BROOKLANDS AERODROME & MOTOR RACING CIRCUIT

CONSERVATION MANAGEMENT PLAN

Brooklands Heritage Partnership

October 2017

Brooklands Heritage Partnership, established in 2010, consists of representatives from Brooklands Museum, Historic England, Surrey County Council and Elmbridge Borough Council.

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This document has been commissioned by Brooklands Heritage Partnership with funding from Historic England (formerly English Heritage).

Brooklands Heritage Partnership consists of representatives from Brooklands Museum, Historic England, Surrey County Council and Elmbridge Borough Council. This informal Partnership was established in 2010 as a result of growing concerns regarding deterioration and lack of management of some sections of the former Brooklands motor racing circuit. Brooklands has a unique motor racing and aviation history and the heritage significance of its surviving features has been recognised by their designation as a Scheduled Monument, statutory listings and through the site's Conservation Area status.

A Conservation Management Plan is a document which analyses the history and fabric of a site, identifies why it is significant and then puts forward recommendations for retaining this significance for the benefit and enjoyment of future generations.

The aim of the Brooklands Conservation Management Plan is to provide information and guidance on best practice to landowners, residents and other stakeholders in order to inform future decision making on proposals affecting the area and to make recommendations for projects to ensure its future conservation. The study has built on work carried out for a previous draft document produced in 2003 on behalf of DaimlerChrysler UK.

This document is the subject of wider public consultation, managed and overseen by Brooklands Museum and Elmbridge Borough Council, for a six week period. Comments received during this process have informed the final endorsed document.

The final section of the Plan sets out recommendations to maintain and review the Conservation Management Plan and associated documents.

The Brooklands Conservation Management Plan was formally endorsed by Elmbridge Borough Council on 21 November 2017.

1.0 EXECUTIVE SUMMARY

1.1 The idea and subsequent actions of Hugh Locke King in 1906 were to change forever a simple area of relatively flat marshy farmland straddling the River Wey, between Byfleet and Weybridge, and put it on the world map for both the development of the motor car and the aeroplane. Brooklands has become internationally renowned as the home of British motor sport during the 'golden years' of the early twentieth century, and as being influential upon the development of the motor car until the outbreak of WW2. In parallel with this, the aerodrome contained within the race track also became the home to many early aviation pioneers, before quickly developing as a thriving centre for both flying training before WW1 and then, during the inter-war period, for pioneering long distance flights.

1.2 Brooklands also provided a key function in both world wars for aviation-related manufacturing activities of national importance. The site became Britain's largest aircraft manufacturing centre by 1918 and following the cessation of motor racing in 1939, it continued to be pivotal in the development of aviation technologies in this country. The site continued as a centre of innovation and engineering excellence, being responsible for the design and manufacture of many military and civil aircraft, including Concorde, until the final closure of the last factory in 1989. Producing over 18,500 aircraft of some 260 different types, Brooklands was Britain's and possibly Europe's most prolific aircraft manufacturing site.

1.3 Today significant features of the former aerodrome and race track survive, although somewhat disjointed by later phases of development, along with a number of important buildings associated with the motor car and aeroplane.

1.4 In 2013, Brooklands Heritage Partnership commissioned the preparation of a Conservation Management Plan to be carried out alongside a Gazetteer of Heritage Assets and a Guidance Document. A principal driver for the new Plan was to update and complete the existing draft Conservation Plan for the site, in line with current planning policies and conservation guidance.

1.5 This new Plan first analyses the history, vulnerability and significance of the heritage assets, before identifying opportunities and recommendations that will provide a sound basis for informing future management and development strategies across the extensive and complex series of heritage assets included within the Brooklands Conservation Area. This has been designated as being at risk due to the poor and deteriorating condition of the Brooklands racing track which is designated as a Scheduled Monument (SM).

2.0 INTRODUCTION

2.1 Background and Purpose of the Plan

2.1.1 The Conservation Management Plan ['the Plan'] has been prepared by Radley House Partnership Ltd [RHP], following their appointment by the Brooklands Museum Trust Ltd [BMT] on behalf of Brooklands Heritage Partnership [BHP] in May 2013, to provide an up-to-date framework for addressing the conservation needs of the Brooklands site and any future plans for the conservation and management of the Scheduled Monument and Brooklands Conservation Area. The appointment of RHP followed the award of a grant by Historic England to help achieve these aims.

2.1.2 The BHP brief for the Plan was to update and complete the existing draft Conservation Plan for the site, produced in September 2003 on behalf of DaimlerChrysler UK so that this new document is in line with current planning policies and conservation guidance. Produced as a requirement of planning conditions relating to the construction of the Brooklands Heritage and Technology Centre (Mercedes-Benz Retail Group UK Ltd), this Plan was not developed beyond initial draft form. DaimlerChrysler UK are no longer involved with the site and Mercedes-Benz World and a number of other heritage assets are owned by Mercedes-Benz Retail Group UK Ltd. The intellectual property rights for the Conservation Plan have been transferred to the BHP.

So that the new enhanced Plan would give a sound basis for informing future management and conservation strategies across the extensive and complex series of heritage assets included within the Brooklands Conservation Area, the brief identified the following specific issues as being required to be addressed:

- a more comprehensive approach to be adopted which addresses the wider Brooklands Conservation Area – not just the areas of the Scheduled Monument;
- more rigorous and detailed expositions of the significance, both of the site as a whole and of its constituent elements – employing the more developed concepts identified in Historic England's "Conservation Principles";
- the need to reflect the changes to national and local authority planning policy frameworks (post-2003);
- a more detailed understanding of risk and vulnerability;
- the need for a wider assessment of the significance of the setting and of the ways in which the setting contributes to significance across the Brooklands site;
- the need for an assessment of the effects on the Brooklands site of more recent developments since 2003;
- the need for inclusion of illustrative historic documents, plans, photographs and other relevant archival material;
- the need for inclusion of more recent surveys and investigations relating to planning or statutory consent works;
- the need to identify current gaps in knowledge and the scope for future research.

2.1.3 Matters of visual investigation and assessment of condition of the heritage assets, used to inform the development of the Plan, have been carried out by RHP. The summary findings of this are reported and illustrated within the Plan, with more focussed information included in the separate document 'Gazetteer of Heritage Assets' – which may be read in conjunction with the Plan.

2.1.4 The principal objective of the Plan is to provide clear and practical guidance for the future management and conservation of the Brooklands Conservation Area and the heritage assets contained within. It will also be a fundamental tool in promoting good conservation practice among site owners and other stakeholders.

In respect of the remit of the brief, the Plan has been written as an informative and strategic document to assess and demonstrate an understanding of the heritage to inform future decision making. As such the document will be formally endorsed by BMT following endorsement by Historic England, Surrey County Council and Elmbridge Borough Council.

2.1.5 The Plan has been prepared in the context of the current national and local planning frameworks, established national and local conservation guidance documents as well as policy documents and conservation statements previously prepared by Brooklands Museum Trust [BMT].

2.2 Authorship and Copyright

2.2.1 The Conservation Management Plan has been prepared by Richard Codd and Jeremy Poll, of the Radley House Partnership Ltd, who have worked in close co-operation with Brooklands Museum and the other members of the BHP.

2.2.2 Copyright in this is assigned to Brooklands Museum Trust Ltd and stated members of Brooklands Heritage Partnership for the sole purpose of the conservation and management of the site and for use in fundraising applications. Any other use of material will be subject to written agreement with Radley House Partnership Ltd and any illustrations, extracts or quotations taken from the Plan should be acknowledged accordingly.

2.3 Acknowledgements

2.3.1 Throughout the course of the development of this document, the consultant team have drawn extensively upon the comprehensive historic records and archives held at Brooklands Museum, and have been greatly assisted by the research work of the Museum's volunteer staff.

