BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

GAZETTEER OF HERITAGE ASSETS

Brooklands Heritage Partnership

Radley House Partnership

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Cover Photographs: Aerial photographs over Brooklands (16 July 2014)

1.0 Introduction

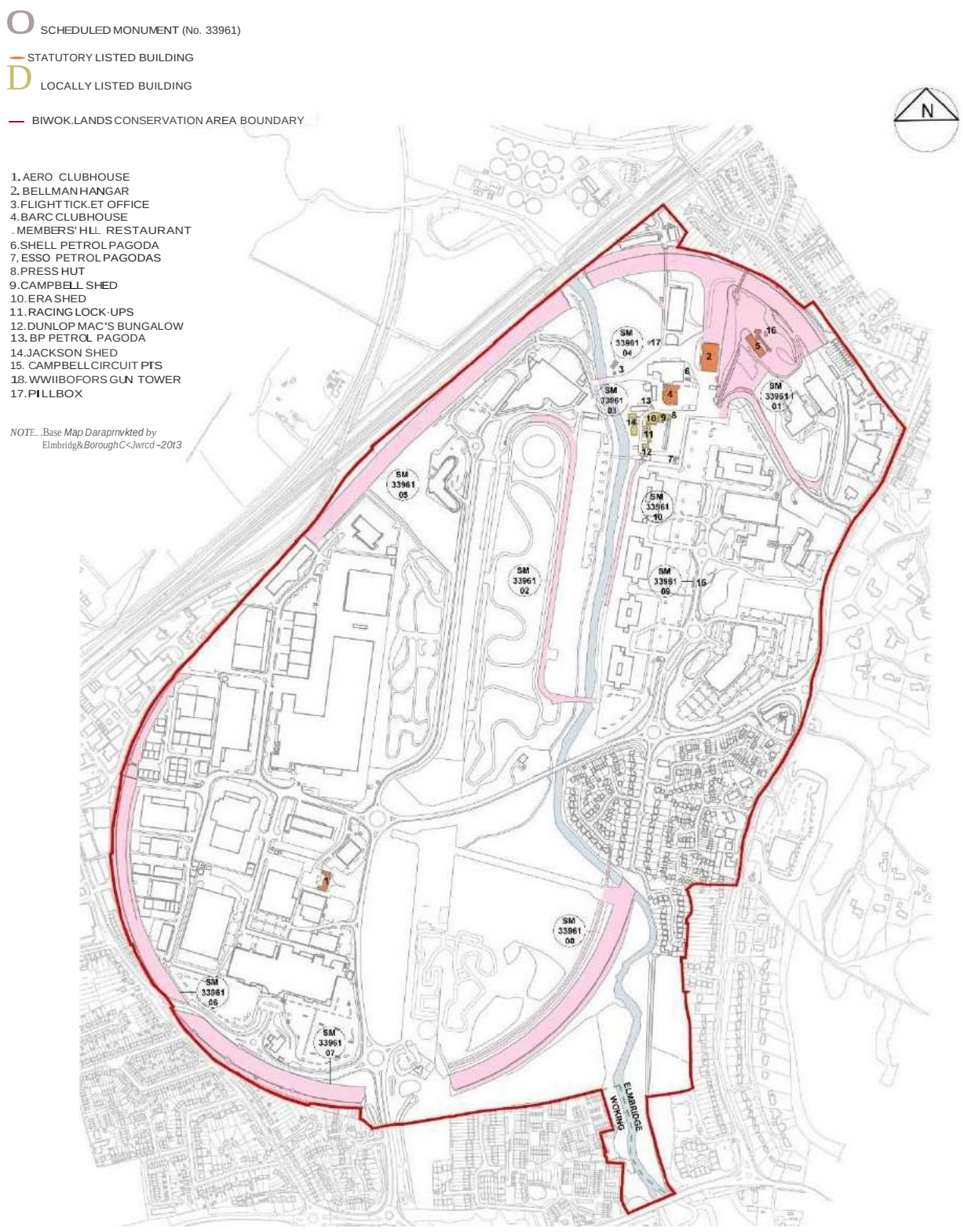
1.1 This Gazetteer contains a series of data sheets, which record all designated and non-designated heritage assets within the Brooklands Conservation Area, as well as a series of historic buildings and structures which are believed to be of importance to Brooklands following the preparation of the Brooklands Aerodrome & Motor Racing Circuit Conservation Management Plan.

1.2 The content of document is broken down into four principal sections, to reflect the type of designation for each of the assets. These are as follows:

- Scheduled Monument
- Statutory Listed Buildings
- Locally Listed Buildings
- Other Non-Designated Assets

1.3 Separate data sheets have been prepared for each of the assets – with the Scheduled Monument broken down into readily identifiable constituent elements. Each data sheet includes a summary of its designation and function; a brief history and description; comments on its significance and value; and reference to the recommendations included in the Conservation Management Plan. They are then illustrated with historic (where available) and contemporary photographs for record purposes. In addition, a thumbnail location plan is included to identify the location and extent of the particular asset (shown in black) within the context of the Brooklands Conservation Area boundary (shown in red), all other mapping information is omitted for clarity.

1.4 The map over the page highlights the extent and location of the different assets within the Brooklands Conservation Area.



Plan of the Brooklands Conservation Area (not to scale)
identifying all statutory designations and locally listed buildings
{Original CMP Map Reference- 5670/SK1 which}

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

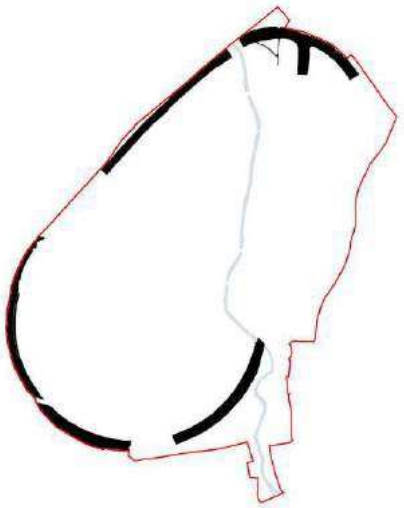
HERITAGE ASSETS GAZETTEER

Reference	Brooklands Motor Racing Circuit – Outer Circuit	Status	Scheduled Monument

Summary

Designation Reference:	SM33961 – 01, 05, 06, 07, 08 Historic England
Date:	1907
Association:	Motor Racing
Function:	Originally race track, sections are still used for vehicle demonstrations/teaching with the remainder now just large sculptural features in the landscape.
Scheduled:	17 January 1975
Amended:	7 January 2002

Location



History and Description

Local landowner, Hugh Locke King of Brooklands House, Weybridge, was an enthusiastic supporter of early motor racing and was frustrated by the lack of any race or test track in England. Following a trip to Italy to see the Coppa Florio road race in 1905, he decided that the marshy land at Brooklands would be an ideal location for a new permanent race track. Plans started to be drawn up in 1906, where it was originally proposed to be a flat oval circuit, however Colonel Henry Capel Loftt Holden of the Royal Engineers suggested that there should be banked corners which would allow speeds of up to 120mph to be achieved in the tightest corners, which was only just slower than the world land speed record of the time!

The track's construction represented a considerable achievement in terms of the scale and complexity of the civil engineering timescale to complete, as well as the pioneering use of concrete as a material previously little used for road building. It was laid in small sections, using locally sourced aggregates, cast directly over the sandy subsoil of the newly made up or cut ground. However, this pioneering use of concrete also brought its own problems as from the day of opening, a recurrent feature of the track was the poor quality of the concrete which required ongoing and often significant areas of repair and relaying – typically on an annual basis during the winter periods, as only short-term ad-hoc gravel repairs were possible during the racing season. This problem was also coupled with the instability of the underlying base. Except for the Hennebique Bridge (see below), no reinforcement was incorporated within the original concrete construction – it is understood this only began to be used within later areas of repair.

Clearance of the site began in the summer of 1906 using local labour, before being progressed by construction company Price & Reeves from January 1907 onwards. Despite being beset with financial problems, labour issues and not without local opposition, the construction project together with the related infrastructure was completed ready for the inaugural race meeting on 6th July 1907. In a period of only ten months the marshy farmland had been transformed with the felling of 30 acres of woodland, the movement of 350,000 cubic yards of earth and the laying of an estimated 200,000 tons of concrete.

The overall oval form of the circuit built with the 6 inch thick concrete, was 100 feet wide (30m) for its entire 2¾ mile (4.4 kilometre) perimeter length. It consisted of the two steeply banked bends at the northeast and southwest ends (the Members' or Home Banking and the Byfleet Banking respectively), which were connected by the 'Railway Straight' on the northwest side and a soft reverse curve section the southeast side – a straight was not achievable here as Locke King had already sold off the adjoining parcels of land. Towards the southeast end of the Byfleet Banking, the 'Fork' was created to allow the ½

mile (0.8 kilometre) long Finishing Straight to follow a northerly axis and link directly to the Members' Banking.

The River Wey presented a significant obstacle for the track at its north end. However, advice was swiftly sought from L G Mouchel & Partners, who were the British agents for the Hennebique method, a reinforced-concrete construction process which had been developed and patented by Francois Hennebique in 1892. This resulted in the 180 feet span across the river being achieved with a pioneering steel reinforced concrete structure consisting of five arches, which became known as the 'Hennebique Bridge'.

During the development of the design and the construction of the track, access for vehicles and spectators were obviously important factors. This was principally achieved with two tunnels constructed at the Weybridge end of the circuit. At the north end of the race track was the 'Competitor's Tunnel' also known as the 'Shell Way Tunnel' – a single carriageway for use by motor cars providing direct access to the Paddock Area. The second tunnel known as the 'Spectators' Tunnel', on the northeast side of Members' Hill, was for pedestrians and provided access for spectators through a series of three interlinked parallel passageways.

From the official track opening on Monday 17th June 1907 by the Earl of Lonsdale, the north end of the circuit with the Finishing Straight became the focal point of all motor racing activities and events held at Brooklands. A major aspect of the Finishing Straight was that it provided vehicular access to the Paddock and Clubhouse, which were both located towards the northern end on its western side, allowing competitors to enter and exit the track. It was also used as a runway by aviation pioneer A.V. Roe for testing his Roe 1 Biplane in 1907-08. Races were generally finished in front of the Clubhouse. Many, but not all, of the Brooklands races by cars, motorcycles and even bicycles, were also started on the Finishing Straight (in line with the convention of motor racing road circuits today). Having been originally conceived with horse racing as the precedent, start lines for race meetings of all types were in many different locations, or for races of different configurations, and which were not necessarily always run in the 'natural' anti-clockwise direction.

National popularity of the track continued unabated until the outbreak of WW1 with intense public interest in both motor racing generally, and the many record-breaking speed and endurance milestone achievements at Brooklands. It was not until April 1920 that motor racing was able to return to Brooklands, as the track had been left in such a poor state of repair as a result of 6 years of neglect. It then continued in use over the following two decades with large attendances being maintained through to the early 1930s, while it remained as the only permanent motor racing venue in England until the opening of Donington Park in 1933 and the advent of road style racing (on an unbanked track).

In 1926, Brooklands held its first international motor race – the first British Grand Prix which raced in an anti-clockwise direction and made use of the Finishing Straight, part of the Members' Banking, the Railway Straight and the Byfleet Banking, with chicanes added to sections of the Finishing Straight to reflect the characteristics of a road circuit. A temporary scaffold footbridge was also erected to link the Paddock to Members' Hill for this event, which was replaced in 1927 by a single-span permanent structure for the return of the event. However, neither turned out to be great successes with only 9 entrants taking part in 1926 and only 11 entrants in 1927, which led to it never being brought back to Brooklands. Unfortunately, Hugh Locke King was unable to witness either of these events as on 28th January 1926 he died at Brooklands House, passing his estate to his wife Ethel who continued to keep the race track in use for a further 13 years. Through this inter-war era the rapid evolution of racing cars continued, with track speeds increasing until the ultimate lap record of 143.44mph was achieved in 1935 by John Rhodes Cobb in his 24 litre Napier Railton.

The last ever race meeting was held on 7th August 1939, as in September 1939 the track closed in response to the outbreak of World War Two. The Brooklands site was subsequently heavily developed for defence and military aviation manufacturing activities - and motor racing was never to return, as the damage caused during the war camouflaging and defending Brooklands against enemy bombing raids as well as that from the growth of the aviation industry was too great.

Over the following decades as the aviation industry grew, sections of track were obscured or lost as buildings were built across the top. Then as other developments within and around Brooklands took place, further losses were inevitable. This initially included the loss of part of the Members' Banking as a result of a housing development off Locke King Road during the late1960s. Then as the aviation industry came to an end and their factory sites were redeveloped, further losses occurred including: more of the Members' Banking (1984/85). Sections of the Byfleet Banking were lost as the industrial and commercial

areas were developed (1986 onwards) and the southern end of the Finishing Straight and The Fork began to be lost as Vickers developed their factory site and built over these areas in the 1950s, before the current commercial office and residential development led to the removal of any surviving sections. The Hennebique Bridge was also removed, but as a result of storm and flood damage in 1968.

During the 1970s and 1980s the Brooklands Society (founded in 1967) carried out the arduous task of clearing away much of the post-war industrial features and materials that obscured what remained of the race track so that it could once again be appreciated and understood by the public.

Over recent decades, damage has continued to occur through inappropriate methods of repair and workmanship by utility companies when installing new services in and around the race track.

Significance/Value

Widely recognised as the first purpose-built motor racing circuit in the world, the Brooklands Outer Circuit has gained national and international recognition, along with its pioneering use of concrete to construct the racing surface.

This significance and value has not been diminished by the fact that the track stopped being used as intended in September 1939. As in its 26 year period of operation (taking into account the 6 years lost due to World War One), it was the location for a number of world-record breaking achievements, including: the 24-hour endurance record by S F Edge in 1907 (1,581 miles); and a number of World Land Speed records were broken at Brooklands, most notably being John Cobb in 1935 with a lap record of 143.44mph. Furthermore, it was the venue for the first British Grand Prix in 1926.

Brooklands is a unique site with both cultural and historic significance, which has achieved enduring international recognition. The surviving remains of the race track are considered to be of national importance – hence its inclusion as part of the Brooklands Scheduled Monument.

Risks and Recommendations

The principal challenges in the conservation of the remaining sections of the Outer Circuit are the vulnerability of degrading surfaces and the need to retain originality and patina of age as well as the erosion of the support banking (burrowing animals/tree growth) and potential lack of edge support to the banked sections of track – a key aspect of which is related to both is ongoing maintenance through weed/vegetation control and site management. The southwestern section of the Byfleet Banking is at a high degree of risk due to the unmaintained weed growth and vegetation which dominate the race track and may potentially have led to the loss of the concrete surface.

The surviving sections of track within the Brooklands Museum site (Members' Banking and north end of the Finishing Straight) and Mercedes-Benz World (Railway Straight) are still used by vehicles, either as means of access/parking or for driving courses/events. Consequently, the surface is degrading to varying degrees, this can be of particular concern where some original sections survive as these are not reinforced and voids/soil erosion below can lead to localised subsidence and failure of the concrete.

Some sections of track have been previously repaired and the Railway Straight is due to be covered with a removable concrete surface laid over the top of the original historic surface and finished to replicate the original. The risks of incremental concrete maintenance repairs, which have potential to diminish the asset being conserved, may only apply if not properly managed through the use of matching concrete mix designs and very skilful application. Whilst the preferred objective is to leave the surfaces 'as found', there may be a necessity for repair or making good (e.g. for safety reasons). The dilemma in the case of Brooklands is that running repairs are also a key part of the track's pre-1940 history, as the original material was of low quality and laid sometimes directly over poor ground. Also the surviving evidence across the areas of track as a result of the WW2 camouflage and defensive measures against air attack as well as the WW2 and post-war uses by Vickers/BAC is also of historic and architectural interest.

In addition, the restrictions on public access to some of the sections add a degree of risk through a potential lack of public understanding as to their value, relevance and importance to Brooklands motor racing history.

