and reach 9½ at the western end of Kew Bridge Station. On the main line of the District they are measured from Mansion House, which was the terminus from 1871 until the Whitechapel extension in 1884, and so they reach 9 miles near the junction with the South Acton branch. The posts on the N.S.W.J. line are self-contained, running from zero at Willesden Junction to 3½ at Old Kew Junction, but on the Richmond branch they are, rather surprisingly, still measured from Waterloo *via* the original 1869 route through Latchmere Junction, Addison Road, Shepherds Bush, and Grove Road, much of which no longer exists. On the surviving portion from Ravenscourt Park, the posts have been replaced by measurements from Mansion House and so the South Western series now starts at 9½ just west of Turnham Green, which coincides with 8 in the Mansion House series, and runs to 12½ just short of Richmond terminus; the "10" post is immediately north of the footbridge



leading to the platforms at Gunnersbury.

From west of Barnes Bridge to Kew Bridge Station the Chiswick line falls at a constant gradient of 1 in 1194, and then climbs at 1 in 187. The Willesden to Kew line is also almost level, falling very slightly at various rates. South Acton to Gunnersbury falls at 1 in 153, 113, and 137, and the line then climbs at 1 in 232 and 1 in 100 to pass over the Chiswick line, falling thence at 1 in 440 to pass level over the Thames, after which there are several minor ups and downs to Richmond. From Turnham Green the Richmond line falls sharply

after leaving Turnham Green, which climb at 1 in 79 to pass over the two flyunders and then fall again at 1 in 77 to Acton Lane, rising thence at 1 in 1,000 to Chiswick Park and at 1 in 260 and 1 in 213 beyond.

A most unusual event in railway history in this country occurred on December 8, 1954, when a tornado blew the roof off Gunnersbury Station. It had been raining hard all day, with a strong wind, but at 5.8 p.m. the wind suddenly whipped up to gale force, which in one minute rendered great havoc in a long thin strip of territory from Gunnersbury through



*Photo]*

*[J. C. Gillham*

**Kew East Junction from the Great West Road bridge, looking towards South Acton, with Gunnersbury Avenue bridge in the background**

at 1 in 97 to the junction with the first flyunder, then at 1 in 124 to the junction with the second flyunder, and then at 1 in 120 to Gunnersbury. In the opposite direction the single track from Acton Lane Junction climbs at 1 in 100 to the junction with the District track from Ealing, which has fallen at 1 in 120 to meet it, and then this and the eastbound Piccadilly fall at 1 in 180 to the junction with the easternmost flyunder, and climb at 1 in 118, and 1 in 88, to Turnham Green. The steepest gradients of all are on the westbound District and Piccadilly

Acton to Willesden, flattening many walls and sheds and removing roofs and chimneys, though no damage was done outside this strip. It was an upwards suction of cyclone type, very rare in Great Britain, and the whole of the island platform roof at Gunnersbury was sucked off and then dropped on the northbound track. I was in the road outside the station at the time, and had to hold tightly to some railings to avoid being lifted as well. The roof and one wall of part of a motor-car garage were deposited on the railway just north of

the station, thereby demolishing the junction signal post. The roof of a mineral-water factory was badly damaged, and, on landing, part of it demolished the signal and telephone wires on one side of the station. A hundred yards of high brick wall along the other side of the station collapsed and buried a friend of mine. There were not many people on the station, so only two were injured, but ten minutes later there would have been many casualties, for a large motor bus factory across the road closes daily at 5.15 and disgorges many of its employees on to this station.

The booking office, a substantial brick building, was not damaged, but the timber sides and corrugated iron roof of the covered footbridge were badly blasted. Although the platform roof was also of corrugated iron, on timber supports, it had been in quite good condition, and was overhauled and repainted in green and cream only a few months previously, so that at the time of the tornado this was, with three exceptions, the cleanest and best station on the whole line to Broad Street. The signalman, whose box is on the other side of the High Road out of sight of the station, saw an advertisement hoarding sail past his window, so at once set all signals to danger before he knew about the station. No trains were in the vicinity, so none came to any harm, but as the current was cut off four were immobilised, namely District No. 62 for Upminster, which had left Richmond at 5.4 and was stranded at Kew Gardens, and three others (the 5.8 and 5.23 departures for Broad Street and the 5.18, District No. 78, for Mansion House) which were taking terminal layover at Richmond.

A few hours later the train at Kew returned to Richmond, where all four remained until next morning. No hold-up occurred on the main line of the District, because all Richmond trains were immediately diverted at Turnham Green to run instead to Ealing Broadway, which is the same distance away, so they were all able to take a normal layover and return to London in their correct path. The next train from Broad Street was due at Gunnersbury at 5.17, but this, and all others that evening, were held at South Acton (where there is a crossover) for the time it takes to run to Richmond and back, and then returned to Broad

Street on the correct timing. No emergency bus service was provided that evening, and, although the normal route No. 27 closely parallels the District route, there is no suitable bus link for the South Acton railway. An emergency bus service was operated the following morning between Acton Central and Gunnersbury, but this missed South Acton altogether, and ran by the normal 265 route.

I returned to Gunnersbury at 10.30 p.m., and found that a 4-6-0 steam locomotive had propelled the Feltham breakdown train into the east-bound platform road and was helping to clear up the debris. By next morning all trains were running again, but passing slowly through the station without stopping. As the junction signal post was demolished, all eastbound trains stopped at it, and were then waved on by a man with a green flag. By midday two new signal arms had been erected, and the signal and telephone wires were linked during the afternoon, so the station was reopened in time for the evening rush hour, although now roofless. Lighting had been by old-fashioned gas lamps, but within two days new electric lamps were erected all along the platform. Full restoration was undertaken with most praiseworthy speed, and within a week erection was begun of a strong framework of steel tubes, on to which a corrugated asbestos roof was soon fitted. The whole job was finished and repainted within eight weeks, and so, although now rather ugly, the station has an adequate and substantial roof which, once again, is in better condition than most others along the North London line.

In conclusion, brief reference must be made to a scheme for a railway to Richmond which came to nothing. In 1913, an extension of the Central London Railway was promoted from Shepherd's Bush. The line was to run under Goldhawk Road, Bath Road, and Chiswick High Road. Just east of Gunnersbury Station, it was to join the L.S.W.R. Richmond line, over which running powers were sought. The Act was passed on August 15, 1913, but the first world war broke out before construction could be started and the scheme was never revived after conditions had returned to normal.