Specific thanks for their help and advice are due to Julian Temple and John Allman of Brooklands Museum; Dr Richard Massey, Paul Roberts and Chris Welch of Historic England; Tony Howe of Surrey County Council; Clare Smith and Christine Manly of Elmbridge Borough Council; Rick Nightingale of ProMow Landscapes; Ian Thompson, of Nomix Enviro. Additionally Mercedes-Benz Retail Group UK Ltd. through their transfer of the draft Conservation Plan dated 2003 which this document is intended to supersede.

2.4 The Site

2.4.1 Brooklands in Weybridge, Surrey, is widely recognised as the birthplace of British motor sport and aviation, and the site of many engineering and technological achievements throughout the first eight decades of the 20th century.

2.4.2 Parts of the original 2 mile 1,350 yard oval Race Track and Aerodrome have been redeveloped or lost over recent decades, and ownership is now fragmented. Fortunately the Museum, to the north-east, occupies some of the most significant parts of the Brooklands site comprising the north end of the Finishing Straight, Clubhouse and Motoring Village, Members' Hill and much of the Members; Banking (the steepest and most impressive section of the Track), as well as later buildings associated with the aviation industry. Elsewhere to the perimeter of the site are extant sections of track including the Byfleet Banking and Railway Straight (under different ownerships). The majority of the designated built heritage assets are contained within the Museum site – however, there are two principal structures which are outside this: the former

Aero Clubhouse to the south and the remains of the Campbell Circuit Pits, just south of the Museum in 'The Heights' commercial development.

2.5 Brooklands Heritage Partnership

2.5.1 The BHP comprises of representatives (named in 2.3.1 above) from Brooklands Museum, Historic England, Surrey County Council and Elmbridge Borough Council – with the Museum remaining as their base within Brooklands. It was set up in 2010, as a result of increased concerns raised by members of the public and groups, with regard to the ongoing deterioration to sections of the Track and a number of cases of damage and unauthorised works. Following the creation of this informal partnership, they identified the following set of aims and objectives[1]:

- To raise awareness of the historic circuit and its significance amongst the various owners, lessees, tenants and other occupiers of the site.
- To promote good standards of management and conservation practice within the Brooklands Conservation Area, possibly within the context of a future Heritage Partnership Agreement.
- To identify and address those specific areas of the Brooklands site requiring repair and positive management.
- To provide readily accessible and practical conservation management advice to site owners.
- To provide an informed basis for future planning and conservation management on and around the historic circuit.

2.6 The Consultant Team

2.6.1 The Plan documents have been prepared principally by Richard Codd BA (Hons), Dip Arch, MSc(Hist Cons), RIBA, AABC who is an accredited conservation architect. Related experience includes research and assistance in the preparation of the "Brooklands Museum Aircraft Factory & Race Track Revival Conservation Management Plan" (2009); preparation of the Massey's Folly Upper Farringdon, Conservation Management Plan. As a former local authority conservation officer, he also has experience in the writing of published Conservation Area Character Appraisals as well as an understanding and working knowledge of the legislative and planning policy frameworks.

2.6.2 Jeremy Poll BA (Hons), Dip Arch, Dip Cons, RIBA, AABC is an accredited conservation architect whose related experience includes inter alia the authorship of the "Brooklands Museum Aircraft Factory & Race Track Revival Conservation Management Plan" (2009) and the conservation and repair of 19th and 20th century historic concrete buildings and iron/steel structures.

[1] Extracted from the BHP 'A brief for the updating and completion of the Conservation Management Plan for the Brooklands Aerodrome and Motor Racing Circuit', dated August 2012.

2.7 Brief and Consultation

2.7.1 The report has been prepared in accordance with the BHP briefing document for the updating and completion of the Plan dated August 2012, which was subsequently revised on 19 September 2012 and 25 February 2013. The production of the Plan and the associated documents has been in accordance with the agreed framework and the latest conservation guidance.

2.7.2 From its inception in 2010, the BHP has regularly met to discuss and deal with various conservation matters relating to the conservation of the heritage assets at Brooklands. Consultation and liaison with BHP members and other stakeholders has continued during the preparation of the Plan.

2.7.3 Following a series of review meetings, draft versions of this document have been submitted to the BHP for discussion and agreement prior to issuing for public consultation and endorsement of the final publication.

2.8 Structure of the Plan

2.8.1 The Plan is divided into six chapters, in accordance with the current standard practice. These are written in sequence, with the information and conclusions of each being used to influence the following. The final chapter states how the Plan will be implemented, published and maintained in the future. The four principal preceding chapters are:

Understanding the Heritage	–	A summary of the key historical information known about the Brooklands Motor Racing Circuit and Aerodrome, from the earliest known records up to the present day.
Statement of Significance	–	Taking into account the content of 'Understanding', this chapter focuses on the areas which give value to and are significant to Brooklands.
Risks and Opportunities	–	This chapter highlights the key risks which currently exist with, or have the potential to impact upon, the assets. This includes consideration of the findings of the visual assessment of the designated and non-designated heritage assets and any recent condition/structural surveys of the assets made available to the consultants during the preparation of the Plan.
Recommendations	–	This section identifies matters to be considered and taken into account with regard to the consideration and implementation of any works to the site and its assets, as well as their management and operation.

2.9 Additional Documents and Plans

2.9.1 The Plan has been produced in tandem with a series of other documents, which are as follows:
- Gazetteer of Heritage Assets (designated and non-designated)
- Guidance Document

2.9.2 Elmbridge Borough Council and Woking Borough Council have kindly provided the mapping information for the purposes of the Plan, against which findings and archival map research have been plotted.

2.9.3 Radley House Partnership drawings (those separately issued - not included within the Plan appendices):

			scale	paper size
5670/	SK1	Site Plan: Statutory Designations	1:5000	A2
5670/	CAS1	Character Area Survey Sheet 1: The Dell; Brooklands Museum & JTI UK	1:1250	A2
5670/	CAS2	Character Area Survey Sheet 2: The Heights	1:1250	A2
5670/	CAS3	Character Area Survey Sheet 3: Mercedes-Benz World	1:2000	A2
5670/	CAS4	Character Area Survey Sheet 4: Light Industrial & Retail Units	1:2000	A2
5670/	CAS5	Character Area Survey Sheet 5: Brooklands Community Park & Residential	1:1250	A2

2.10 Statutory Instruments

2.10.1 The Plan also has an important association with other national and local statutory documents which relate to the conservation, management and regeneration of the historic site. In particular, these comprise:

Scheduled Monument	
– Ancient Monuments and Archaeological Areas Act 1979	National
Listed Buildings and Conservation Area	
– Planning (Listed Buildings and Conservation Areas) Act 1990	National
– National Planning Policy Framework March 2012 (section 12 – Conserving and enhancing the historic environment)	National
– Elmbridge Borough Council: Brooklands Conservation Area	Local
Development Control	
– Town and Country Planning Act 1990	National
– National Planning Policy Framework	National
– Elmbridge Borough Council: Core Strategy July 2011	Local
– Woking Borough Council: Core Strategy October 2012	Local
– Woking Borough Council: Local Plan 1999 Saved Policies	Local

2.10.2 These documents are correct at the time of publication of the Plan – any new or superseding legislation, or other enforceable documents published after this time will take precedence.

3.0 UNDERSTANDING THE HERITAGE

3.1 Introduction

3.1.1 The scope and extent of development evident at Brooklands, through its relatively short history of just over a century, is quite exceptional and crucial to understanding the diversity of the heritage that remains today.

Brooklands, now widely recognised as the birthplace of British motor sport, was the home of the first British Grand Prix in August 1926, as well as for a number of other significant motoring events, which included World Land Speed and endurance records. Through the relevant period and in parallel with the engineering achievements of the race track, the site also played a significant role in the pioneering years of aviation in flying training and is closely connected to the origins and evolution of the British aviation manufacturing industry during the 20th century.