Relevant CMP Recommendations: G2-G7, C1-C11, M1, M3-6 and EC1-3

Sources

Brooklands Museum Archives
Brooklands Museum Website & Guidebook
Brooklands Motoring History Timeline – Julian Temple, Brooklands Museum (15/12/2013)
The Finishing Straight (F/S) Timeline – Julian Temple, Brooklands Museum (13/12/13)
Historic England Scheduled Monument Description

Illustrations

Tom Lace in 4.5 ltr Invicta passing Freddie Dixon in Riley

© via Brooklands Museum

Start On Railway Straight Of Army & Navy Meet 7 August 1915

© via Brooklands Museum

Start of the Britsh Empire Trophy 1934

© via Brooklands Museum

Denis Minett on banking

© via Brooklands Museum

Looking south down the Finishing Straight, from the Members' Banking

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Members' Banking, looking west from Members' Hill Bridge

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Railway Straight, looking north-east

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View, looking northeast, along the western section of the Byfleet Banking

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View, looking north, along the southwestern section of the Byfleet Banking

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View, looking southeast, along southern section of the Byfleet Banking

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View, looking northeast, along the southeastern section of the Byfleet Banking

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View, looking northeast, across the Cobham Bridge, spanning the River Wey

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Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

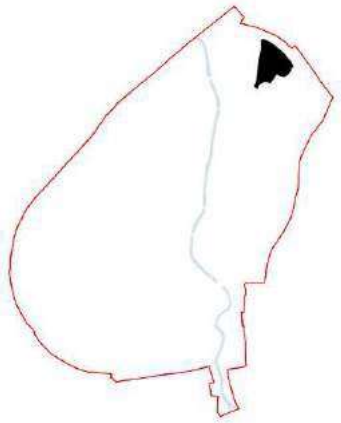
HERITAGE ASSETS GAZETTEER

Reference	Members' Hill – inc. Test Hill, Air-Raid Shelters & Bofors Anti-Aircraft Gun Tower	Status	Scheduled Monument

Summary

Designation Reference:	SM33961 - 01 Historic England
Date:	1907 (first motor racing association)
Association:	Motor Racing & Military
Function:	Natural topographical feature, developed for use as part of the racing circuit and now part of the Museum site.
Scheduled:	17 January 1975
Amended:	7 January 2002

Location



History and Description

This natural topographic feature, which once formed part of ancient woodland, became isolated through the construction of the race track when it was initially sandwiched between the Members' Banking and Finishing Straight (before the Campbell Circuit was added along its southern edge in 1937). Its location and formation provided a prime vantage point for spectators and the site for the Members' Restaurant and main grandstands during the motor racing period – as a result, from its opening in 1907, it was divided into four areas along its southern side by a series of railings (some of which still remain today). From the west these included: (i) the 'Members' Enclosure', which contained their own grandstand and had access to the Restaurant; (ii) the 'Reserved Lawn', which contained the 'Tattersalls' grandstand and again had access to the Restaurant; (iii) the 'Five Shilling Enclosure', which contained two grandstands; and (iv) at the eastern end was the 'Public Enclosure' which was just a grassed area. Members' were provided with their own access above the track via 'Members' Bridge' a steel framed structure, supplied by Head Wrightson & Co. Ltd. of Thornaby-on-Tees (the current bridge is a 1988 replica), whereas the other spectators used the series of three parallel tunnels under the track, on the northeast side of the hill.

In 1909 the Test Hill was added, which brought more focus to the hill. It consisted of a concrete roadway, 352ft (107.3m) in length across varying gradients (average 1:5), constructed to allow automobile engineers to test engine acceleration and vehicle braking. In 1937, when the Campbell Circuit was built a footbridge was built over this road racing circuit to allow spectators to move between the hill and the other spectator and car parking areas to the south, which was located between The Fork and the Finishing Straight.

Following the outbreak of World War Two, the lightweight structures (grandstands and Campbell Bridge etc.) were removed and the Hill became a defensive point for the airfield with a 40mm 'Bofors' Anti-Aircraft Gun and Sighting Tower added on the north side of the Restaurant building along with a series of other wartime structures, including a series of pre-cast concrete frames and bases on the south side of the Hill, which are understood to have been the footings and supporting framework for a timber 'mess' type building where the personnel crewing the gun tower would have been based; and a number of air raid shelters built against and into the bottom of the hill on both the west and northeast sides. These shelters were associated with the Wellington production line hangars built across the track. Three brick and concrete shelters were built into the bottom of the bank on the northeast side, each containing a series of rooms/cells with blast walls externally. Whereas on the west side, the shelter was constructed by excavating the foot of the hill, casting a reinforced concrete tunnel which was then buried in earth with both entrances protected externally by brick blast walls at each end.

During the 1970s and 1980s the Brooklands Society (founded in 1967) carried out the arduous task of clearing away much of the post-war industrial features and materials that obscured much of the historic features on and around Members' Hill, so that it could once again be appreciated and understood by the public. Further clearance work by Brooklands Museum staff and volunteers also helped to uncover other war-time and post-war features on the south side of the banking. The Museum has also recently replaced the railings up the side of the Test Hill road surface, using early photographs to replicate the original design.

Significance/Value

Although predominantly a natural topographic feature, the landscaping carried out during the construction of the track and the subsequent above and below ground built features added to it, give Members' Hill significant value in the context of Brooklands. This both in terms of its connections with the motor racing history (i.e. extant Members' Hill Restaurant buildings and Test Hill) and to its aviation history (with the remains of the World War Two features). This national importance is recognised through its inclusion as a distinct element of the Brooklands Scheduled Monument.

Risks and Recommendations

Located within the Museum site, the area benefits to a degree from the on-site understanding and knowledge associated with the site. However, as many of these remains have now become obscured by vegetation, there is a risk that they can be easily overlooked by visitors due to their lack of context and understanding. This includes the surviving sections of old metal railings which would once have divided up the Hill into its different spectator enclosures and the concrete bases/footings from former bridges which originally allowed spectators access over the Campbell Circuit to the south and also allowed spectators to move down the side of the Test Hill and across it at the same time.

Furthermore, with no hard-surfacing alongside the Test Hill surface itself, the grass becomes badly worn as a result of visitor footfall, exposing the earth and tree roots etc. which in turn leads to further erosion damage with routes being worn into the surface.

Relevant CMP Recommendations: G2-G7, C1-C11, M1, M3-6 and EC1

Sources

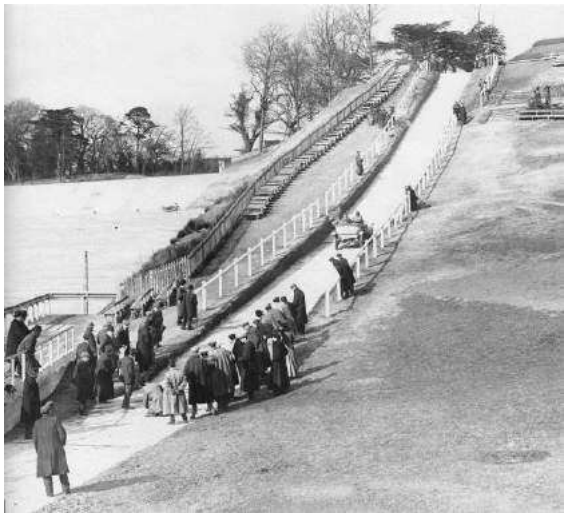
Brooklands Museum Archives
Brooklands Museum Website & Guidebook
Brooklands Motoring History Timeline – Julian Temple, Brooklands Museum (15/12/2013)
The Finishing Straight (F/S) Timeline – Julian Temple, Brooklands Museum (13/12/13)
Members' Hill Grandstands Timeline – Julian Temple, Brooklands Museum (16/12/13)
Historic England Scheduled Monument Description

Illustrations

Cars going to start of Horsley Plate Race (1907) with members banking in background

Crowds on Members' Hill (1907)

© via Brooklands Museum

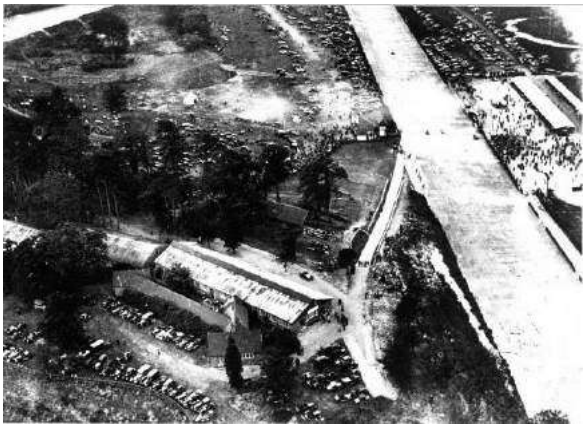


Test Hill on Opening Day, 25 March 1909

© via Brooklands Museum

Saloon cars descending Test Hill (1929)

© via Brooklands Museum



Aerial view of Members' Hill pre-1937

© via Brooklands Museum

Test Hill out of use and relocated World War 2 hut visible in top of picture, located on reinforced concrete foundations originally built for one of the grandstand s
Post-war date unknown

Looking up Test Hill

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Air raid shelters, northeast side of Members' Hill, built in late 1940s for Vickers dispersal hangar T222

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Air raid shelter interior, west side of Members' Hill

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'Bofors' Anti-Aircraft Gun Tower

Radley House Partnership - 2013

World War 2 hut, relocated here post-war on top of extant reinforced concrete foundations, originally built for a grandstand on south side of Members' Hill

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Remains of iron railings from former spectator enclosures/pathways across Members' Hill

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Remains of concrete footings and iron framing from former pedestrian bridge (timber) spanning the Campbell Circuit

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View of concrete footings (2 no.) from former pedestrian bridge alongside Test Hill, originally spanning transverse path across Members' Hill

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Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

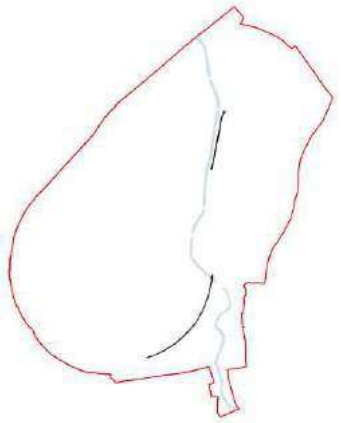
HERITAGE ASSETS GAZETTEER

Reference	Aerodrome Road	Status	Scheduled Monument

Summary

Designation Reference:	SM33961 – 08 & 10 Historic England
Date:	1911/12
Association:	Aviation
Function:	Originally provided a means of access between the Motoring Village to the north of Brooklands and the Flying Village to the southwest. The extant sections are now used by pedestrians to move around the site (where accessible)
Scheduled:	17 January 1975
Amended:	7 January 2002

Location



History and Description

Aerodrome Road was constructed with 'macadam' laid over the top of natural clay or compacted hardcore, without any form of kerb or edging, as a service road between the southwest corner of the Paddock in the Motoring Village and the east side of the Flying Village, located inside the southwest corner of the Byfleet Banking. Originally timber bridges were constructed over the oxbow lake and bent?/bend in the River Wey. With the back-filling of the oxbow lake, only the southern bridge was required and still remains, which in 1931 was replaced by Surrey County Council with a ferro-concrete bridge – at the same time the road was completely repaired and re-tarred.

The road operated as a perimeter road for the aerodrome with part-built or dismantled aeroplanes moved around the site (especially by Hawker Aircraft Ltd. in the 1930s), however it is not believed to have ever been used as a taxiway for aircraft. The north end of the road also gave spectators access to car parking which was located, on race days, between the river and the Finishing Straight.

By the early 1950s, with the growth of Vickers-Armstrongs works, the southern section of Aerodrome Road was improved and widened to allow two-way vehicular traffic, so that it could be used by emergency vehicles and other site traffic to move easily within the perimeter of the site.

Following the closure of the British Aerospace factory by 1989 and the subsequent redevelopment of areas of Brooklands in the 1990s, sections of the road were removed. Most notably at its northern end, adjacent to the Campbell Bridge, where a 280m (918') length of road was removed as part of flood protection measures associated with The Heights development in the early 2000s. More recently, in 2013, further building work was carried out to extend one of the office buildings up to the edge of Aerodrome Road just near to the Museum boundary.

Significance/Value

As the only means of circulation between the Motoring Village and the Flying Village, for vehicles and aircraft components, what now remains of the road is of considerable national significance and value to the Brooklands Conservation Area as one of only a few surviving early remains of the aerodrome. This national importance is recognised through its inclusion as a distinct element of the Brooklands Scheduled Monument.

Risks and Recommendations

The isolated locations of the extant sections of Aerodrome Road put them to a higher degree of risk through a potential lack of public understanding as to their value, relevance and importance to Brooklands aviation history.

The impact of visitor footfall across its surface is minimal, compared to its original use by vehicles. However, encroaching vegetation along its edges and surface (The Heights) puts the remaining sections at significant risk of loss. This risk has been further compounded for the sections contained within The Heights, where trees have been planted near to its eastern edge – as they mature and their root system develops, they may begin to cause damage and lead to loss of the track edge and alignment.

Relevant CMP Recommendations: G2-G7, C1-C11, M1, M3-6 and EC2-3

Sources

Brooklands Museum Archives
'Aerodrome Road' at Brooklands, Surrey Timeline – Julian Temple, Brooklands Museum (13/12/2013)
Historic England Scheduled Monument Description

Illustrations

Oblique view of Brooklands from the north in 1926, with Aerodrome Road visible along the east side of the riverbank – between the Motoring Village and Byfleet Banking in the distance.

Oblique view of the BAe East Works in the 1980s with Aerodrome Road clearly visible along the east riverbank and across the bridge over River Wey to the south

Extant section of Aerodrome Road, within 'The Heights' development, becoming obscured by grass and vegetation.

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Extant section of Aerodrome Road, within the Brooklands Community park, inside the Byfleet Banking.
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Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

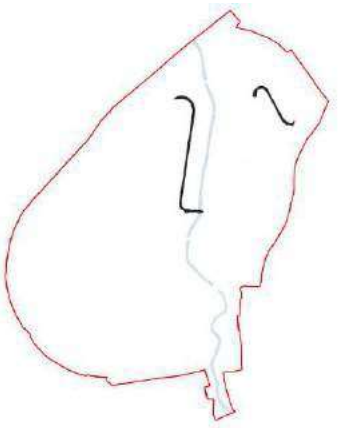
HERITAGE ASSETS GAZETTEER

Reference	Brooklands Motor Racing Circuit – Campbell Circuit	Status	Scheduled Monument

Summary

Designation Reference:	SM33961 – 01 & 02 Historic England
Date:	1937
Association:	Motor Racing
Function:	Originally a road racing circuit, now the eastern section is used as access to Brooklands Museum and the western section forms part of the Mercedes-Benz World test track.
Scheduled:	17 January 1975
Amended:	7 January 2002

Location



History and Description

Sir Malcolm Campbell designed this road circuit in 1936, in response to the declining popularity of Brooklands as a motor racing venue; construction began in the same year – as with the Outer Circuit, it was constructed in a series of regular concrete bays. Unlike the original Outer Circuit, the Campbell Circuit was constructed with reinforced concrete, the total length of this circuit measured approximately 2¼ miles (4.4 kilometres) and was typically 32 feet (9.75 metres) wide, increasing to 40 feet (12.2 metres) at the corners. Completed in 1937 and officially opened by Dame Ethel Locke King on 20th April, it linked the Members' Banking and Railway Straight of the Outer Circuit with a series of straights and bends laid out across the north end of the aerodrome and the south side of Members' Hill. The circuit was used for motor car and motorcycle racing, as well as a 'Soap Box Derby' in July 1939 – a month before its last race use before the outbreak of the war. During World War Two, the Campbell Circuit was camouflaged and the Campbell Bridge was a vital link between the Vickers factory and the aerodrome – narrowly escaping destruction when the Luftwaffe bombed Vickers on 4th September 1940. On the western section, a hangar was built beside the Campbell Circuit for use by Communications aircraft and these and Vickers aircraft were towed along the road for dispersed parking. Anti-aircraft defences were also hastily built adjacent to the Campbell Circuit in 1940/41. Post-war, the Campbell Circuit had relatively little use except by factory site transport vehicles particularly using the former Campbell Bridge which led to a new tarmac and concrete link road across the centre of the aerodrome linking the much expanded Vickers/BAC/Bae East and West Works. The northeast section became the main access route for the new Brooklands Museum from c.1989 but has been used only as a staff and delivery entrance since Mercedes-Benz World provided a new public entrance and car park in late 2006.

Sections of the track adjoining the Railway Straight were lost in 1951, following the construction of the concrete runway and taxiway by Vickers-Armstrongs which ran north-south through Brooklands, while eastern sections largely survived within the Vickers/BAC/Bae factory until 1989/90 when they were lost through demolition and the redevelopment of the former British Aerospace East Works for The Heights Business Park. The majority of the Campbell Circuit Pits also survived in use as stores until demolished just hours before the Brooklands Conservation Area was designated in November 1989. Five sections of Campbell's original circuit however do survive, these are Test Hill Hairpin and Dunlop's Delight (both located on the Brooklands Museum site), the Banking Bend (located in the JTI UK site) and the Sahara Straight and Howe's Corner including the Campbell Bridge over the River Wey (in the Mercedes-Benz World site). The Campbell Bridge was originally built c.1927 to enable Vickers aircraft to be taken over the River Wey between the factory and aerodrome and was then modified in 1937 to accommodate the

Campbell Circuit too. As well as the track itself, many of the original associated features and details still survive alongside the sections within the Museum site. These include: sections of the in-situ cast concrete retaining walls around the north side of the Test Hill Hairpin and northeast side of Dunlop's Delight – the latter having three openings with steps, beyond which was originally provided access to the spectator enclosures on Members' Hill; sections of low-level in-situ cast concrete kerbing (including metal columns and formwork encased within) along the southwestern edge of the track surface; and the remains of a pre-cast drainage gully at the southern end of Dunlop's Delight and the inner radius of the Banking Bend.

Significance/Value

Although this circuit had a relatively short period of intended use, compared to that of the Outer Circuit, it has considerable cultural and historic significance due to its connection with Sir Malcolm Campbell as well as it being the last stage of motor racing circuit development ever carried out at Brooklands, before the track's closure in 1939 due to the outbreak of war. Making it both nationally and internationally important – hence its inclusion as part of the Brooklands Scheduled Monument.

Risks and Recommendations

The principal challenge in the conservation of the Campbell Circuit is the vulnerability of degrading surfaces, and the need to retain originality and patina of age – a key aspect of which is related to ongoing maintenance through weed/vegetation control and management. Significant damage to certain sections in recent decades has been caused by winter flooding and erosion of subsoil causing sections to subside. In addition, further damage is caused by heavy goods vehicles, buses and cranes which travel across these sections of track – all of which should be ideally discouraged from driving over the Scheduled Monument.

Unauthorised works to the Scheduled Monument are an issue, with respect to the Campbell Circuit this relates to the Campbell Bridge where the east side of the structure which would have connected with the river bank was been removed (c. 2010) and is yet to be reinstated and properly repaired. Every effort should be made to address the reasons that lead to its removal and so allow the missing section to be properly reinstated. Historic England is currently in discussion with the relevant landowners about repairing this bridge and its abutments.

All of the surviving sections of the Campbell Circuit are still used by vehicles, either as means of access/parking (JTI UK Ltd and Museum) or for driving courses (Mercedes-Benz World). Consequently, the surface is degrading to varying degrees – with sections of the Sahara Straight and Dunlops' Delight having already been resurfaced with tarmac (pre-1980s and early 21st century respectively) and complete bays of the track have been replaced with new concrete (Sahara Straight). The risks of incremental concrete maintenance repairs, which have potential to diminish the asset being conserved, may only apply if not properly managed through the use of matching concrete mix designs and very skilful application. Whilst the preferred objective is to leave the surfaces 'as found', there may be a necessity for repair or making good (e.g. for safety reasons – with respect to this, Historic England has generally approved of tarmac being used for temporary essential repairs).

In addition, the restrictions on public access to some of the sections add a degree of risk through a potential lack of public understanding as to their value, relevance and importance to Brooklands motor racing history.

The low-lying elements, Sahara Straight and Howe's Corner, also remain at risk from prolonged flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2-G7, C1-C11, M1 and M3-6

Sources

Brooklands Museum Archives
The Campbell Road Circuit (1937) Timeline – Julian Temple, Brooklands Museum (20/06/2013)
Historic England Scheduled Monument Description

Illustrations

Campbell Circuit being constructed alongside the Outer Circuit Finishing Straight (circa 1936)

© via Brooklands Museum

Construction of the south end of the Campbell Circuit Finishing Straight as it crosses the Outer Circuit Finishing Straight (c. 1936)

© via Brooklands Museum

Construction of the Campbell Circuit showing the c.1927 Vickers constructed bridge that was modified to accommodate the new circuit (1936)

© via Brooklands Museum

Looking north along the Finishing Straight, with the Test Hill Hairpin, Dunlop's Delight and the Banking Bend all visible in front of Members' Hill (date unknown)

© via Brooklands Museum

View from the Banking Bend along Dunlop's Delight to the south of Members' Hill at a BARC Meeting in August 1939

© via Brooklands Museum

Wellington L4212 being pushed over the Campbell Bridge (date unknown)w

© Vickers-Armstrongs Ltd via Brooklands Museum

Test Hill Hairpin, looking southwest, with concrete retaining wall alongside Members' Hill

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Low-level in-situ cast concrete kerbing to the southwestern edge of Dunlop's Delight

Radley House Partnership - 2013

The remains of the 'Banking Bend' which would have led round to the Members' Banking on the Outer Circuit. Now used as car parking by JTI UK staff

Radley House Partnership - 2013

View of the Sahara Straight, looking north

Radley House Partnership - 2013

The Campbell Bridge, spanning across the River Wey (viewed from the southwest)

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

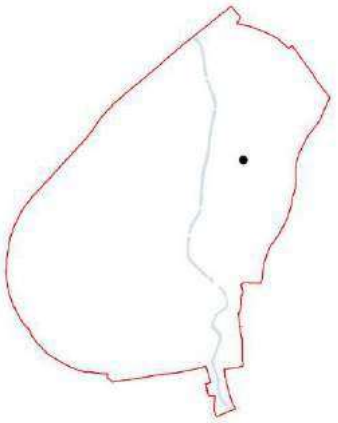
HERITAGE ASSETS GAZETTEER

Reference	Brooklands Motor Racing Circuit – Campbell Circuit Pits	Status	Scheduled Monument

Summary

Designation Reference:	SM33961 - 09 Historic England
Date:	1937
Association:	Motor Racing
Function:	Originally the pits garages associated with the Campbell Circuit, now used for storage purposes by The Heights grounds maintenance team.
Scheduled:	7 January 2002 (an amendment of the original 1975 scheduling)

Location



History and Description

In conjunction with the creation of the Campbell Circuit in 1937 (see separate Gazetteer entry), the Campbell Circuit Pits were constructed parallel to the circuit's new Finishing Straight (which no longer survives). Built with in-situ cast concrete panels and a painted rendered finish externally, they were divided into a series of open-fronted garage bays with a concrete flat roof over.

During the second half of the twentieth century, under Vickers-Armstrongs ownership, the structure was given the reference 'T68' & 'T241' where it was identified as 'Track Pits' and 'Store' respectively having been adapted for storage use with rendered concrete blockwork used to infill former openings and construct a central spine wall. The full length of the Pits survived until November 1989, when all but the surviving 3½ bays were demolished, just hours before the Brooklands Conservation Area was designated.

Following the redevelopment of the area now known as The Heights, the external ground levels have been raised, while rendered concrete blockwork has been used to infill former openings and construct a central spine wall to create a single storage space which runs the full length of the building. Externally, plaques identifying the names of former drivers and course personnel have been added above the former 'pit frontage', along with a series of painted murals stylistically depicting 1930s motor racing.

Significance/Value

Although its context is now lost and the intended operation of the Campbell Circuit and the Pits was relatively short compared to other motor racing assets at Brooklands, the surviving remains of this structure still have considerable cultural and historic significance due to their connection with Sir Malcolm Campbell as well as being the surviving feature from the last stages of motor racing at Brooklands, before the Circuit's closure in 1939 due to the outbreak of war. This structure is therefore both nationally and internationally important – hence included as part of the Brooklands Scheduled Monument.

Risks and Recommendations

The surviving Campbell Pits now stand isolated within The Heights development, alongside the principal vehicle access route into the site. Through loss of context, in combination with the inferred restrictions on general public access around The Heights a degree of risk as a consequence of a potential lack of public understanding as to the value, relevance and importance of the former Pits with the later stages of Brooklands' motor racing history – such confusion over the Pits' historic value already exists due to the use of later blockwork added during the Vickers-Armstrongs alteration works.

The current private use of the building reduces the risk of damage through general wear and tear and visitor footfall – as may occur with other built heritage assets within Brooklands. However, the leadwork copings to the end parapet walls are at risk from theft (evidence of attempted theft was noted during an August 2013 site appraisal). Should this occur, the core of the historic structure will also be put at risk from water penetration.

Relevant CMP Recommendations: G2-G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives
The Campbell Road Circuit (1937) Timeline – Julian Temple, Brooklands Museum (20/06/2013)
Historic England Scheduled Monument Description

Illustrations

Start of the JCC '200' in front of the Campbell Circuit Pits in 1938

Campbell Circuit Pits during a Sports Car Race in July 1939

The remains of the Campbell Circuit Pits, viewed from the south-east

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The remains of the Campbell Circuit Pits, viewed from the south-west

Radley House Partnership - 2013

Raised floor levels evident along with remains of former pit divisions and enclosures. 'Modern' in-fill wall (left hand side) decorated with motor racing mural.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

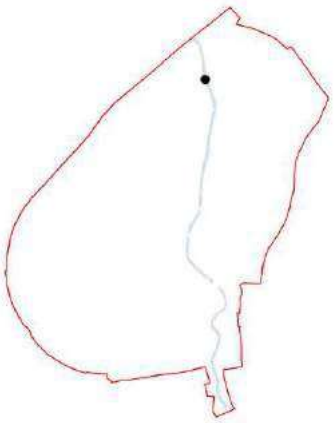
HERITAGE ASSETS GAZETTEER

Reference	'Vickers' Bridge	Status	Scheduled Monument

Summary

Designation Reference:	SM33961 - 03 Historic England
Date:	Late 1940
Association:	Aviation & Military
Function:	Access bridge over the River Wey
Scheduled:	17 January 1975
Amended:	7 January 2002

Location



History and Description

The bridge was built by Vickers-Armstrongs around late 1940, to enable their newly manufactured Wellington bombers (and subsequently other aircraft) to cross the River Wey and access the airfield from the Bellman hangar located on the Finishing Straight. They could then disperse to other airfields around the country, or be tested and prepared for collection. Constructed from panels of cast-iron riveted together, a concrete surface and kerbing is laid across its top to form the roadway.

The exact date of the bridge's construction is unknown, although most likely to be late 1940 when the related Bellman hangar was also completed. Photographic evidence suggests another 'Bailey' type bridge was originally built in this location circa 1937, to provide a secondary means of vehicular and pedestrian access to the sections of the Campbell Circuit on the west side of the River Wey. This is not to be confused with the earlier Campbell Bridge (located further south) which was Vickers' primary access to the pre-war and war-time aerodrome from c.1927. This current bridge has only been named the 'Vickers' Bridge by Brooklands Museum staff from the early 21st century.

The bridge now functions as a secondary means of vehicular access into the Museum site as well as allowing the transfer of historic aircraft to the grass runway beyond during aviation events.

Significance/Value

As a vital means of circulation around the site, for aircraft following their manufacture and preparation for dispersal, the bridge is of considerable national significance and value to the Brooklands Conservation Area as one of only a few surviving remains from its operation as a wartime aerodrome – and later post-war aircraft manufacture. This national importance is recognised through its inclusion as a distinct element of the Brooklands Scheduled Monument.

Risks and Recommendations

Readily accessible from Brooklands Drive (west side of River Wey) there is a risk of damage and increased wear to the concrete track surface from additional vehicle movements – including HGVs and buses which use the bridge as a turning point – this risk could be reduced with appropriate (discreet) signage and regular monitoring. Any repairs to the concrete surface should be carried out through liaison with Historic England to ensure the appropriate materials and methods of workmanship are applied.

It's somewhat isolated position across the River Wey, between the main complex of museum buildings and the service entry points to Mercedes-Benz World, puts the structure to a degree of risk through a potential lack of public understanding as to its value, relevance and importance to Brooklands.

Relevant CMP Recommendations: G2-G5, C1-C11, M1 and M3-5

Sources

CORLEY, DENIS & HUTCHINS, TONY: 'Brooklands Aerodrome – The Years 1939 to 2006'
Airfield Review
April 2006
Historic England Scheduled Monument Description

Illustrations

The 'Vickers' Bridge allowing aircraft to cross the River Wey and access the airfield from the Bellman hangar located on the Finishing Straight – photo taken in 1947 at the 'launch' of the Stratosphere Chamber

© via Brooklands Museum

A 'Bailey' bridge seen in the location of the current Vickers bridge – date unknown (circa Spring 1937)

© via Brooklands Museum

View, of the Vickers Bridge looking south east from the west bank of the River Wey

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Looking across the bridge towards the Museum, the original concrete surface and kerbing remains although degrading in some areas

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

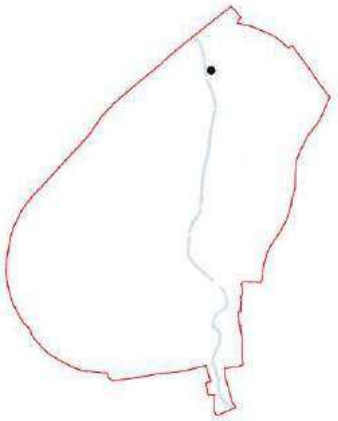
HERITAGE ASSETS GAZETTEER

Reference	Brooklands Memorial	Status	Scheduled Monument

Summary

Designation	SM33961 – 04
Reference:	Historic England
Date:	1957
Association:	Motor Racing and Aviation
Function:	Memorial
Scheduled:	17 January 1975 (an amendment of the original 1975 scheduling)

Location



History and Description

Designed by architects Ley Colbeck & Partners, following a commission by Vickers-Armstrongs (Aircraft) Ltd., the memorial was faced with blocks of 'white spar cast stone' over a masonry core. Measuring 9.5m (31') long, 1.5m (5') wide and 4.2m (14') high, the Memorial was originally located on the north western side of the former airfield facing the London to Portsmouth railway line.

It was built to commemorate the 50th anniversary of the site and included the text 'Brooklands 1907-1939' in 2' (0.6m) high bronze letters on both sides, as well as a large bronze plaque containing a sculptured plan view of Brooklands and a panel of text, on its north western face. It is understood to have been built by local contractors with the bronze details cast by a subsidiary of Vickers.

The Memorial text on the plaque reads as follows:

> "On this site in 1907, H F Locke-King, Esq., built the Brooklands Motor Racing Circuit - the first of its kind in the world.
>
> Brooklands, from 1907 to 1939, was the scene of many famous car and motorcycle races and three world's land speed records were established on the circuit. Numerous other records of endurance and speed were also made at Brooklands by all classes of motor cars and motorcycles.
>
> The 340 acre area enclosed by the track was used as one of England's earliest aerodromes and many of the great pioneers built and flew their aircraft here. The first flying experiments at the track were those of A V Roe in 1907-8 and subsequently many of the leading British aircraft companies were based at Brooklands.
>
> Much aviation history was made from this place. The Vickers Vimy aircraft in which Alcock and Brown made the first non-stop Atlantic flight in 1919 was built and tested here.
>
> Brooklands was used for military and test flying from 1914 to 1918, and from then until 1939 it became the world's most renowned centre of motor racing and of sporting flying. During the second world war aircraft built or assembled at Brooklands took part in every major campaign.