As a result of its early involvement in aviation, the aerodrome became a strategic location for military-related activities through both world wars, predominantly in connection with emergence of supporting industries which concurrently developed at the site. Aviation research and development, for both civil and military applications, continued at Brooklands during WW2 and then for a further four decades until the closure of the aircraft factory in the late 1980s. The achievements encompassed through this era, and their importance to British aeronautical heritage, cannot be overstated. They range from the work of A.V. Roe, Thomas Sopwith, Sydney Camm, Rex Pierson, George Edwards and Barnes Wallis, through the development of jet aviation, to a key role in the production of Concorde.

Most recently, as residential, commercial, industrial and retail developments have been built around Brooklands, the north-east area of the site (which contains much of the remaining built heritage and important track features) has been protected and developed as a Museum of exceptional quality. This is now enjoyed as both a learning and recreational resource, by all sectors of the public community.

3.1.2 The extant physical built heritage at Brooklands, may therefore be essentially considered to be of three significant phases:

- Pre-WW2 motor racing and links to early aviation – as a place of recreation and achievement;
- WW2 military aviation manufacturing activities – as a centre of war-time industry;
- Post WW2 aerospace development and the Vickers-Armstrong's (later British Aircraft Corporation, then British Aerospace) factory site – as a centre of industry.

During the most recent era, a fourth type of heritage closely related to both of the above, is that of the Museum's ever growing collection which helps to bring the remaining features back to life for the benefit and enjoyment of all.

3.1.3 Encompassing some 340 acres within the perimeter of the Outer Circuit, Brooklands is a unique site with respect to not only the local environs of Weybridge but also in a regional, national and international context. The importance and value of specific parts of the heritage were first formally recognised on 7th January 1975, with the Scheduled Monument designation (ref: 33961) which now includes the extant sections of the Race Track as well as a number of the notable associated buildings – i.e. the former 'Brooklands Automobile Racing Club' Clubhouse, the former Members' Hill restaurant and the Campbell Circuit Pits building. Four years later, in 1979, the aviation connections were initially recognised with the former Brooklands Aero Clubhouse, being designated as a Grade II listed building. Subsequent reviews of the site by Historic England (and DCMS), most notably in 1984 and 2002, in parallel with the improved understanding of the site and its features, resulted in Brooklands being given increased Scheduled Monument and Listed Building protection. In summary: 1984 saw the Aero Clubhouse listing being amended to

Brooklands Park Building T120 (former Aero Control Tower), following its previous record identifying it as Aero Club House/Control Tower; and the former Flight Ticket Office being added as a Grade II listed building (previously included as part of the Scheduled Monument); then in 2002 the Scheduled Monument was amended, with some further buildings de-scheduled and re-designated as listed buildings instead.

Refer to Appendix A2 for the current statutory designation map and records.

3.1.4 In addition to the statutory Scheduled Monument and Listed Building designations given to elements of Brooklands by Historic England (and DCMS), Surrey County Council designated the entire former Brooklands Motor Circuit and Aerodrome and its environs as a Conservation Area in November 1989. It is understood that there are three other historic airfields in the UK (Biggin Hill, Hornchurch and Hullavington) that have similar protection, Biggin Hill and Hullavington were designated after Brooklands and Hornchurch only protects several acres of land with just a few surviving buildings, leaving Brooklands as unique, with its entire area designated. In 1985, Elmbridge Borough Council first published their 'List of Local Buildings of Special Architectural Or Historic Interest' which, following amendments in 1990 and again in April 2006, now identifies 12 buildings of local importance within the Conservation Area (the majority of which are located within the Museum site).

Refer to Appendix A2 for the current statutory designation map and local list records.

3.1.5 Areas of the former race track and aerodrome were redeveloped from the mid-1970s onwards as various parts of Brooklands fell into disuse and were subsequently regenerated. Regrettably this led to the demolition and clearance of the majority of the remaining Flying Village buildings during 1979-80. However, it is fortunate that significant elements of the site still remain today; although now fragmentary in some places they still clearly reflect the area's original use and function. With the combination of the statutory protections and the improved understanding of the site, the redevelopment that has occurred during the end of the 20th century and the early 21st century has increasingly become more considered, with attempts made to weave new developments into the features and character of the former race track and aerodrome where possible – such as the works in the early 1990s with the alignment of the parking and lighting in 'The Heights' and the main road through the residential development along the line of the old Finishing Straight.

Although it may only occupy less than 10% of the Brooklands Conservation Area, there is no doubt that the Museum site at the north-east end can now be regarded as the focal point of Brooklands through its retention of many historic assets and features associated with motoring and aviation.

3.1.6 Although there have been few comprehensive historical studies of the entire Brooklands site, there have been a number of respected publications, books and journal articles, which have discussed and recorded the development history of the site from its inception through to the present day in much detail; the following account is therefore only intended to provide a brief overview to give context for the purposes of the Conservation Management Plan.

Detailed timelines for the aerodrome, race track, specific historic buildings and related subjects (prepared by Julian Temple) are included as Appendices to the separate Gazetteer document.

3.2 The Historical Development of Brooklands

Pre-1907 – prior to the Race Track and Aerodrome Development

3.2.1 Compared to other areas nearby where settlements have been discovered which include the north side of the railway line (multi-period settlement including Iron Age, Saxon and Medieval occupation) and St George's Hill (an early Iron Age multivallate hillfort), relatively little is actually known and recorded for the prehistory and archaeology of the Brooklands floodplain. At the time of track construction, in 1906, a small number of finds were discovered which included: a Neolithic polished flint axe (north area of circuit); a Bronze Age flint axe blade (Members' Hill); a hoard of

Roman coins dating from 297-350AD (western side adjacent to the railway line); and a sixth century cordone bronze bucket, now known as the 'Weybridge Bucket', which is believed to have been part of a wine drinking set of Italian origin (north-west corner adjacent to the railway line).

With the knowledge that the floodplain is of some archaeological importance and belief that there may be further settlements linking the other two identified areas, targeted investigations and trial trenches were excavated in 1990 under the auspices of Surrey Archaeological Unit. While these found some Iron Age earthworks and pottery etc. in the central area of the site, no structural remains were found for this period. More recently a late Roman bucket was found on Members' Hill in Spring 2014.

Therefore in the context of the subject of this report, while the potential for archaeological finds in previously undeveloped areas and undisturbed pockets of land will always remain a possibility, the likelihood of finding any further remains of significance around the scheduled and listed features is less. Especially with regard to the extensive civil engineering and excavation works that were carried out in the early 20th century during the construction of the race track and aerodrome.

3.2.2 From the 16th century the land around Brooklands was part of a royal hunting chase for Henry VIII attached to Hampton Court and later connected to the new Royal Palace at Oatlands two miles to the north-east. By 1650 the land was in the possession of Cromwell's Parliament, and following restoration of the monarchy reverted to Crown property, eventually to become part of the Duke of York's estate which encompassed the farms of Brooklands and Byfleet Park. In the 18th century a desirable villa, Brooklands House, was built on land leased by George Payne to the south of Brooklands Farm. By 1803 this too had been purchased by the Duke of York who promptly demolished the house.

3.2.3 In 1824 the Duke sold the Oatlands estate, which included what we now know as Brooklands, to a wealthy dandy and gambler Edward Hughes Ball-Hughes, who promptly sold the land to the 7th Baron King of Ockham (Peter King – grandfather to Hugh Locke King) in 1829. Four years later the farm was inherited by his second son, Peter Locke King, who built the new Brooklands House in 1862 and supplemented his land holding with the acquisition of Hollick Farm and Wintersells Farm to the south-west of Weybridge (later to become the site of the motor circuit).

3.2.4 In 1895 Brooklands House and both farms were inherited by Hugh Locke King, a character who enjoyed an extravagant lifestyle and, as an enthusiastic supporter of early motor racing, was increasingly frustrated by the lack of any race or test track in England – especially after discovering a lack of British entrants at the Coppa Florio road race during a trip to Italy in 1905, which was claimed to be due to restrictive laws in Britain preventing competitions on public roads[2].