In 1946 the motor racing track and aerodrome were taken over by Vickers-Armstrongs, Limited and were devoted exclusively to the advancement of civil and military aviation.

This memorial was erected by Vickers-Armstrongs (Aircraft) Limited and was unveiled on July 6th 1957, by Lord Brabazon of Tara, P.C., G.B.E., M.C., in the presence of many of those who on the track or in the air had helped to create the fame and tradition of Brooklands."

Some of the dignitaries present at the unveiling included: Sir Alliot Verdon-Roe, Earl Howe, The Duke of Richmond and Gordon, Major-General C A L Dunphie (Chairman of Vickers-Armstrongs (Aircraft) Ltd.), Capt. Duncan Davis and George Edwards.

During the 1980s the large letters were replaced in plywood following the earlier theft of the original bronze plaque and letters, before being replaced again in plastic in the 1990s. The only original bronze element to survive is the sculptured plan view of Brooklands, which is now housed in the entrance foyer to the BARC Clubhouse.

In 2003 the Memorial was carefully dismantled and relocated to its current location in the Museum site with the same orientation as the original, following the redevelopment of the north western area of the former airfield by Mercedes-Benz with their principal building 'Mercedes-Benz World' being built over the site of the Memorial.

Significance/Value

Although the Memorial is no longer in its original location and only has modern replicas of the original bronze detailing, it is still of considerable significance and value to Brooklands in terms of both the motoring and aviation histories – through its design, content and its connection with those responsible for the original commission. It has therefore been included as part of the Brooklands Scheduled Monument.

Risks and Recommendations

Having been relocated to the edge of the Museum site, the Memorial now benefits from the on-site understanding and knowledge associated with Brooklands history. However, its somewhat isolated location and loss of context from its original site put the structure to a degree of risk through a potential lack of public understanding. Riverside tree growth and vegetation partially obscures the northwest elevation from outside of the Museum site and the reconstituted stone is beginning to become stained and fracture at the arrises, possibly as a result of water penetration and subsequent frost damage – this will further reduce its visual impact and interest to the public, especially if seen from the west side of the River Wey. Specialist input would be required to monitor and assess this damage so that appropriate and sympathetic repairs can be specified.

Relevant CMP Recommendations: G2-G5, C1-C11, M1 and M3-5

Sources

The Brooklands Memorial (1957) Timeline – Julian Temple, Brooklands Museum (16/12/2013)
Historic England Scheduled Monument Description

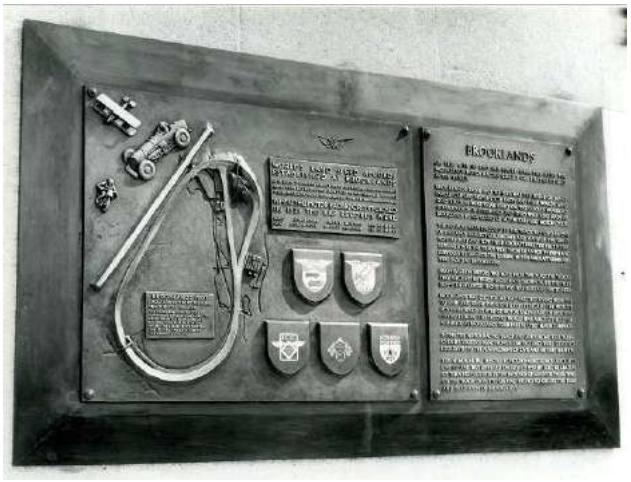
Illustrations

Unveiling of the Brooklands Memorial by Lord Brabazon 1957

© via Brooklands Museum

Unveiling of the Brooklands Memorial by Lord Brabazon 1957

© via Brooklands Museum



The Brooklands Memorial Plaque (1957)

© via Brooklands Museum

View of the south-east face of the Memorial, with its replica lettering.

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View of the north-west face of the Memorial, with its replica lettering and plaque.

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Close up view of the replica plaque on the north-west face of the Memorial.

Radley House Partnership - 2013

The original Memorial plaque, now located within the entrance foyer of the BARC Clubhouse.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

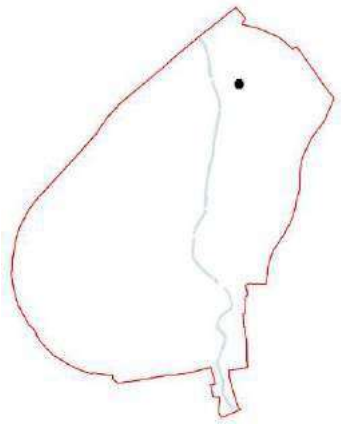
HERITAGE ASSETS GAZETTEER

Reference	Former Brooklands Automobile Racing Club Clubhouse	Status	Listed Building

Summary

Designation	Grade II*
Reference:	1272443 – Historic England (Part of the Scheduled Monument 1975-2002)
Date:	1907
Association:	Motor Racing 1907-39, Aviation 1945-83
Function:	Originally the motor racing Clubhouse, it now houses museum exhibits, offices, the Museum library and archive (partial), corporate and Brooklands Trust Members' facilities.
Listed:	1 November 2002

Location



History and Description

Designed and built in conjunction with the motor racing circuit, the building was originally known as 'The Weighing Block' and housed the various race track officials (Clerk of the Course, Clerk of the Scales and the stewards) as well as containing the drivers' changing rooms, a large open viewing stand on the south side of the first floor for members of the press and a bar and dining room for members of the Brooklands Automobile Racing Club (BARC). Generally brick construction, with a slate roof and copper-domed tower the building was officially opened on 17th June 1907.

Renamed 'The Official Block' in 1914, further alterations included the addition of a steel-framed structure housing a Tea Room at first floor level on the north side, which led onto a small balcony on the east side giving direct access to the Paddock below. Major alterations were then carried out in 1929-30 to the designs of architect and surveyor A G Stedman, this included conversion of the Tea Room into a Public Dining Room, the addition of a public 'Snack Bar' at first floor (west side), external stairs with balcony and the Ladies Cloak Rooms on the ground floor. Later in the 1930s further alterations were carried out including the addition of glazing to the first floor and enclosure of ground floor space to create additional BARC facilities (Ladies' Reading Room, Billiard Room and Members' Lounge).

Vacated by the BARC soon after war was declared, its main use during WW2 is unknown, however in the autumn of 1945 Barnes Wallis moved into the building and it became the hub of the Vickers-Armstrongs Research & Development department, with the interior converted into drawing offices, general offices and workshops. Its new association with the aviation industry lasted through to the early 1980s with the BAC Film Unit occupying the building for 12 years after Wallis retired and the Research & Development department moved out in 1971. It was then sold to Gallaher Ltd in 1984 who restored much of the building to its pre-war configuration and three years later leased it to Elmbridge Borough Council to facilitate the establishment of Brooklands Museum.

Refer to 'The 1907 BARC Clubhouse (W109/T206/MB1) Timeline' document in the Appendices for a more detailed history.

Significance/Value

Located adjacent to the Finishing Straight, the Clubhouse has been the principal building at Brooklands since the opening of the motor racing circuit in 1907. While fulfilling social and practical needs for the circuit, through its internal arrangement and uses it also demonstrates the chronological series of changes that have occurred at Brooklands over the last century. These connections are of high

significance and value, which make the Clubhouse of national and international importance (hence its grade II* listing).

Risks and Recommendations

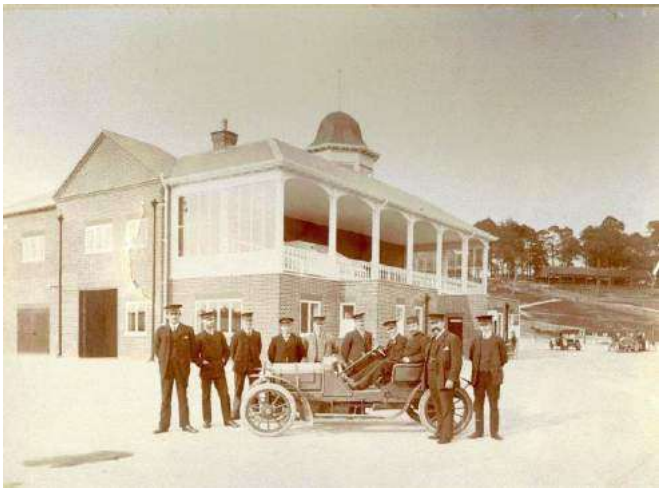
Located at the heart of the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. However, having areas open to the public increases the risk of potential damage to the fabric being caused by wear-and-tear, whereas other less-used private areas away from the public eye (i.e. storage spaces in the tower) are at risk through a lack of use/monitoring and cyclical maintenance due to being perceived as having a lower priority than public spaces. The building is also at risk from flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2, G3-G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives
Brooklands Museum Website & Guidebook
Brooklands History – The 1907 BARC Clubhouse (W109/T206/MB1) Timeline – Julian Temple, Brooklands Museum (13/12/2013)
Historic England Listed Building Description

Illustrations



BARC Staff with Staff Car 1907

View of the Clubhouse and Paddock, from the north-east – late 1920s

The Clubhouse Lounge
1931

The Clubhouse Ladies
Reading Room
1931

The Clubhouse Veranda
(Finishing Straight and
Number Board in background)
1931

View of the Clubhouse from the southeast, with the A V Roe memorial in the foreground.

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Clerk of the Course's Office. Dressed museum exhibit within the Clubhouse.

Radley House Partnership - 2013

Clerk of the Scales Office and Weighbridge. Dressed museum exhibit within the Clubhouse.

Radley House Partnership - 2013

The Ladies Reading Room.
Dressed museum exhibit
within the Clubhouse.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

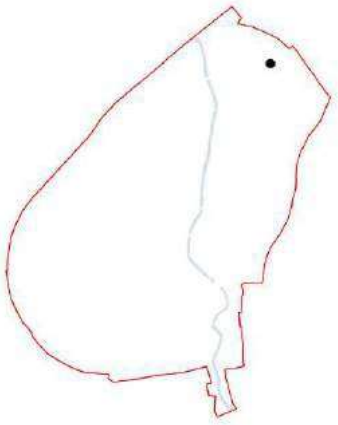
HERITAGE ASSETS GAZETTEER

Reference	Former Members' Hill Restaurant	Status	Listed Building

Summary

Designation Reference:	Grade II 1272444 – Historic England (Part of the Scheduled Monument 1975-2002)
Date:	1907
Association:	Motor Racing
Function:	Originally restaurant buildings, now under restorations as a workshop and showroom for the 'Brooklands Motor Company'
Listed:	1 November 2002

Location



History and Description

Designed and built in conjunction with the motor racing circuit, the Members' Hill Restaurant buildings principally consist of two parallel ranges linked together, with a courtyard formed in between with flanking angled wings – originally these would have contained the 'Luncheon Room', kitchens and cloakrooms. All are of red brick construction under an asbestos cement (south range) and plain clay tile roof (remainder) – with the principal timber trusses and braces exposed in the larger south range (i.e. the 'Luncheon Room'.

Originally for use by Members only, it was in use on the day of the track opening, 17th June 1907. The location of the buildings on top of the hill meant that they could get clear views across much of the race track - hence many newsreel cameramen would film from this area.

Until the outbreak of World War 2, the buildings' use remained unchanged. However after this it initially became a billet for the gunners operating the 'Bofors' anti-aircraft gun located immediately to the north– with the 'Luncheon Room' used to stage occasional musical events and dances to entertain local troops. After the war, under the ownership of Vickers-Armstrongs, the north and south ranges were identified as T244 and T245 and used as a 'Store' and 'Open Lavatory' respectively. Their post-war use is largely undocumented but it is believed to have been mainly for aircraft materials and parts storage.

Following the contraction and decline of the Bae/British Aerospace factory in the 1970s, the buildings fell into disrepair with some sections becoming derelict. Sold with 40 acres to Gallaher Ltd in 1984, they continued in use for storage until it transferred to Brooklands Museum in 1987. The Brooklands Motor Company leased the buildings in 2008 and began a major programme of repair and restoration works, to bring them back into use as a classic vehicle workshop.

Significance/Value

As with the Clubhouse, the Members' Hill Restaurant buildings were among the first buildings at Brooklands since the opening of the motor racing circuit in 1907. Again fulfilling social and practical needs for the circuit, through its changes of use they also provide a significant physical link with events at Brooklands during the motor racing period, war-time and the post-war growth of the aviation industry. These connections are of particular significance and value, which make the Restaurant buildings of national importance (hence their grade II listing).

Risks and Recommendations

Isolated from the rest of the museum facilities and exhibits, there is the risk that the former Restaurant buildings could become neglected – as was demonstrated through their condition following the decline of the BAC aircraft factory in the 1970s. However, with new tenants and a new viable use – the ongoing repair and refurbishment programme of works will bring the buildings back into full use. This should also facilitate a cyclical maintenance regime.

The top of the hill has become heavily wooded, providing screening as well as valuable wildlife habitats. However, trees should be monitored and maintained to ensure there is no risk of future damage to the built structures – with any tree works being carried out in accordance with the Conservation Area legislation.

Relevant CMP Recommendations: G2, G3-G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives
Members' Hill, Test Hill & Members' Hill Restaurant Buildings Timeline – Julian Temple, Brooklands Museum (16/12/2013)
Historic England Listed Building Description

Illustrations

Members' Hill Restaurant Buildings
c. 1910

Soldiers from the 284 Anti-Aircraft Battery during World War Two
(date unknown)

Members' Hill Restaurant Buildings
c. 1950s

West view of the Members' Hill with repair works in progress

Radley House Partnership - 2013

'Courtyard' area viewed from the east, formed between the different ranges of the linked buildings

Radley House Partnership - 2013

Internal view of the refurbished south range (the former 'Luncheon Room') – exposed trusses and brace evident in distance.

Radley House Partnership - 2013

Internal view of the north range with refurbishment works in progress

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

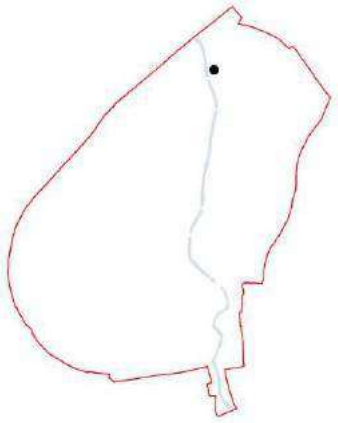
HERITAGE ASSETS GAZETTEER

Reference	Former Flight Ticket Office	Status	Listed Building

Summary

Designation	Grade II
Reference:	1191645 – Historic England (Part of the Scheduled Monument 1975-2002)
Date:	1911
Association:	Aviation
Function:	Originally a Ticket Office, now a museum exhibit and store
Listed:	1 November 2002

Location



History and Description

Built in 1911, this is understood to be the world's first Flight Ticket Office. Constructed with painted brick walls, timber framed glazing above with a plain clay tile roof and decorative crested ridge – with a painted signboard to the ridge.

Originally constructed in the Brooklands Flying Village, at the southern end of the Conservation Area, it was built for a London booking agency, Keith Prowse & Co. who were acting on behalf of others providing commercial flights. A telephone line connected it with their main London office as well as other branches around the country. Customers were able to book a simple joyride flight for two guineas, or a longer flight of three circuits of either Brooklands or Hendon Aerodrome for four guineas, to a longer cross-country flight for ten guineas.

It is thought that it no longer operated as a ticket office after World War I, however by the 1930s it was used by Brooklands Aviation Ltd. as their 'Pilots' Reporting Office'. After World War 2, with Vickers-Armstrongs having taken over the Brooklands site, the building was identified as T115 and used as an office. However, by 1989 it had been surrounded by the growing Brooklands Industrial Estate, so it was agreed to dismantle and move the building to its current location on the Museum site where it was re-built in 1990.

Significance/Value

The first solidly constructed building in the Brooklands Flying Village and the first Flight Ticket Office in the world, gives this small relatively simple structure a high degree of significance and value. Not only at a local and national level in the context of Brooklands aviation history but also at an international level due to it being the first of its type – hence its grade II listing.

Risks and Recommendations

Having been relocated to the edge of the Museum site, the building now benefits from the on-site understanding and knowledge associated with Brooklands history. However, its somewhat isolated location and loss of context from its original site put the building to a degree of risk through a potential lack of public understanding. Furthermore, being used as an ad-hoc store means the interior of the building may not be monitored as regularly as those areas open to the public. The building is also at risk from flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives & Website
Brooklands Museum Exhibit Presentation Boards (2013)
Historic England Listed Building Description

Illustrations

The Blue Bird Restaurant and Flight Ticket Office
(date unknown)

Flight Ticket Office
1912

Flight Ticket Office surrounded by aircraft factory buildings mid-1970s

View, looking north-east, of the Flight Ticket Office, in its new position within the Museum site. (Relocated Brooklands Memorial in background)

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

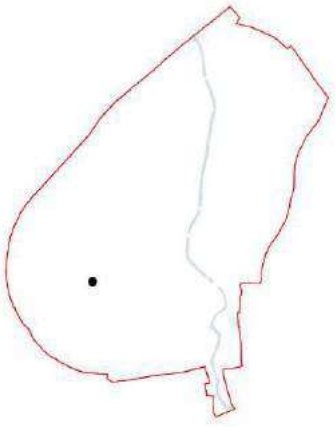
HERITAGE ASSETS GAZETTEER

Reference	Former Brooklands Aero Clubhouse	Status	Listed Building

Summary

Designation	Grade II
Reference:	1030123 – Historic England
Date:	1932
Association:	Aviation
Function:	Originally the Aero Clubhouse in the Flying Village, now commercial offices
Listed:	17 January 1979

Location



History and Description

Designed by Graham R. Dawbarn, a leading British airport architect, following a commission by Brooklands Aviation Ltd. in 1931, the building was opened in May of the following year, at a cost of £7,439, on the eastern side of the Flying Village facing the open grass aerodrome. Constructed in brick with a rendered finish externally and a series of in-situ concrete flat roofs and floors, the building is Art Deco in style and comprises of a central three-storey tower and clock (with a four-storey stair tower on its west side), flanked on either side with single-storey wings.

With Brooklands Aerodrome being a popular and regular venue for air races, 'dawn patrols', flying displays and open days, the Clubhouse became the social hub for the pilots and personnel from the neighbouring flying schools with a restaurant, lounge, bars and offices contained within. The large expanse of flat roofs was designed to give the spectators an improved vantage point for the various aviation events – safety railings to the roof perimeter still remain today.

After World War 2, with Vickers-Armstrongs having taken over Brooklands, the building was identified as T120 and was used as the 'Aircraft Servicing School' to train engineers/mechanics. Then following the decline of the aviation industry at Brooklands, the former Clubhouse became disused in the mid-1970s (but was still worthy of listing in 1979), eventually sympathetically converted in 1987-88 to a series of lettable offices with its elevations and elements of its internal arrangement and detailing remaining unaltered from its original design.

Significance/Value

The only building from the former Brooklands Flying Village and Aerodrome to remain in its original location, this building also remains in a relatively unaltered external condition. It has a high degree of significance and value due to its connections with the growth of aviation at Brooklands, this national importance is reflected through its grade II listing.

Risks and Recommendations

The former Aero Clubhouse has lost its context as a result of the growth of the Brooklands Industrial Estate on its north, west and south sides and the construction of Sopwith Drive to its east – this puts the building to a degree of risk through a potential lack of public understanding. There is also a further risk, that any more development around the building may have a further negative impact upon its setting and context.

Now in full use with an owner/occupier who has an interest in Brooklands and has a cyclical maintenance regime in place, the risk of harm to the buildings itself is significantly reduced.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

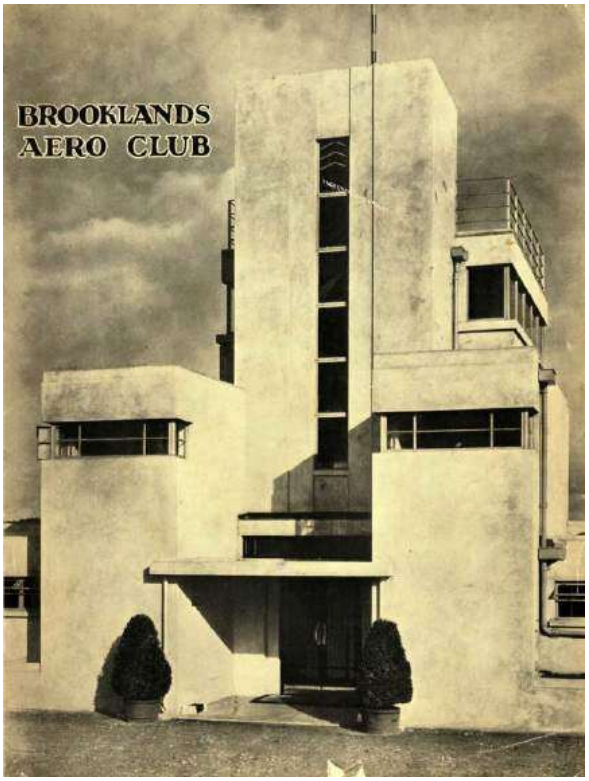
Sources

Brooklands Museum Archives & Website
Historic England Listed Building Description

Illustrations

Brooklands Aero Club
(date unknown)

The Dawn Patrol,
Brooklands Aerodrome
1933



West entrance to the Aero Clubhouse
(date unknown)

View, looking west, of the
former Aero Clubhouse

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Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

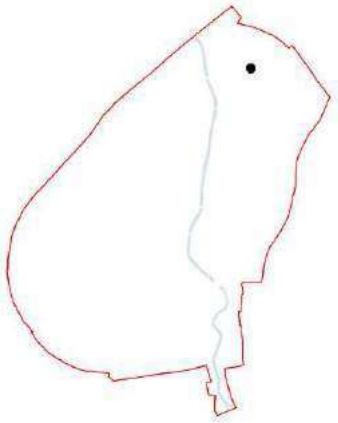
HERITAGE ASSETS GAZETTEER

Reference	Bellman Hangar	Status	Listed Building

Summary

Designation	Grade II
Reference:	1379426 – Historic England
Date:	1940 (late)
Association:	Military/Aviation
Function:	Originally part of the manufacturing production line for Wellington bombers, now houses a large number of the Museum's aviation exhibits and displays.
Listed:	4 November 1999

Location



History and Description

The Bellman type hangar was designed in 1936 by structural engineer Norman S. Bellman of the Air Ministry Directorate of General Works as a lightweight transportable aeroplane shed. It was primarily intended for wartime use for maintenance and inspection work as a replacement for the outdated timber-framed canvas-covered Bessoneau Hangar, which had originated in France before WWI, and no longer suited the needs of the Royal Air Force. The efficiently designed structure comprised an all-steel portal frame, fabricated from welded rolled steel sections which were bolted together on site. Unit components to both walls and the roof were identical and the (knee joint) corner unit was of unequal angles to enable different roof configurations. The frame was clad in 'easy-fix' galvanised corrugated sheeting being fixed in place by hook bolts with wing-nuts for speed of erection and dismantling.

The Finishing Straight Bellman Hangar is the last survivor of up to ten examples known to have been erected by the Ministry of Aircraft Production at Brooklands for both the Vickers and Hawker aircraft factories. The hangar is of the rarer 25ft high type, the taller variant being required for the dispersed production of Wellington and Warwick bombers which both had tall tailfins.

Built between September and December 1940 at a cost of £5,513, it is believed to have initially had no windows or gutters, in accordance with the standard design, but did feature the additional lean-to brick lavatory block and corrugated iron-clad annexe to the west side. It is conjectured that exposed sidewalls of the building may also have been camouflage painted, although there is currently no firm evidence to support this – however, the building was protected by camouflage netting.

From 1941-1945 the building was used for the dispersed production of Vickers Wellington Mk II and Warwick aircraft. Fuselages were towed from the Members' Banking hangar for completion, and then left through the south doors for access to the aerodrome via a new taxi-way built from the Finishing Straight around the north side of the BARC Clubhouse – this also led to the removal of the pitched roof from the Shell Petrol pagoda and demolition of the Redline Petrol Pagoda to ensure there was clearance for the Wellingtons' wings.

From 1946, the hangar was identified as T202 by Vickers-Armstrongs, who used it for production and repair work to Viking and Warwick aircraft. From the early 1950s it also housed their Guided Weapons department, and was also used as a 'mock-up' hangar until the 1970s for the manufacture of replica wooden fuselages of a number of their airliners – including the Vanguard, VC10, and BAC One Eleven.

Then up until the cessation of the aviation industry at Brooklands in the late 1980s it became a store building.

With a recently awarded (2015) grant from the Heritage Lottery Fund, the Bellman hangar will be completely restored and relocated on a new site adjacent to its current one, allowing the Finishing Straight to be brought back into use for both motoring and aviation activities. The hangar will be presented as an aircraft factory, with its displays showing how aircraft from the earliest biplanes and triplanes to Concorde were designed, built and developed at Brooklands over an 80-year period.

Significance/Value

The Bellman Hangar has considerable significance, as it is a rare example of its type and through association with Vickers' production of Wellington bombers, also owes much to the historically associated collection it contains. Whilst the building exemplifies the war-time era of the Brooklands site, later aeronautical projects for which it was later used additionally have some significance, although these are somewhat lessened due to the loss of context of the former vast aircraft manufacturing site.

In terms of the originality of the materials used in its original construction, the lightweight modular construction of the portal frame structure is of some structural engineering interest, as well as other components of the building envelope. Furthermore, the profile of the external corrugated cladding is also of considerable importance to the character of the building as are the unusual wing-nut/hook bolt fixings which are a fundamental part of the Bellman design concept to enable speed of erection and dismantling.

This significance and value is strengthened through its grade II listing, as a rare surviving example of the taller type of Bellman which retains its original form of corrugated iron sheet cladding.

Risks and Recommendations

A key building and home to important exhibits, the hangar benefits from the on-site understanding and knowledge associated with the site. However, having areas open to the public increases the risk of potential damage to the fabric being caused by wear-and-tear. This risk is compounded by the fact that by their very nature, the elemental components of the steel assembly with such a 'lightweight' construction are inherently vulnerable – it was designed as a temporary building, not a permanent structure.

While the overall condition of the building is fair, previous structural assessments have noted that there are inherent structural weaknesses to specific areas of the frame (portal frame knee joints and purlins). In addition, the corrugated sheet cladding has reached, or is nearing, the end of its serviceable life. 'Ad hoc' running repairs may gradually diminish the significance of the building over time, and the scale of the building is such that there is the question as to whether such an approach is sustainable. However, in altering the cladding it is vital that the special character of the hangar is not compromised, and as such there may be a potential conflict between the heritage assets.

Relevant CMP Recommendations: G2, G3-G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives, Website & Guidebook
Bellman Hangar T202 at Brooklands Museum Timeline – Julian Temple, Brooklands Museum (14/12/2013)
Historic England Listed Building Description
RADLEY HOUSE PARTNERSHIP: Aircraft Factory & Race Track Revival - Conservation Management Plan (Brooklands Museum, January 2010)

Illustrations

Bellman hangar on the Finishing Straight
1946

© via Brooklands Museum

Bellman hangar in the background during the launch of the Stratospheric Chamber
1947

© via Brooklands Museum

View, looking northeast, of the Bellman hangar on the former Finishing Straight

Radley House Partnership - 2013

Internal view of the Bellman hangar, with the Loch Ness Wellington bomber in the background

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

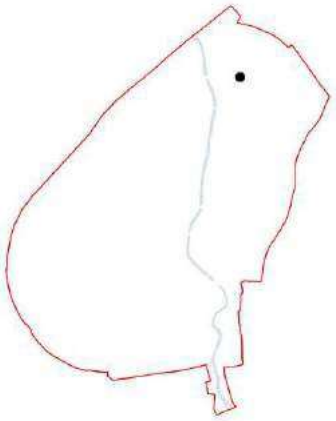
HERITAGE ASSETS GAZETTEER

Reference	Shell Petrol Pagoda	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1922
Association:	Motor Racing
Function:	Originally a petrol filling station, now an accessible space containing memorial plaques on rear wall (facing the adjacent Garden of Memories).

Location



History and Description

Built in 1922, after the drawings were prepared in August 1921 (copies held in the Museum Archives), for the Shell Oil Company with two petrol pumps on its forecourt – as can be seen today. Constructed in brick, with a timber-framed portico and roof with a slate covering, the building contained a manager's office and store.

Five leading oil companies supplied the drivers at Brooklands with their fuel during the 1920s and 1930s – these were BP, Cleveland Discol, Pratts (Esso), Redline and Shell. All built circa 1922, each had their own petrol filling station built in the 'pagoda' style. Three were and remain located around the Paddock, with the Cleveland Discol and Redline Pagodas being positioned further away alongside Shell Way north-west of the Clubhouse – where the Balloon Hangar now stands.

In late 1940 the Redline Pagoda was demolished when a new access road/taxiway was built between the Bellman dispersal hangar on the Finishing Straight and the Vickers' Bridge. The Shell Pagoda's pitched roof was removed at the same time to allow Wellington bomber's manoeuvring space on the Finishing Straight.

After the end of World War 2, Vickers-Armstrongs retained the Pagoda as a flat-roofed Paint Store for their Research & Development department, giving it the reference T207.

In 1987 the front elevation collapsed during the 'hurricane' force store which swept across southern England, but this was rebuilt in 1992-93 and the original pitched roof was recreated during the buildings major restoration by Brooklands Museum.

Significance/Value

This early original building from the inter-war period, remains relatively unchanged externally having been restored to its original appearance by the Museum. It provides a physical connection with this important period of motor racing at Brooklands and demonstrates the 'pagoda' style – as was the preferred architectural fashion for petrol filling stations during this period in both the UK and USA. Therefore, the building has significant value in terms of Brooklands motor racing history.

Risks and Recommendations

Located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. Although minimal, the building will be susceptible to some wear and tear as it is open and accessible to the public.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives
Fuel Facilities at Brooklands Aerodrome & Race Track Timeline – Julian Temple, Brooklands Museum (16/12/2013)

Illustrations

Shell Pagoda – 6 May 1933

Shell Pagoda – 1 July 1933

View from the tower of the BARC Clubhouse, looking across to Members' Hill with the Shell Pagoda in the foreground - 1939

[pre-restoration photo to be inserted]

© via Brooklands Museum

[restoration photo to be inserted]

© via Brooklands Museum

View of the restored Shell Petrol Pagoda and its pumps in the foreground,

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

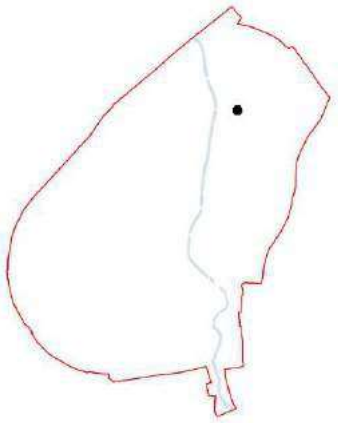
HERITAGE ASSETS GAZETTEER

Reference	Esso Petrol Pagodas – (Formerly Pratts Pagodas)	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1922 (extended in 1939)
Association:	Motor Racing
Function:	Originally a petrol filling station, now a dressed museum exhibit and store.

Location



History and Description

The northern building was built in 1922 for the Anglo American Oil Company Ltd. and originally had three petrol pumps facing the paddock – an additional structure was later added to the south in 1939, in the same style as the original. Constructed in brick with painted render externally, with internal spaces a combination of painted plaster and painted brick, all under tiled roofs.