1906-1939 Race Track Development, Motor Racing and early Aviation

3.2.5 On his return to England, Locke King thought that the marshy land at Brooklands would be an ideal location for a new permanent race track – especially with the rail link to London provided by the nearby Weybridge Station on the London & South Western railway line. He therefore decided to develop his land and plans started to be drawn up from 1906. 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!

3.2.6 As a new concept of design, 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. The then relatively new material of Tarmacadam as well as asphalt were also considered as possible track surfaces over aggregate bases, however the steep banking meant they would have been impossible to lay

[2] LANCASTER, NICHOLAS H.: Brooklands–CradleofBritishMotorRacingand Aviation (Oxford: Shire Publications Ltd., 2012), p. 7.

and roll. As a result, with concrete chosen 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. From the day of opening, a recurrent feature of the track was the poor quality of the concrete which was originally unreinforced and 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.

3.2.7 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.

Fig. 3.1 – Clearance of the site in 1906 (© via Brooklands Museum)

Fig 3.2 – Construction of the north end of the race track in 1906 (© via Brooklands Museum)

3.2.8 The race course immediately attracted international interest, most notably from Kaiser Wilhelm II who, upon realising the obvious advantage to the development of motor racing that Brooklands offered, directed a permanent course to be built in Germany (the AVUS track in Berlin – completed in 1921). National popularity of the track continued unabated until the outbreak of WW1 with intense public interest in both in motor racing generally, and the many record breaking speed and endurance achievements at Brooklands.

3.2.9 The overall oval form of the circuit built with the 6 inch thick unreinforced concrete, was 100 feet wide for its entire 2¾ miles (4.4 kilometres) perimeter length. It consisted of the two steeply banked bends at the north-east and south-west ends (Members' or Home Banking and the Byfleet Banking respectively), which were connected by the Railway Straight on the north-west side and a soft reverse curve section the south-east side – a straight wasn't achievable here as Locke King had already sold off the adjoining parcels of land (this is where the Itala Works was established, discussed later). Towards the south-east 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.

3.2.10 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 of reinforced concrete construction, a 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'.

Fig. 3.3 – Hennebique Bridge under construction
(© via Brooklands Museum)

Fig 3.4 – The completed Hennebique Bridge
(© via Brooklands Museum)

3.2.11 During the development of the design and the construction of the track, access for vehicles and spectators were obviously important factors. This was achieved with two tunnels and a bridge being constructed at the Weybridge end of the circuit, due to the railway connection nearby, before the track surface was laid above. At the north end of the race track was the 'Motor Tunnel', more commonly known as the 'Shell Way Tunnel' or 'Competitors' Tunnel'. This consisted of a single carriageway for use by motor cars, especially competitors' vehicles, providing direct access to the Paddock area. From 1912 this route also led to the Flying Village via Aerodrome Road and was presumably also used by aviators too. The second tunnel, on the north-east side of Members' Hill, was for pedestrians and provided access for spectators through a series of three interlinked parallel passageways – each lined with white tiles to improve the quality of light and their appearance to the spectators[3]. Finally, the BARC 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[4].

Fig 3.5 – Spectator's Tunnel under construction
(© via Brooklands Museum)

Fig 3.6 – Competitors' Tunnel in 1908
(© via Brooklands Museum)

3.2.12 From the official track opening on Monday 17 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 and in this respect it is, together with the bankings, still arguably the most significant part of the circuit today. 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. On its east side lay

[3] BIRD, ROGER: The Birth of Brooklands (Woking: Roger Bird, 2012), p. 74.
[4] ibid., p. 91.

Members' Hill where the natural topography of the steeply rising land provided a prime vantage point for spectators and the site for the main grandstands.

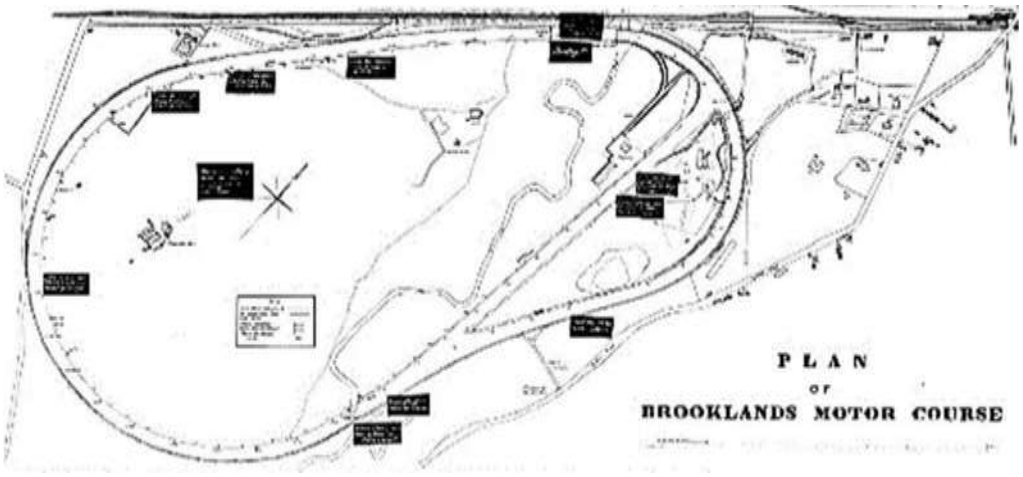

Fig. 3.7 – Plan of the race track and associated structures as it would have been in 1907
(© via Brooklands Museum)

3.2.13 A key feature of the Finishing Straight was that it was deliberately constructed to be above the River Wey flood plain, from its southern end it rose in a steady shallow gradient before climbing steeply beyond the Clubhouse to meet the base of the Members' Banking. At this point, on the eastern edge, the Straight had a distinct 'kink' - the reason for which is not fully understood, although it has been previously proposed that it may have been to maintain the 100 foot width opposite the Paddock exit road[5]. The exit road, which remained in use until 1926, ran from the Paddock to a point close to the north end of the Finishing Straight and was separated from the main track by a wooden fence. Other race-related buildings in the vicinity of the Paddock included the Judges' Box, Programme Sellers' Hut, Results Board, Soda Fountain Hut and Telegraph Board.

3.2.14 At the Fork end, to the south of the Finishing Straight, the Itala Works had been constructed by 1907 for the assembly of their imported car parts but was taken over for aircraft manufacture by Vickers Limited in 1915. Soon, under Vickers, this factory site was extensively developed and became a well-known Brooklands landmark in its own right: the saw-tooth roof profile of the main Vickers assembly hall of 1919 featuring as a famous backdrop of many inter-war photographs.

3.2.15 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 including later races which started on the Railway Straight, or for races of different configurations, and which were not necessarily always run in the 'natural' anti-clockwise direction.

3.2.16 In the early days of motor racing, when the cars had limited or no means of braking, it is believed that on occasion the gradient at the end of the Finishing Straight was used to good effect for pulling up. Indeed, as the speeds increased it was not unknown for a competitor to drive into the steep earth bank of the Members' Hill in order to stop.

3.2.17 In direct parallel with the introduction of motor racing at Brooklands, were the aviation interests of pioneering aviators such as Alliott Verdon Roe and John Moore-Brabazon. One of the many

[5] RADLEY HOUSE PARTNERSHIP: AircraftFactory &RaceTrack RevivalConservationManagementPlan (Brooklands Museum, January 2010)

notable events occurred just three months after the opening of the track, when Roe built a small timber hangar at the foot of Members' Hill for the construction of his Roe 1 Biplane. He then used the Finishing Straight for testing and towed flight trials of his Roe 1 biplane. These earliest recorded powered flight trials at Brooklands ended in mid-1908, but by 1910 an aerodrome had been developed and the 'Flying Village' at the Byfleet end of the track was established. This grew to include eight flying schools and a number of embryonic aeroplane manufacturers which included notable names in early aviation such as Thomas Sopwith, the British & Colonial Aeroplane Co. (Bristol), Martin & Handasyde, A.V. Roe and Vickers. In addition to teaching flying, pleasure flights also became a popular attraction. So much so, that in early 1911 the world's first Flight Ticket Office was built (now grade II listed and relocated in the Museum site) and operated by Keith Prowse & Co., a well-known London booking agency.