Pratts Motor Spirit was named after Charles Pratt, one of the founders of the Standard Oil Company of New Jersey, USA and was first advertised in the UK in 1896. Then in 1935 the company's brand name was changed to 'Esso' (i.e. S.O. being the abbreviation of Standard Oil) and the corporate identity of the Pagoda was changed accordingly.

Five leading oil companies supplied the drivers at Brooklands with their fuel during the 1920s and 1930s – these were BP, Cleveland Discol, Pratts (Esso), Redline and Shell. All built circa 1922, each had their own petrol filling station built in the 'pagoda' style. Three were and remain located around the Paddock, with the Cleveland Discol and Redline Pagodas being positioned further away alongside Shell Way north-west of the Clubhouse – where the Balloon Hangar now stands.

Their original function remained unchanged after the end of World War 2, with Vickers-Armstrongs giving the original 1922 element the reference T225 and the 1939 addition the reference T226, which were a Petrol Station and Oil Store respectively until at least the late 1960s. The buildings were slightly modified post-war, most notably with T225's original windows being bricked up. Both Pagodas were fully restored by Brooklands Museum in 2008-2010.

Significance/Value

These original buildings from the inter-war period, remain relatively unchanged and provide a physical connection with this important period of motor racing at Brooklands. They also demonstrate the 'pagoda' style - as was the preferred architectural fashion for petrol filling stations during this period in both the UK and USA. These work together to give the buildings significant value in terms of Brooklands motor racing history.

Risks and Recommendations

Located within the Museum site, the pair of buildings benefit from the on-site understanding and knowledge associated with the site. Static displays within the visible areas demonstrate to the public how the buildings originally operated – as these areas are not open to the public they are not susceptible to damage from wear-and-tear. However, there is a risk that they may therefore not be monitored for damage or decay as regularly as the spaces that are open to the public. Closed areas are also used for ad-hoc storage.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives
Brooklands Museum Exhibit Presentation Boards (2013)
Fuel Facilities at Brooklands Aerodrome & Race Track Timeline – Julian Temple, Brooklands Museum (16/12/2013)

Illustrations

Pratts Petrol Pagoda – date unknown

© via Brooklands Museum

Pratts Petrol Pagoda – circa 1930

© via Brooklands Museum

[1950s photo to be inserted]

© via Brooklands Museum

[pre-restoration photo to be inserted]

© via Brooklands Museum

[restoration photo to be inserted]

© via Brooklands Museum

North View of the 1922 Pagoda with pumps in the foreground

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West view of the Pagodas – original 1922 building on the left with the 1939 addition to the right

Radley House Partnership - 2013

Internal view of the 'dressed' office space, recreating its early use

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

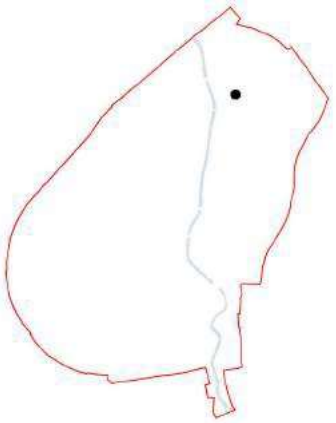
HERITAGE ASSETS GAZETTEER

Reference	Press Hut	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	Early 1930s
Association:	Motor Racing
Function:	Press Hut for local and national journalists, now a museum exhibit

Location



History and Description

A lightweight timber-framed building, clad internally and externally with a corrugated metal roof. Timber framed windows are fitted to the north, east and south elevations with the only means of entry on the north side. Constructed in the early 1930s by replacing three of the former racing car bays.

It stood on one of the busiest parts of the Paddock and housed tables and telephones which journalists could use to phone the race results back to Fleet Street and elsewhere. The latest results would be pinned up on boards along with any important notices concerning the day's events.

Vacated soon after war was declared, its main use during WW2 is unknown, however its post-war use was as a Parts Store (T221) for the Vickers-Armstrongs Research & Development department.

The building was refurbished by Brooklands Museum with sponsorship from the Daily Mail newspaper and re-opened to the public on 8th June 1993 by Viscount Rothermere in the presence of HRH Prince Michael of Kent – as recorded by a brass plaque on the north side of the building.

At its south end is an enclosed dressed exhibit depicting how the building would have functioned in its heyday.

Significance/Value

This original building is a demonstration of the increasing popularity of motor racing at Brooklands in the early 1930s. Retained in its original location and form it is of significant value not only to the Museum site, but also to the Brooklands Conservation Area as a whole.

Risks and Recommendations

Being located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. However, being open to the public and occasionally used for children's events consequently increases the damage caused by wear-and-tear to the internal fabric.

Decorations are failing to areas of the ceiling – this may be as a result of water penetration or their age. The ceiling panels contain asbestos therefore if/when modified or removed suitably qualified personnel will need to carry out the work and the materials disposed of appropriately.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archive
Brooklands Museum Exhibit Presentation Boards (2013)

Illustrations

View of the Press Hut from the BARC Clubhouse tower in 1939

© via Brooklands Museum

External view of Press Hut

Radley House Partnership – 2013

Internal view of Press Hut, with dressed exhibit at south end, depicting how the building was used in the 1930's.

Radley House Partnership – 2013

Revisions	
Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

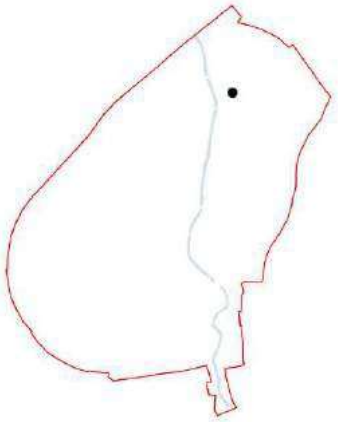
HERITAGE ASSETS GAZETTEER

Reference	The Campbell Shed	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1926, extended 1931
Association:	Motor Racing
Function:	Office, workshop and showroom now a museum exhibition space.

Location



History and Description

Malcolm Campbell, the World Land Speed Record holder, built his first timber-framed and weatherboarded shed in this location at Brooklands in 1926 before extending it in 1931. The building we see today was used by him as office, workshop and showroom until circa 1935. The famous 'Blue Bird' racing and world record breaking cars were built and often kept in the shed.

Leading motor engineers Thomson and Taylor, later took over the building for a period of time where they used it as a workshop and showroom for both Alfa Romeo and Railton cars. During Vickers-Armstrongs' ownership, the building was given the reference T220 and used as the canteen for the staff working in the Research and Development department.

The Campbell Shed was restored by Brooklands Museum during the mid to late 1990s. Currently as one of the museum exhibition spaces, it contains a collection of racing cars, an engineer's workshop, displays of racing club memorabilia and a driver's study.

The current raised floor is laid over the original, which can be seen through two clear vision panels.

Significance/Value

Although likely to have been re-clad and altered during its life, this original structure retains its original location and dating from the mid-1920s is a physical connection not only with the inter-war motor racing period at Brooklands but also with Sir Malcolm Campbell. It is of significant value with respect to the early motor racing period as well as in terms of the land and water speed records that Campbell gained during the 1920s and 1930s. Of a lesser value is its significance to the Motoring Villages post-war use on the site. However, overall it makes a valuable contribution to both the Museum and Conservation Area.

Risks and Recommendations

Being located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. However, being open to the public consequently increases the risk of damage caused by wear-and-tear to the fabric – although it is acknowledged that the external cladding is not original and the internal floor is a modern replacement.

Condensation is forming behind the floor vision panels, which is leading to a damp environment to the void – ventilation should be increased to ensure the historic fabric below is not at risk of accelerated decay. The building is also at risk from flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives, Website and Guidebook

Illustrations

The north elevation of the Campbell Shed circa 1927. The 'Exide Battery' Shed was replaced by the construction of the ERA Shed in the late 1930s

© via Brooklands Museum

View from the BARC Clubhouse tower in 1939, showing the Campbell Shed as the Alfa Romeo and Railton showroom

© via Brooklands Museum

North elevation painted in the Campbell livery – showroom window to right hand side.

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Internal view with the modern (raised) floor and the exhibition contained within.

Radley House Partnership - 2013

The driver's study, a dressed exhibition display against the south-east wall of the Shed, forming part of the main exhibition.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

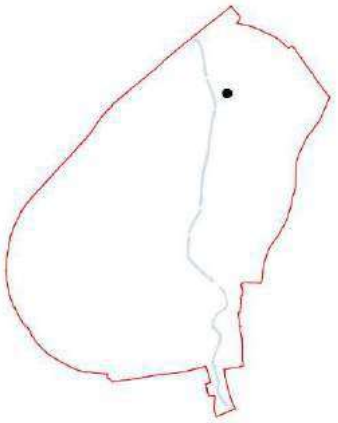
HERITAGE ASSETS GAZETTEER

Reference	ERA Shed	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	Late 1930s
Association:	Motor Racing
Function:	Workshop and showroom now a museum exhibition space.

Location



History and Description

This steel-framed, timber-clad building was the last of the workshop buildings to be constructed in the Paddock, by LBB Motors in the late 1930s. As part of their work included the conversion of double-decker engines to diesel, they needed oversized external doors to allow the buses to access the workshop. Its bus ownership soon changed when it became a showroom for English Racing Automobiles (ERA) before it changed hands again and was owned by the Brooklands Engineering Company in 1939.

During the second half of the twentieth century, under Vickers-Armstrongs ownership, the building was linked to the Racing Lock-ups, given the reference T219 and used as a 'G W Workshop' fur guided weapon research.

The ERA Shed was restored by Brooklands Museum during the mid to late 1990s.

Significance/Value

As with other weatherboarded timber-clad buildings, it is likely to have been re-clad. However, the extant internal steel-framed structure appears to be original. This shed has particular significance and value with respect to Brooklands as the last building related to motor racing to be constructed in the Paddock. This significance is also further strengthened through its ownership and association with ERA.

Risks and Recommendations

As with the other historic Paddock buildings, being located within the Museum site the building benefits from the on-site understanding and knowledge associated with the site and each entity. However, inevitably being open to the public consequently increases the risk of damage caused by wear-and-tear to the fabric – although it is accepted that the external cladding is unlikely to be original and the internal floor is a modern replacement laid over the original. As with the other Paddock buildings, the ERA Shed is at risk from flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

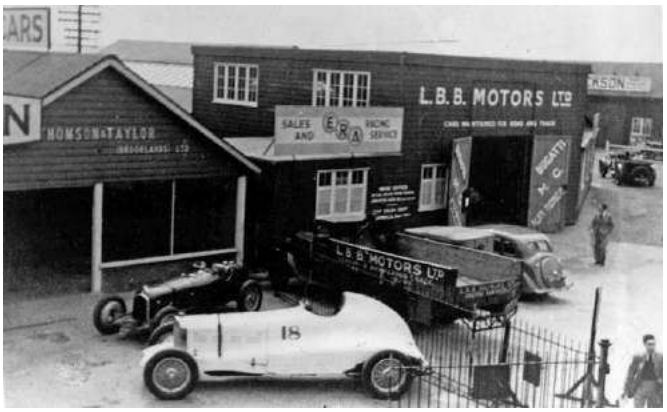
Sources

Brooklands Museum Archives, Website and Guidebook

Illustrations

View from the BARC Clubhouse tower across to the ERA Shed and Jackson Shed beyond in 1939

© via Brooklands Museum



The ERA Shed under its original ownership in the late 1930s, with Thomson & Taylor occupying the part of the Campbell Shed (left)

© via Brooklands Museum

North elevation repainted in the original LBB Motors Ltd. livery and signage. The high double doors provide the principal means of entry.

Radley House Partnership - 2013

South elevation,again in the LBB Motors Ltd. livery.

Radley House Partnership - 2013

Internal view of the east shed, with the modern (raised) floor and the exhibition contained within – Napier Railton the central exhibit in the foreground.

Radley House Partnership - 2013

Internal view of the west shed, with the modern (raised) floor and the motor cycles for the exhibition contained within. This space then leads through to the Racing Lock-ups.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

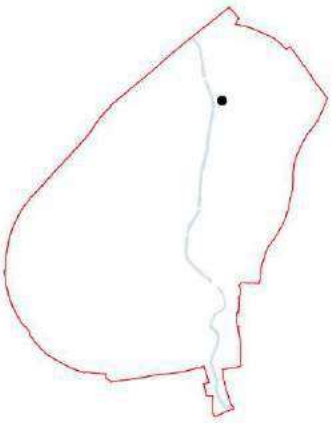
HERITAGE ASSETS GAZETTEER

Reference	Racing Lock-ups	Status	Locally Listed Building

Summary

Designation: Local List
Reference: Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date: 1927
Association: Motor Racing
Function: Garages to prepare cars for racing, now a museum display space 'Brooklands Cycle Exhibition and Raleigh Display'.

Location



History and Description

A row of timber-framed and weatherboarded garages (9 bays long with 7 pairs of garage doors), under a felted roof, which were rented out by different teams/owners to house and prepare their motor cars or motorcycles for racing. Built in 1927 and continually changing hands, the garages' doors would be regularly sign-written to advertise the owners and their businesses – a feature which has been replicated by the Museum.

During the second half of the twentieth century, under Vickers-Armstrongs ownership, the building was linked to Dunlop Mac's Bungalow and the ERA Shed, given the reference 'T218' and used as a 'G W Workshop'.

The Racing Lock-ups were restored by Brooklands Museum in the mid to late 1990s.

Significance/Value

Although re-clad and converted during its life, this late-1920s structure retains its original location and is a physical connection with the inter-war motor racing period at Brooklands. It is of significant value with respect to the early motor racing period and the subsequent Motoring Village's post-war use by the aircraft industry – so making a valuable contribution to both the museum and Conservation Area.

Risks and Recommendations

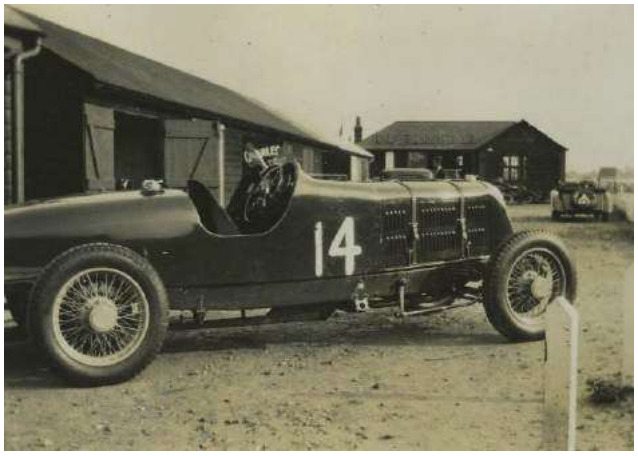
Being located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. However, being open to the public consequently increases the risk of damage caused by wear-and-tear to the fabric – although it is acknowledged that the external cladding is not original and the internal floor is a modern replacement. Encroaching vegetation (south and east elevations) and failing cladding materials to the south elevation have the potential to put the structure and exhibits at risk, unless appropriately and sympathetically maintained and repaired. The building is also at risk from flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives, Website and Guidebook

Illustrations



The west side of the Racing Lock-ups, with Dunlop Mac's in the background (date unknown)

[additional archive photo to be inserted]

West elevation with garage doors painted to identify different occupants, as seen during the motor racing season.

Radley House Partnership - 2013

South and east elevations, demonstrating the risks that may arise as a result of vegetation growing against the timber clad walls.

Radley House Partnership - 2013

Internal view of the Lock-ups, illustrating the modern replacement floor and extent of the Brooklands Cycle Exhibition and Raleigh Display.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

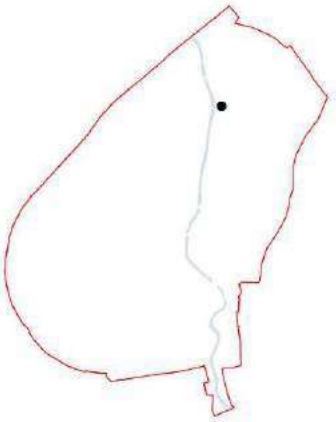
HERITAGE ASSETS GAZETTEER

Reference	Dunlop Mac's Bungalow	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1921
Association:	Motor Racing
Function:	Originally a 'Tyre Depot', now vehicle workshops and volunteers' crew room.