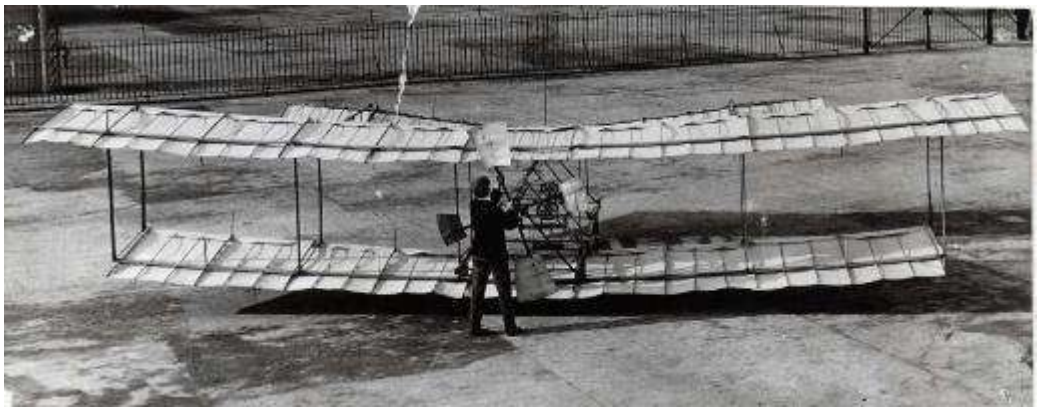

Fig. 3.8 – Alliott Verdon Roe testing his Roe 1 biplane on the Brooklands Finishing Straight circa. 1908

(© via Brooklands Museum)

3.2.18 With the continued intense interest in motor racing, Brooklands was an immediate success and continued to be developed over the coming years. Whilst originally conceived as a recreation for the Edwardian social elite, Brooklands became a popular venue for all members of society who had an interest in British motor sport. Before the events of WWI closed the circuit, the main addition to the track was that of the Test Hill. Built in 1909, opposite the Paddock, it comprised of a road of increasing gradient stages for hill climb testing.

3.2.19 Motor racing at Brooklands was brought to an abrupt halt with the outbreak of WW1 on the 4th August 1914, when Locke King made Brooklands available to the government and the War Office made use of its flying ground and schools for the Royal Flying Corps (later the Royal Air Force), who took possession on the 5th August for the purposes of training pilots, testing and delivering new aircraft and later specialised in the training of wireless operators and observers. Initially taking over the Bristol, Sopwith and Vickers Flying Schools as a Military Training School before No. 2 Reserve Aeroplane Squadron arrived in late 1914. Some motor cycle events continued to take place on the track in the early weeks of the war, however by October the site was completely closed to the public and all motor racing events ceased for the duration of the war, with the circuit being guarded by a detachment of the Royal West Surrey Regiment. As the aerodrome's importance grew a number of squadrons were consequently formed or reformed here including: No's 1, 8, 9 and 10 as well as No's 2 and 23 Reserve Squadrons (who were responsible for training pilots)[6]. Pioneering pre-war experiments by Marconi engineers with airborne radio equipment continued under RFC control and resulted in Britain's (and possibly the World's) first successful air-to-ground voice transmission in 1915.

[6] CORLEY, DENIS & HUTCHINS, TONY: 'Brooklands Aerodrome – The Years 1907 to 1939' AirfieldReview July 2005, p. 60.

Fig. 3.9 – Test Hill on Opening Day, 25 March 1909
(© via Brooklands Museum)

Fig. 3.10 – Crowds on Members' Hill, 1907
(© via Brooklands Museum)

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3.2.20 During the years of WWI there was intense aviation-related manufacturing activity at Brooklands with the Royal Flying Corps and four local aircraft factories. These included Sopwith, who remained in the Flying Village carrying out the final erection and testing or their aeroplanes which had been built off-site at their main factory at Kingston – these notably included the Sopwith Pup and Sopwith Camel. In addition, as referred to above, Vickers Ltd. took over the Itala Works in 1915 and continued to expand its operation at Brooklands during the hostilities with the mass-production of the Royal Aircraft Factory's BE2c reconnaissance aircraft, the FE8 and by 1917 were producing their SE5a fighter (1,650 being built by Vickers at Brooklands). Towards the end of October 1917, 'Number 10 (Brooklands) Air Acceptance Park was established to carry out the necessary flight testing of new aircraft. Vickers also developed a long-distance bomber with the intended capabilities of being able to reach the heart of Germany, this was the Vickers Vimy (designed by Rex Pierson). However, although it arrived too late to have a major influence on WWI it became famous instead for record breaking long-distance flying in 1919 and then again in 1920, firstly with the crossing of the Atlantic Ocean by John Alcock and Arthur Whitten-Brown and then Ross and Keith Smith flying from England to Australia, as well as Brand and van Ryneveld's flight from London to Cape Town.

[7] ibid., p. 60.

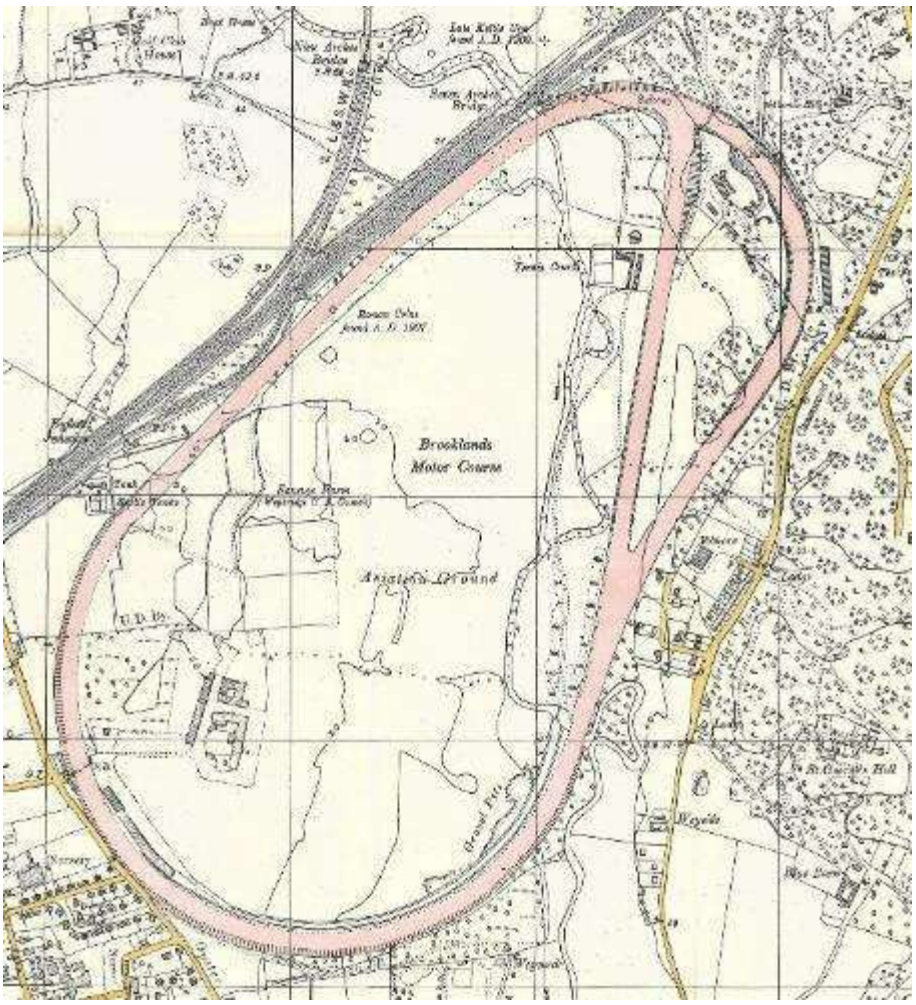

Fig. 3.11 – A coloured Ordnance Survey extract, circa 1915, showing the Race Track, Motoring Village (north) and the Flying Village and Aviation Ground (south) as it would have been following the outbreak of World War I

(© via Brooklands Museum)

3.2.21 At the end of WWI in November 1918 and the return of Brooklands to Locke King, it had been hoped that the motor racing would quickly restart in 1919. However the outer circuit of the track had been left in such a poor state of repair as a consequence of damage from heavy commercial and military vehicles and the three Belfast-truss Hangars, although the Finishing Straight fared much better, it was to eventually take another year to carry out all of the necessary and substantial repairs before the racing was able to resume in April 1920. It then continued over the following two decades with large attendances being maintained through to the early 1930s, while it remained 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).