Location



History and Description

Built in 1921 by the Dunlop Tyre Company, the 'Tyre Depot' building was one of the first of the 'sheds' to be built in the Motoring Village. Containing workshops and office space, it was constructed with brick walls (externally faced with mock timber-framing) under a decorative slate roof.

The Brooklands Race Track was extensively used for tyre testing, being the only track in the country at the time where vehicles could be driven continuously for long periods at top speeds and, Norman Freeman Dunlop's 1920s Racing Manager at the time therefore set up his Brooklands headquarters in the building. The depot gained its nickname 'Dunlop Mac's' through Brooklands racing community's recognition of one of the tyre-fitters – David McDonald. He successfully supervised the tyre changes at race meetings and become synonymous with the building and Brooklands.

After World War 2, the building was used by the Vickers-Armstrongs Research & Development department dealing with plastics – building reference T217, and was linked to their workshops (T218) in the adjacent Racing Lock-ups.

Significance/Value

Dunlop Mac's Bungalow has particular historical significance and value with respect to Brooklands as the first of the motoring workshops to be constructed near the Paddock. It also has a degree of significance, as a physical demonstration of the connection between Brooklands and the Dunlop Tyre Company, both through their tyre testing and racing activities.

Risks and Recommendations

Being located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. Visitor impact risks are currently significantly reduced with the building only being used by Museum volunteers as a crew room and vehicle workshops for repairing and maintaining Museum exhibits. As with other Paddock buildings, the Bungalow is also at risk from flooding, during extreme flood conditions.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

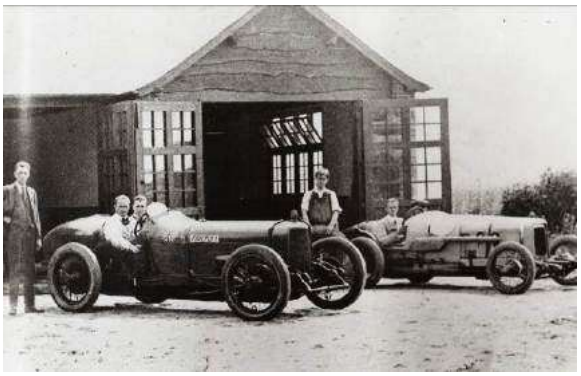
Sources

Brooklands Museum Archives, Website and Guidebook

Illustrations

The north side of Dunlop Mac's with advertising to the eaves and gable (date unknown)

© via Brooklands Museum (John Williams Collection)



The north side of Dunlop Mac's with view into workshops (date unknown)

© via Brooklands Museum

View of Dunlop Mac's from the north-west.

Radley House Partnership - 2013

East view of Dunlop Mac's with the single-storey link to the Racing Lock-ups added by Vickers-Armstrongs.

Radley House Partnership - 2013

Internal view of the vehicle workshop.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

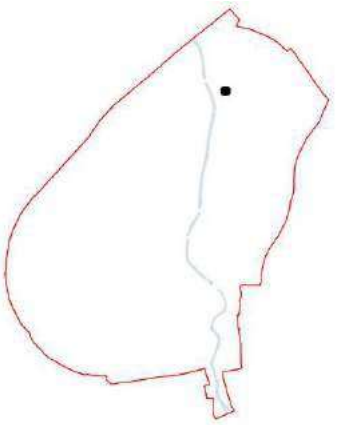
HERITAGE ASSETS GAZETTEER

Reference	BP Petrol Pagoda	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1922
Association:	Motoring
Function:	Originally a petrol filling station, now a dressed museum exhibit and store.

Location



History and Description

Built in 1922 for the British Petroleum Oil Company with a single petrol pump on its forecourt – as can be seen today. Constructed in brick, with a roughcast render above window sill level and a plain clay tile roof, the building contained a manager's office and store.

Five leading oil companies supplied the drivers at Brooklands with their fuel during the 1920s and 1930s – these were BP, Cleveland Discol, Pratts (Esso), Redline and Shell. All built circa 1922, each had their own petrol filling station built in the 'pagoda' style. Three were and remain located around the Paddock, with the Cleveland Discol and Redline Pagodas being positioned further away alongside Shell Way north-west of the Clubhouse – where the Balloon Hangar now stands.

Under Vickers-Armstrongs ownership, after World War 2, the BP Pagoda was used by their Research & Development department as a 'Rectifier Room' and was given the building reference T214. Increasingly disused from the early 1970s and almost derelict by the mid-1980s, it was restored by Brooklands Museum later that decade.

Significance/Value

This early original building from the inter-war period, appears relatively unchanged externally having been recently refurbished to its original appearance by the Museum. It provides a physical connection with this important period of motor racing at Brooklands and demonstrates the 'pagoda' style – as was the preferred architectural fashion for petrol filling stations during this period in both the UK and USA. Therefore, the building has significant value in terms of Brooklands motor racing history.

Risks and Recommendations

Located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site.

Static displays within the former manager's office demonstrate to the public how the buildings originally operated – as these areas are not open to the public they are not susceptible to damage from wear-and-tear. However, there is a risk that they may therefore not be monitored for damage or decay as regularly as the spaces open to the public.

The closed room to the rear is still used for storage.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Fuel Facilities at Brooklands Aerodrome & Race Track Timeline – Julian Temple, Brooklands Museum (16/12/2013)
Petrol Stations, Fuel & Oil Depots at Brooklands – Julian Temple, Brooklands Museum (04/11/2013)

Illustrations

Kaye Don's Sunbeam Tiger in front of the BP Petrol Pagoda (date unknown)

[pre-war photo to be inserted]

[1950s photo to be inserted]

[pre-restoration photo to be inserted]

Principal east view of the BP Petrol Pagoda with pump in the foreground

Radley House Partnership - 2013

Internal view of the former manager's office (now a dressed museum exhibit)

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

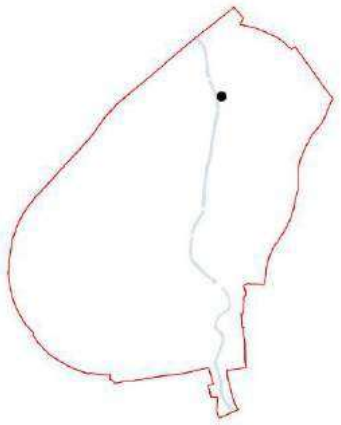
HERITAGE ASSETS GAZETTEER

Reference	Jackson Shed	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1931
Association:	Motor Racing
Function:	Workshop/garage, now a museum exhibition space.

Location



History and Description

One of the earlier buildings in the Paddock, this was built in 1931 for Robin Jackson who at the time was acknowledged as one of leading motor racing engineers, as well as being a respected racing driver. The building became known as the 'Robinry', as the small team of skilled engineers employed by Jackson were able repeatedly, to service and tune the cars to the highest standards. Jackson also specialised in the maintenance of MG cars and became well known for building 'specials', including the Bentley-Jackson and the Appleton Riley.

Following the end of World War 2, when the building continued in use under Vickers-Armstrongs ownership, the building was given the reference T216 and then used as a 'General Stores' building by Research and Development personnel based in the surrounding buildings. At the same time, Jackson moved his premises up the road to Byfleet where he continued to work on successful Grand Prix racing cars during the following two decades.

The timber-framed and weatherboarded building is predominantly single storey, with a second storey at its northern end which following its restoration by the Museum to its original 1930s appearance, contains a drawing office (a 'dressed' exhibition space) on the ground floor and Museum offices on the first floor, with a lean-to garage workshop extension at its south-west end. The principal internal spaces on the ground floor function as Museum exhibition space and contain a collection of Grand Prix racing cars which celebrate Brooklands as the venue for the first ever British Grand Prix races in 1926 and 1927 as well as illustrating the subsequent development of Grand Prix racing in Britain up to the present day. The Jackson Shed was restored by Brooklands Museum c.2000-01.

Significance/Value

Although the building has been restored to reflect its original 1930s appearance, the structural core of the building and its location are original. In conjunction with its connection to Robin Jackson and pre-war motor racing at Brooklands, this gives the Jackson Shed a significant degree of significance to both the Conservation Area and the Museum.

Risks and Recommendations

Being located within the Museum site, the building benefits from the on-site understanding and knowledge associated with the site. However, being open to the public inevitably increases the risk of damage caused by wear-and-tear to the fabric. Unfortunately poorly informed repairs with an inappropriate type of weatherboarding on the west side of the building, which have an inadequate lap and fixings leading to severe cupping and the potential for damage to the structural frame within. This should be replaced with traditional weatherboarding which has a greater lap and fixings to cope with its southerly exposure. As with the other Paddock buildings, the Jackson Shed is also susceptible to flooding during extreme flood conditions – especially as it is closest to the river.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

Brooklands Museum Archives, Website and Guidebook

Illustrations

The original form of the Jackson Shed, prior to the extension to its north and south ends (pre-1939)

© via Brooklands Museum

Extension being added to its southern end (pre-1939)

© via Brooklands Museum

Internal view of the workshop (date unknown)

© via Brooklands Museum

View from the BARC Clubhouse tower across to the Jackson Shed, with the ERA Shed in the foreground in 1939

© via Brooklands Museum

North-east corner of the shed, with the two-storey element in the foreground. Refurbished to reflect its original 1931 layout and detail.

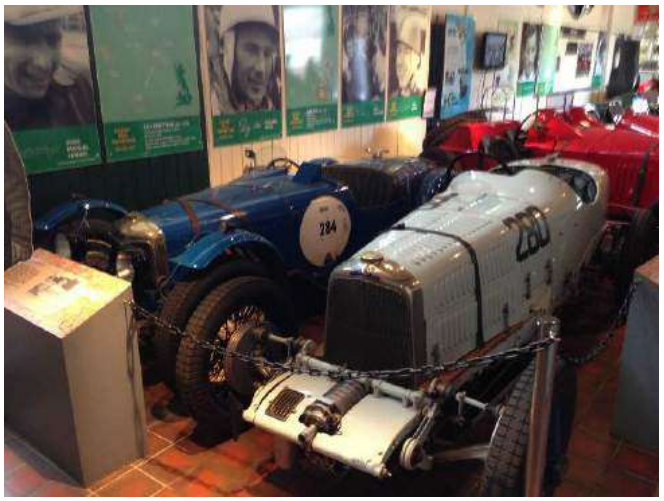
Radley House Partnership - 2013

South elevation, with the lean-to garage addition on the left.

Radley House Partnership - 2013

The former lean-to garage space added to the south-west corner of the shed now used as part of the Grand Prix exhibition.

Radley House Partnership - 2013



Part of the Grand Prix exhibition contained within the main space of the shed.

Radley House Partnership - 2013

Re-created drawing office in the ground floor space to the north-east corner of the building.

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

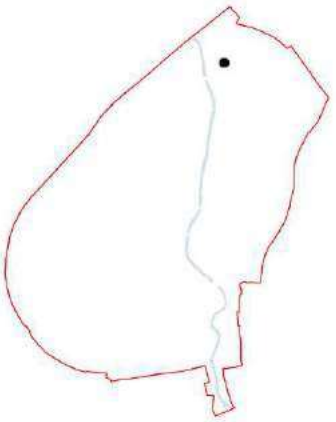
HERITAGE ASSETS GAZETTEER

Reference	Pill Box	Status	Locally Listed Building

Summary

Designation	Local List
Reference:	Elmbridge Borough Council List of Local Buildings of Special Architectural or Historic Interest (June 2000).
Date:	1940
Association:	Military
Function:	Defensive military structure

Location



History and Description

An unusual hexagonal design, the brick-built war-time Pill Box is located to the north of the principal buildings on the Museum site. With a single means of entry on its south-west side, there are small concrete loopholes to each corner – believed to be a unique feature of this Pill Box – and a central circular concrete open well (similar to Type 27 pill boxes) which would have contained the anti-aircraft weaponry – such as a Bren or Lewis gun. The main defence measure being the 'Bofors' Gun Tower on top of Members' Hill.

Significance/Value

This structure provides a physical connection with the war-time activities at Brooklands and has particular significance and value as it appears to be one of only two structurally complete World War 2 defence measures surviving at Brooklands, the other being the 'Bofors' Gun Tower. The remains of all other defence measures on and around the race track are incomplete – i.e. only concrete bases and partial walls/features etc. are still extant. In addition it may also have national significance due to its corner loopholes which are believed to be a unique feature of this Pill Box.

Risks and Recommendations

With no current viable use in the context of the Museum, this structure is potentially at risk through lack of use and may in the future be seen as obstructive to the future growth or development of the aircraft park, surrounding it to the north and west.

Relevant CMP Recommendations: G2, G3, G5, C1-C11, M1 and M3-5

Sources

The Pill Box Study Group – www.pillbox-study-group.org.uk

Illustrations

The Pill Box surrounded by trees and vegetation (post-war date unknown)

© via Brooklands Museum

Overgrown and surrounded by trees in the late 1980s or early 1990s

© via Brooklands Museum

External view of the hexagonal Pill Box (from the north-east)

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

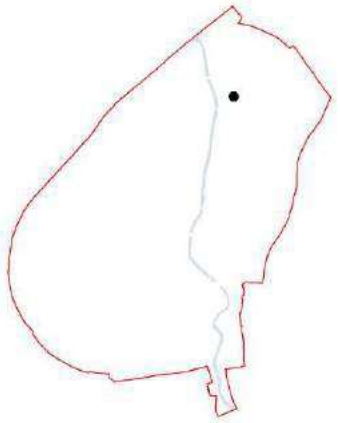
HERITAGE ASSETS GAZETTEER

Reference	Substation No. 23 (T222)	Status	Non-Designated Assets

Summary

Designation Reference:	None
Date:	Late 1930s
Association:	Military/Aviation
Function:	Originally an electrical substation, now an ad-hoc Museum store

Location



History and Description

This small, single cell, brick building with plain clay tile roof is tucked away behind the Campbell Shed and Racing Car Bays, South of the Paddock. Its original date of construction is unknown, although it first appears in an undated late-1930s photograph. The first relevant site plan is a Vickers-Armstrongs drawing dated 8th January 1946 where its use as a substation is confirmed and it's identified as building T222. Part of the Vickers-Armstrongs/BAC Research & Development department post-war, it ceased to be used as a 'live' substation by the mid-1980s and remained disused and locked until the early 21st century when brought into use as a temporary store for Museum aircraft instruments from c.2007. Around this time it was first noted that original pre-war labelling survived identifying electrical circuits for specific motoring buildings, including the long demolished 'Paddock Grandstand'. Since c. 2011 it has been used as an extra store by the Museum Events and Car Rides Teams.

Significance/Value

This pre-war building appears to remain remarkably unchanged from its original construction. Although not as significant as other larger buildings/structures at Brooklands, T222 still has a significant degree of value in terms of its connection with Vickers-Armstrongs and also due to its retention of many original electrical components, including its pre-war labelling.

Risks and Recommendations

With no viable use in the context of the Museum through being accessible to the public etc., this structure is at risk through a lack of a full use – only being used for storage on an ad-hoc basis.