3.2.22 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[8]. 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

[8] LANCASTER, NICHOLAS H.: op. cit., p. 33.

led to it never being brought back to Brooklands. Unfortunately, Hugh Locke King was unable to witness either of these events as on 28 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.

Fig. 3.12 – Starting Line up at the top of the Finishing Straight for the first British Grand Prix on 7 August 1925
(© via Brooklands Museum)

Fig. 3.13 – John Cobb setting the lap record in 1935
(© via Brooklands Museum)

3.2.23 Through this inter-war era the rapid evolution of racing cars continued, with track speeds increasing until the lap record of 143.44mph achieved in 1935 by John Rhodes Cobb in his 24 litre Napier Railton.

3.2.24 In 1937, and in response to the changing tastes of motor racing, the Campbell Circuit was opened. The new road circuit crossed the Finishing Straight just south of the Paddock, and a new climbing road section was cut into Members' Hill.

3.2.25 As the motor racing events took place during the inter-war period, the aviation industry that had quickly developed and grown during WWI had seen some changes as a result of the severe post-war cut-backs in military aircraft production. A number of the factories closed or went into receivership, such as Sopwith although this immediately reformed under the guise of the H G Hawker Engineering Company[9]. Instead the flying schools gradually came back to the fore, with the Brooklands School of Flying being set up in 1928, followed two years later by the formation of the Brooklands Aero Club, who built its Clubhouse in 1932 to the designs of Graham Dawbarn.

3.2.26 The re-establishment of the flying schools and growth of light aviation at Brooklands led to the return of a number of notable air races returning to Brooklands, including the King's Cup Air Race in 1932.

3.2.27 During the 1930s, concern increased at the worsening situation in Germany. This became evident at Brooklands in 1935 as a result of the Royal Air Force Expansion Scheme which began to place large orders for military aircraft. The two notable factories directly affected by this were Hawker who now concentrated on the fighters (including Hurricanes) and lightweight bombers; and Vickers who specialised in the larger bomber (including Wellingtons) and transport aircraft. This increased military manufacturing activity also led to the establishment of the 'Number 11F Squadron of the Air Defence Cadet Corps' (later renamed the Air Training Corps) in conjunction with Brooklands Aviation Limited in 1938 and by 1939 Vickers had been advised by the Air Ministry on how to camouflage the whole site[10].

[9] LANCASTER, NICHOLAS H.: op. cit., p. 37.

[10] CORLEY, DENIS & HUTCHINS, TONY: op. cit., p. 63.

Fig. 3.14 – Aerial view of Brooklands from the south 1939 – showing the new Campbell Circuit.
(© Aerofilms via Brooklands Museum)

Fig. 3.15 – Aerial view of the Brooklands Aero Club

(© via Brooklands Museum)

1939-1945 – the Second World War and the increased growth of the aviation industry

3.2.28 In September 1939 the track closed in response to the outbreak of the Second World War. The Brooklands site was heavily developed for military aviation manufacturing activities and defence purposes.

3.2.29 As part of the rapid site development a series of up to 10 temporary Air Ministry Bellman hangars were erected at different locations around the circuit for aircraft production and as repair facilities for the Vickers-Armstrong's (Aircraft) Limited and the Hawker Aircraft Ltd factories. Until 2004 two of the Vickers hangars were still in existence, one located on the Railway Straight (now demolished) and the other (which still remains today on the Museum site) on top of the Finishing Straight between the Clubhouse and Members' Hill. The extant hangar (later known as T202) was ordered on 16 September 1940 just 12 days after a devastating German air raid on the Vickers Works and built between September and December the same year.

3.2.30 The purpose of hangar T202 was specifically for the dispersed manufacture of Vickers Wellington MkII and Warwick aircraft, and part of a production sequence linked to another (non-Bellman) hangar, later known as T194, located on the Outer Circuit under the Members' Bridge. Incomplete new fuselages were towed into the north end of the Bellman Hangar, before being finished and rolled out of the south doors for engine ground runs on the apron. They were then able to access the aerodrome via a new taxi-way built from the Finishing Straight around the north side of the Clubhouse and then crossing the river over a new steel bridge (still extant).

3.2.31 The Hawker factory built 3,012 Hurricanes at Brooklands in their new assembly shop which replaced the last of the old flying sheds by the Byfleet Banking in 1935. It is now understood that nearly 75% of the Hurricanes that fought in the Battle of Britain were built at Brooklands. With the increased production of Wellingtons and Hurricanes, Hawker decided to focus the development of prototypes at their relatively new factory at Langley, Buckinghamshire.

Fig. 3.16 – Hangar T194 photographed with a Wellington bomber fuselage under construction inside (WW2).
(© BAE Systems via Brooklands Museum)

Fig. 3.17 – Bellman Hangar T202 on the Finishing Straight.
(Radley House Partnership)

3.2.32 A significant number of other factory-related smaller structures were built on and around the circuit as well as air raid shelters, three reinforced concrete gun towers equipped with 40mm Bofors anti-aircraft guns and other defensive gun emplacements. The map overlays included in Appendix A3, record the growth and development of Brooklands during the WW2 period. Records are limited as to their particular uses at this time, although it is known that within the Museum site during the 1940-41 period along the north-east side of the Finishing Straight, a Boiler House, Sub-Station and Trailer Pump House were built between the hangars – with some traces of these still extant today. The two tunnels under the track were also used during the war for manufacture which could carry on without interruption during air raids. Some original fittings and features are still evident, including electric lighting and power sockets a lowered reinforced ceiling structure and steel support/lifting beam in the Competitors' Tunnel and an outer blast wall and associated ventilation system to the Spectators' Tunnel.

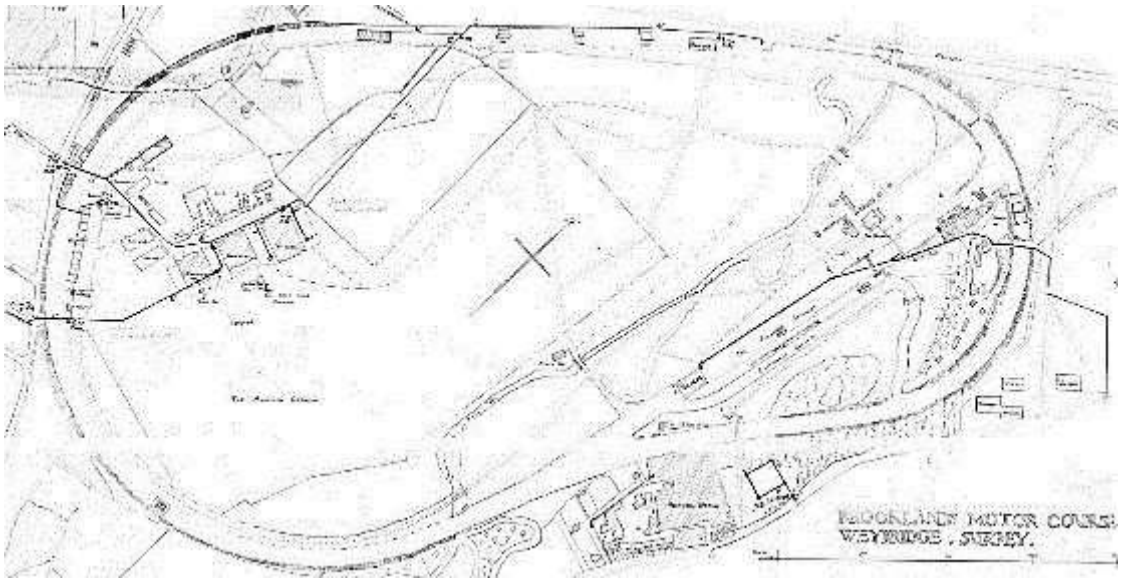

Fig. 3.18 – c.1940 plan showing World War 2 aerodrome layout, including balloon sites and defensive gun sites
(© via Brooklands Museum)

3.2.33 Located approximately 150 miles from the nearest German airfields in France, the aircraft factories at Brooklands were a prime target for the Luftwaffe, who it is now known had a plan of the site dated 26 June 1939 in their atlas of targets which clearly illustrated the site prior to the further

rapid growth of the factories. This led to an increase in the implementation of defensive measures around the site, including the use of camouflage netting supported on a series of poles across the large areas of track and buildings being painted green, in an effort to help disguise them. The first air raid was on 24 July 1940 and they continued throughout the war – the worst recorded attack was during the Battle of Britain when the Vickers factory was on the 4th September hit by a series of 500kg bombs which resulted in the deaths of at least 88 workers with a further 419 were injured.

Fig. 3.19 – 1940 Luftwaffe plan showing the potential targets at Brooklands.
(© via Brooklands Museum)

3.2.34 One former gun emplacement is still evident, though overgrown, at the west end of the Byfleet Banking along with a reinforced concrete Bofors anti-aircraft gun tower on top of Members' Hill. In addition to the fixed guns, Brooklands also had a detachment of the 5th AA Division Royal Artillery with 16 3.7" AA guns[11]. Two overgrown air-raid shelters have been located outside of the track partially built into the support banking at the north and south ends of the circuit, with others more readily identifiable adjacent to the hangar locations around Members' Hill which would have been for use by the Vickers staff. To the north this comprised three separate brick structures built into the hillside which each consist of a series of cells and blast walls, then a subterranean tunnel was also built into the west side of Members' Hill with external blast walls and finally to the south of hangar T202 another shelter took the form of a brick structure built upon the track surface.

Post Second World War to the present day

3.2.35 As had occurred at the end of WWI, many motor racing enthusiasts were hopeful that Brooklands would re-open to the public and racing would resume after the war. However, the damage caused during the war by enemy bombing and defence works as well as that from the growth of the aviation factories with their many dispersed premises was too great, so the major repairs necessary would have been too costly and taken many years to complete. In addition the Ministry of Aircraft Production still controlled the site and would not allow access to any part of the track by members of the public. Motor racing was never to return.

[11] VENABLES, DAVID: Brooklands–The Official Centenary History (Yeovil: Haynes Publishing, 2007), p. 244.

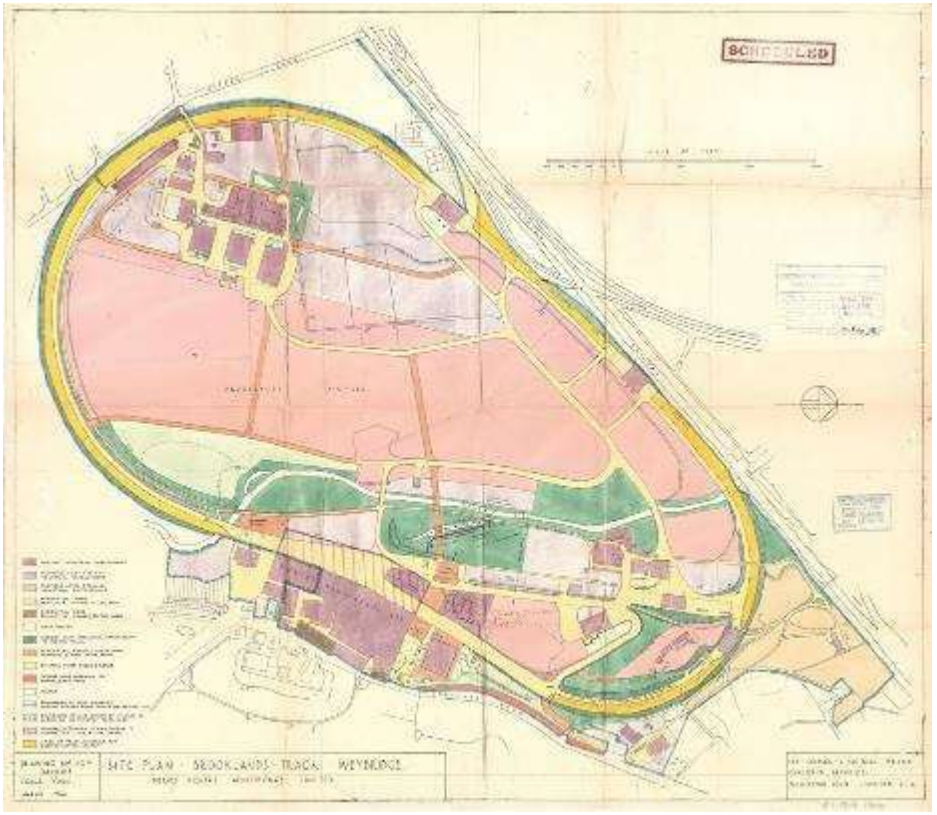

Fig. 3.20 – Site plan prepared by Ley Colbeck & Partners for Vickers-Armstrongs in March 1946 (© via Brooklands Museum)

3.2.36 The aircraft industry was now to take over the site and dominate events at Brooklands, with manufacturing, research and development. In total, it is reckoned that some 18,600 aircraft of 260 types were produced at Brooklands through the 20th century.

3.2.37 The post-war changes began on 1 January 1946 when Vickers-Armstrongs bought the entire Brooklands site for £330,000 and then adjusted and scaled down its operations for the peacetime economy and initially invested in improving the pre-war factory located at The Fork, to develop new aircraft. This included the design and production of civil airliners, as well as major military aircraft contracts, with a large research and development department under the direction of Barnes Wallis. With Vickers' complete ownership of the site, to allow their Valiant 'V' bomber aircraft to take off and land, the centre of the Byfleet Banking was removed in 1951 and a concrete runway laid down through the site on a north-south alignment. Notable Vickers aircraft developed during this period included the Viking, Viscount, Vanguard and VC10 airliners as well as the Valetta, Varsity and Valiant military designs..

3.2.38 In 1946-47, under the guidance of Barnes Wallis and following much planning, the Stratosphere Chamber was constructed to the north of the Clubhouse (where his office was located), with all sections being built and brought in from the Vickers shipyards at Barrow-in–Furness, before being 'launched' on to its final site adjacent to the Clubhouse. This facility was mainly used to test components at very low pressures and temperatures, as Vickers had had the foresight to realise that civil aviation would grow following the end of the war.

Fig. 3.21 – The 'launch' of the Stratosphere Chamber in 1947 showing the Bellman hangar west elevation.

(© BAE Systems via Brooklands Museum)

3.2.39 Many of the pre-war race buildings including the footbridge over the Finishing Straight had survived WW2, but were gradually cleared away over the subsequent years as major new factory buildings were erected by Vickers from the late 1940s. The factory buildings also continued to develop and increase through the following decades on both the west and east sides of the airfield with a series of dispersed war-time buildings being retained and re-used around the track.

See 1956 overlay (5670/SK13), 1962 overlay (5670/SK14) and 1971 overlay (5670/SK14) in Appendix A3 for the illustration of the growth of the post-war aviation industry.