Relevant CMP Recommendations: G2, C1-C10, M1 and M3-5

Sources

Brooklands Museum Archives

Illustrations

View from the Clubhouse tower of the Substation tucked in behind the Press Hut, Racing Car Bays and the Campbell Shed 1939

© via Brooklands Museum

External view of Substation T222 from the north

Radley House Partnership - 2013

Internal view of the substation, with the original ceramic fuses still in-situ

Radley House Partnership - 2013

Internal view of the substation, with the original switches/controls still in-situ

Radley House Partnership - 2013

Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

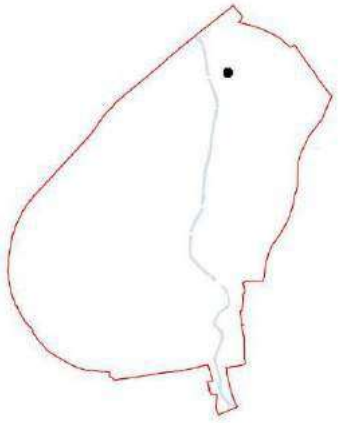
HERITAGE ASSETS GAZETTEER

Reference	The Stratosphere Chamber, Balloon Hangar & Supersonic Wind Tunnel	**Status**	Non-Designated Assets

Summary

Designation Reference:	None
Date:	1948 (Stratosphere Chamber) & 1958 (Balloon Hangar & Supersonic Wind Tunnel)
Association:	Aviation
Function:	Originally a pressure chamber for large scale environmental testing, now houses museum exhibits, education space and volunteer workshop

Location



History and Description

Designed under the direction of Barnes Wallis in 1946, the Stratosphere Chamber was built to test aircraft components under particular environmental conditions – typically those found at 70,000 feet, as this is the altitude at which Barnes Wallis believed supersonic aircraft would operate. This meant that the facility to be able to reproduce the coldest temperatures found on the earth's surface and air densities which are $^{1}/_{20}{}^{th}$ of what exists at sea level (when completed it had an altitude range of 0-80,000ft and the temperature could be varied from -65°C to more than 55°C).

Due to there being similarities with the design of the pressure capabilities of the Chamber and of submarines, the Main Chamber (40,000ft^3 of vacuum storage) was manufactured in sections by Vickers shipbuilders at Barrow-in-Furness and then transported by road to Brooklands. Assembled on what is now the site of the Acoustics Laboratory, before it was 'launched' on to its foundations in September 1947 then housed with the simple steel-framed structure, clad with corrugated sheeting. The Main Chamber, which measures 7.6m (25') in diameter and 15.2m (50') long was sealed across its northern end by 'The Great Door', which is carried on railway tracks to allow the Chamber to be fully accessed for the insertion and removal of aircraft, vehicles and various other components and structures.

On its west side, the Balloon Hangar with its Supersonic Wind Tunnel was added in 1958 (requiring demolition of the 1920s Cleveland Discol Petrol Pagoda). The hangar could hold 30,000ft^3 of dry air which, when working in parallel with the 40,000ft^3 vacuum volume of the Stratosphere Chamber, meant that speeds of between Mach 1.4 and Mach 3.5 could be generated through the connecting wind tunnel, by exhausting the air from the Chamber and then replacing it with the air from the Hangar.

The Stratosphere Chamber remained in use until 1980 – during some 30 years of operation it was used to test pressure cabins on the Vickers Vanguard, VC10 and Viscount airliners. In addition, complete Scimitar and Sea Vixen aeroplanes, several helicopters, pieces of diesel-driven machinery, electrical equipment, naval guns and scale model fishing trawlers were tested inside the Chamber. Snow, ice and blizzard conditions could also be created within the Chamber which meant that Arctic clothing was also tested.

Since the mid-1980s, the Museum has used both buildings for storage, restoration workshops and Museum displays. In 2013-14 the Stratosphere Chamber underwent a series of major repairs, predominantly focussing on the equipment, controls and associated exhibits within – these works were successfully completed and the building reopened on 13th March 2014. In 2014 the Balloon Hangar and

Supersonic Wind Tunnel were the subject of major restoration (both buildings being completely reclad and insulated with modern materials) with a new 4D Theatre visitor attraction installed in the Balloon Hangar and the Supersonic Wind Tunnel area being renamed 'The Vickers Building' and converted complete with kitchen and toilets for use as flexible space suitable for corporate/private events and temporary exhibitions. Completed in just over six months, the rejuvenated buildings were officially reopened on 2nd September 2014

Significance/Value

The value and significance of the Stratosphere Chamber is limited to the surviving testing equipment and its Control Room which are contained within the building – as opposed to the utilitarian fabric of the building envelope itself. Whereas that of the Balloon Hangar and Supersonic Wind Tunnel is more focussed on the structure of the buildings and their layout. They provide a physical connection with the considerable post-war growth of the aviation industry at Brooklands and the work of the notable engineer Sir Barnes Wallis.

Risks and Recommendations

Being located within the Museum site, these buildings and associated facilities benefit from the on-site understanding and knowledge associated with the site and its evolution. The Stratosphere Chamber equipment has recently undergone some restoration works following receipt of a grant from the Association of Independent Museums, and a further project is scheduled for the Balloon Hangar.

While there is focus on the important internal fittings, there is a risk that the condition and maintenance of the external fabric may be overlooked – this should continue to be monitored and included within the cyclical maintenance regime.

As use/demands change there is a risk that there may be a desire for further changes to internal spaces within these buildings – consideration is required to ensure that it does not compromise the setting, accessibility and understanding of the testing equipment contained within.

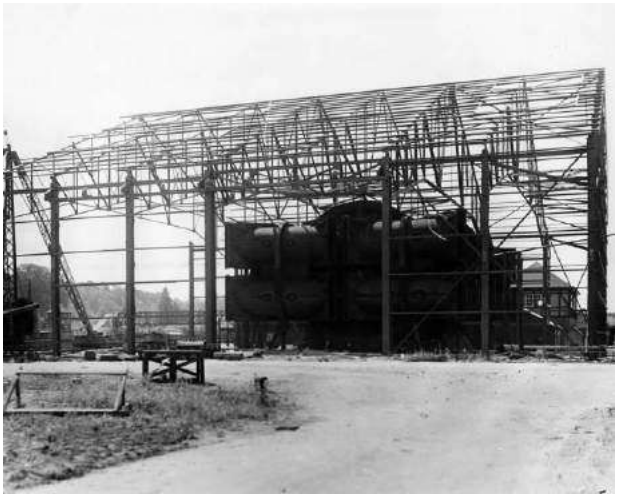
Relevant CMP Recommendations: G2, C1-C10, M1 and M3-5

Sources

Brooklands Museum Archives, Website and Exhibit Presentation Boards (2013)
The Stratosphere Chamber (T287) & Supersonic Wind Tunnel (T326) Timeline – Julian Temple, Brooklands Museum *(11/12/2013)*

Illustrations

The Stratosphere Chamber in position following its launch
May 1948

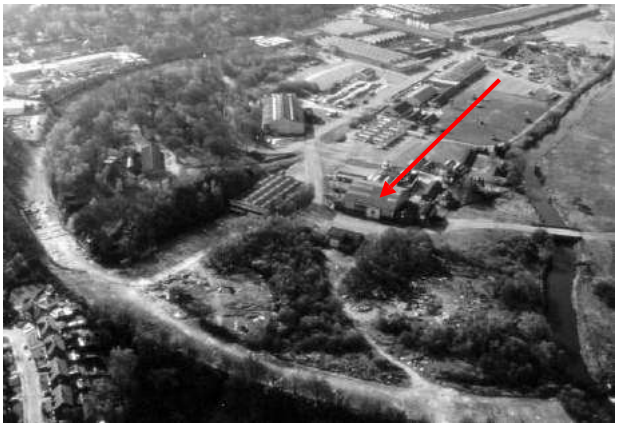


Steel-framed structure being erected around the Stratosphere Chamber 1948

© via Brooklands Museum

Equipment being loaded into the Main Chamber for testing (date unknown)

© via Brooklands Museum



Post-war aerial photograph over the northern end of Brooklands (date unknown)

© via Brooklands Museum

View from the south-east of the large building enclosing the Stratosphere Chamber

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Internal view of the recently restored 'Great Door' in the open position with the Main Chamber to the left

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Internal view of the Main Chamber from the access point in the south end

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Revisions

Date *Comments*

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

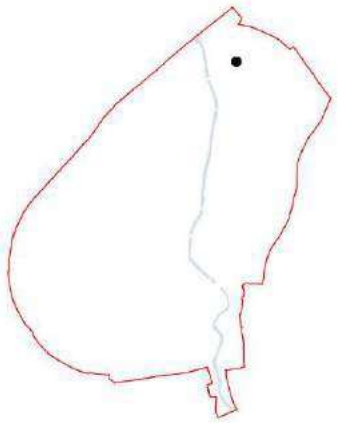
HERITAGE ASSETS GAZETTEER

Reference	Acoustics Laboratory	Status	Non-Designated Assets

Summary

Designation Reference:	None
Date:	1965
Association:	Aviation – Research & Development
Function:	Originally an Acoustics Test Laboratory, now part of the 'Brooklands Concorde Experience' (including the Concorde Simulator) and the Museum archives store

Location



History and Description

Designed by the architects Ley Colbeck & Partners for British Aircraft Corporation, the Acoustics Test Laboratory was built in 1965. It was used to study how noise affected people, engines, equipment and aircraft structures – including parts of Concorde. The testing equipment required for the Laboratory was also designed and produced at Brooklands. Constructed in brick, with a series of flat and low-pitched roofs, the building was divided into five principal areas, as follows:

The Reverberant Rooms – these two rooms operated in parallel to measure the degree of noise transmission through different sections of aircraft cabin interior lining panels which were fixed in a hole between the rooms. This allowed a variety of aircraft internal trim types, materials and construction methods to be fairly compared. Using this same method, large samples of internal partitions were also tested to determine their noise absorption qualities.

The Anechoic Chamber – wedges made from a foam-based absorption material were fixed to the walls, floor and ceiling to deaden any noise reflection.

The Control Room – the focal point of the building, where the scientists were able to control the testing and then measure and analyse the results.

The Noise Room – this double-height space was used to test larger aircraft components such as sections of fuselage. Generators were used to produce the sounds, which in this space were reinforced and evenly distributed through the reflection of the sound off the smooth walls.

The Siren Room – within this space a series of sirens were positioned to generate a high noise level which could be used to test structural components from aircraft.

Double-walled construction was used for the Anechoic Room, the Reverberant Rooms and the Siren Room – with each of the Reverberant Rooms also being mounted on anti-vibration supports which meant that each room could be fully isolated to reduce the potential effect of any ground vibrations on the sensitive measuring equipment.

As well as the aircraft work, the Acoustic Department at Brooklands also dealt with other applications and acoustic issues in both the industrial and community sectors. Its closure date is unknown although it was possibly still used in the early 1980s until this part of the Bae factory was sold to Gallaher Ltd in 1983.

Part of Brooklands Museum since c.1985, although all original testing equipment and machinery had been removed by then, it has since been increasingly used for storage and a mezzanine floor and staircase was added inside the former Control Room to accommodate additional Museum archives after the floods of November 2000. The Museum's Hawker Hurricane was initially stored then partly restored in the northwest corner of the building from 1997 to c.2005 and the Concorde Simulator was installed and returned to service in the former Noise Room in 2009.

It has suffered from roof leaks and has seriously defective gutters and downpipes, as well as serious structural cracking due to subsidence at the southeast corner.

Significance/Value

This functional building provides a physical association with the successful research and development work carried out by the Bae/British Aerospace aviation companies during the 1960s and 1970s. This gives the building a degree of significance in the context of Brooklands aviation history – even though this is somewhat reduced as a result of its change of use and loss of original internal fittings and equipment (only the structural elements and sound-proofed doors now remain).

Risks and Recommendations

Being located within the Museum site, the building now benefits from the on-site understanding and knowledge associated with the site. The building also benefits from being fully used for archive/storage purposes as well as part of the 'Brooklands Concorde Experience' with the Concorde Simulator housed in the former 'Noise Room'. Temporary interpretation panels demonstrate to the public how the building was originally used. As use/demands change there is a risk that there may be a desire for further changes to the structure – this should be avoided to retain the character and appearance of the structural envelope.

The issues with roof leaks, defective rainwater goods as well as the movement in the southeast corner are putting the structure of the building at risk – as well as its contents in the long-term. There is a clear need for not only an appropriate programme of repairs to address the movement and leaks in the roof, but also a cyclical maintenance regime to monitor and maintain the rainwater goods.

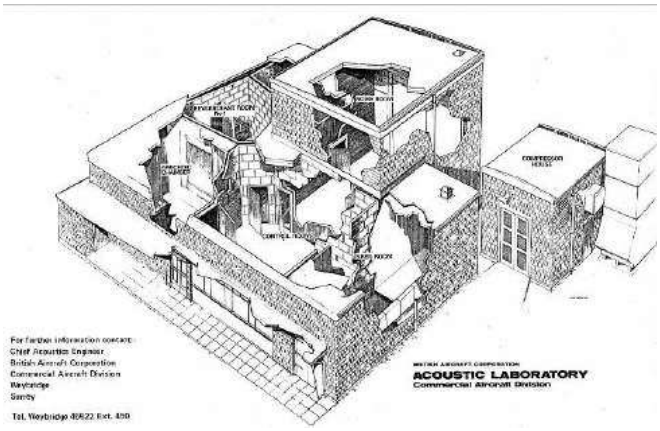
Relevant CMP Recommendations: G2, C1-C10, M1 and M3-5

Sources

Brooklands Museum Archives
Brooklands Museum Exhibit Presentation Boards (2013)

Illustrations

South side of the Acoustics Laboratory (date unknown)



British Aircraft Corporation (Commercial Aircraft Division) cut-away drawing of the Acoustics Laboratory (date unknown)

View from the south-east, with the second storey of the taller former 'Noise Room' rising above

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The former 'Reverberant Room No 1' on the west side of the building, now a vehicle workshop

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Revisions

Date	Comments

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

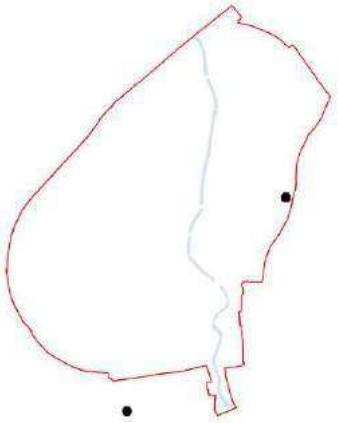
HERITAGE ASSETS GAZETTEER

Reference	Terracotta 'Gate Statements'	Status	Undesignated Asset

Summary

Designation Reference:	None
Date:	Early 1990s
Association:	Motor Racing & Aviation
Function:	Monument

Location



History and Description

A matching pair of terracotta 'gate statements' erected in the early 1990s, following a commission by Trafalgar Brookmount Ltd. (the then landowners and developers). Artist unknown – no record on the structures or in archives. Constructed in brick, the decorative facing panels are moulded terracotta.

These modern monuments acknowledge the pre-war history of Brooklands through their depiction of the famous Napier Railton, Vickers Vimy and the former Aero Clubhouse.

One is located within the Brooklands Conservation Area on the grass verge to the northwest of the roundabout junction between Brooklands Road, Wellington Way and Caenswood Hill. The second is located just outside the Conservation Area, on the grass verge against the wooded area to the northeast of the roundabout junction between Sopwith Drive and Parvis Road.

Significance/Value

While they are of no particular historical significance or value, they do make an important contribution to the setting and context of the Conservation Area and reflect important historic events and connections with this unique site.

Risks and Recommendations

Neither have any statutory form of protection, the southern feature is outside the Conservation Area and their ownerships are unknown (but most likely now belong either to Mercedes-Benz or the local authorities) – putting both at potential risk from a lack of routine managed maintenance with reliance put on occasional local volunteer labour. Furthermore, the southern feature is positioned in an area of heavy vegetation (overhanging trees and scrub) putting the terracotta at risk from algal/lichen staining if not maintained properly.

Relevant CMP Recommendations: M1

Sources

None

Illustrations

Gate statement located within the Conservation Area, on the grass verge to the north-west of the roundabout junction between Brooklands Road, Wellington Way and Caenswood Hill.

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Gate statement located outside the Conservation Area, on the grass verge against the wooded area to the north-east of the roundabout junction between Sopwith Drive and Parvis Road.

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Revisions

Date	Comments