3.2.40 In 1960, encouraged by the Government, the ownership of the site changed to the British Aircraft Corporation Limited [BAC] which had been formed as an amalgamation of four aviation companies, Vickers, Bristol, English Electric and Hunting Percival. This led to the Vanguard, VC10, 1-11, TSR2 and major parts of Concorde being built at Brooklands during the 1960s and early 1970s.

3.2.41 The Acoustics Test Laboratory building, which remains extant on the Museum site, was built in 1965 to the north of the Stratosphere Chamber. It formed part of the BAC Design Office and was used to study how noise affected people, engines, equipment and aircraft structures. This included components for the Anglo-French designed Concorde which had begun to be developed between BAC and Sud Aviation – with the nose, flight deck, fin and substantial front and rear fuselage sections eventually being built at the Brooklands site.

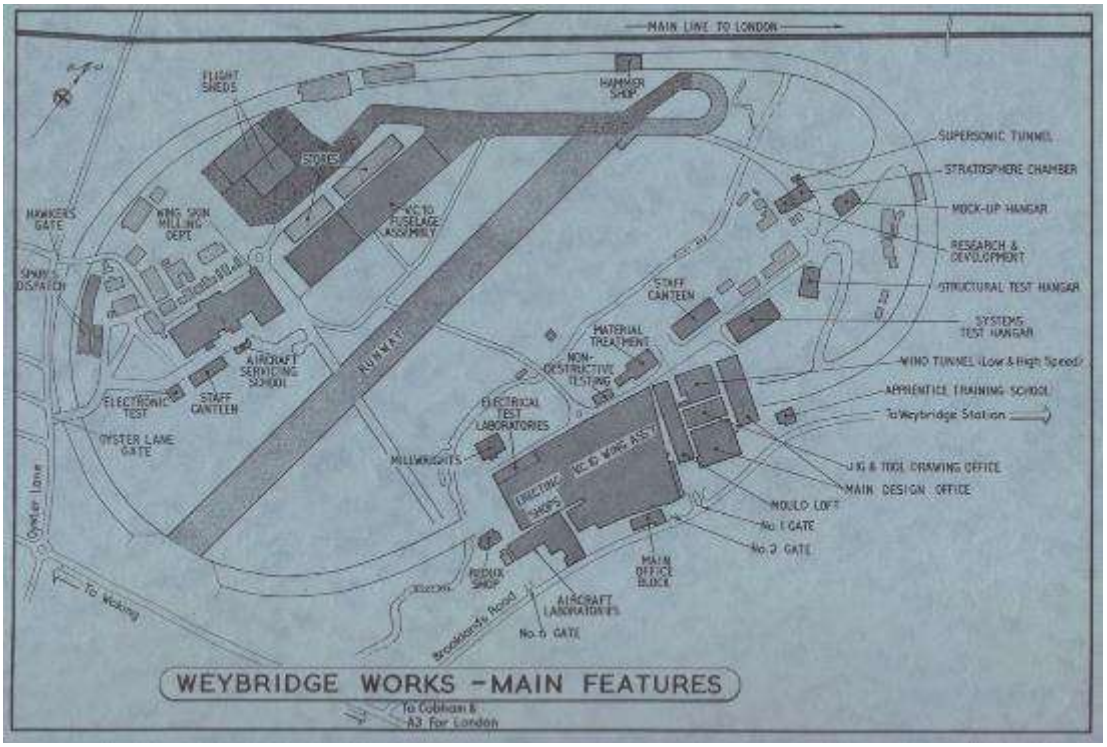

Fig. 3.22 – Extract from a British Aircraft Corporation handbook, showing the arrangement and main features of the 'Weybridge Works' circa 1964.

(© via Brooklands Museum)

3.2.42 Along with the manufacture of the VC10, which had been in production since 1962 on the west side of the circuit, the Concorde components were some of the last major aviation projects to be carried out on the site. The end of VC10 production in 1970 in turn led to the end of the BAC factories on the west side of the site, this was also compounded by the increase in brown-field site land values and earlier threats to route the proposed M25 motorway through the circuit. In 1974, BAC therefore joined forces with the company's major shareholders (GEC and Vickers) to set up their own company to redevelop the now redundant west side of the site – soon to become known as the 'Brooklands Industrial Park'. This also led to the closure of the airfield in 1975, although it continued to have limited use as a helicopter base by Air Hanson.

3.2.43 As the redevelopment of the site was being considered, the Brooklands Society (founded in October 1967) had set up its own company, Brooklands Track Ltd, which applied for outline consent to set up a museum on 40 acres of land at the north-east end of the site in 1975, following indications from BAC that the site was no longer going to be required by them. Although permission was granted, they were unable to secure the necessary funds – however, it is believed that their efforts to tidy up the badly neglected track and raise its awareness led to the Scheduled Monument designation for the extant sections of the track[12].

3.2.44 In 1978 further re-development was permitted in the location of the historic former Flying Village, leading to the demolition of all of the surviving buildings there except the former Brooklands Aero Clubhouse and Flight Ticket Office which were now protected as Listed Buildings.

[12] VENABLES, DAVID: op. cit., p. 260.

Fig. 3.23 – The British Aerospace Weybridge factory in the early 1980s.
(© BAE Systems via Brooklands Museum)

3.2.45 In 1982, the 40 acres in the north-east of the site (previously targeted by the Brooklands Society) was finally sold to Gallaher Ltd, who subsequently declared that they only required 10 acres for a new headquarters and eventually leased the remainder to Elmbridge Borough Council for a peppercorn rent to facilitate the formation of the Brooklands Museum Trust which was formally launched on 7 June 1987, nearly 80 years after the track's official opening. Gallaher removed the derelict remains of the dispersal hangar that had been built into the Members' Banking and reinstated the missing underlying section of track, as well as restoring the Clubhouse. In 1988, the Museum replaced Members' Bridge following removal of the original neglected steel structure in 1971.

3.2.46 In June 1986 British Aerospace announced it would be closing its Brooklands site, which took place following several years of winding down and clearance – bringing to an end eight decades of aircraft manufacture at Brooklands. Final contracts included the production of sections of Hawk fuselage as well as complete wings for the Airbus A320 airliner. This site, on the east side of the track, was demolished in 1989-90 and eventually replaced by a mixed-use scheme of residential development on 25 acres of land to the south and the remainder being business (office) use – known as 'The Heights'.

3.2.47 The last major developments at Brooklands have been at the north-west end of the site. Initially with Mercedes-Benz World (2006) which is a dominant feature seen across the site, the neighbouring 'Brooklands Hotel' and office buildings which are alongside the Railway Straight and finally a social housing scheme completed in 2014, 'Railton Place', located just outside the track between the railway line and the Members' Banking.

3.3 Context of Brooklands

3.3.1 The former Brooklands Aerodrome and Motor racing Circuit as a whole occupies a large land area bound by Byfleet to the south and west, St George's Hill to the east, and the main London to Portsmouth railway line which runs along the northern edge from south-west to north-east and these all defined the perimeter of the track's development.

3.3.2 The once open nature of the circuit is now heavily developed with mixed uses of residential, commercial, retail and light industrial development. Indeed, through the progressive development of the airfield and track site previously described, the original circuit has now become woven into the urban fabric of the Byfleet and Weybridge areas. The external approaches to the site are no different. In fact it is not until you are within the site that you are able to begin to appreciate the scale of the former motor racing circuit and aerodrome – especially those areas that remain accessible within or visible from the public domain: the Museum with its numerous features to the north-east and the Byfleet Banking in the Community Park to the south-east are accessible, whereas the remains of other parts of the Byfleet Banking, Railway Straight and Campbell Circuit may only be viewed from a distance. The 1990s office developments (The Heights) on the former aircraft factory, the 1980s/90s retail park and industrial units to the south-west on the former Flying Village and the 2006 Mercedes-Benz World to the north-west on the former airfield are plainly evident and in fact dominant to the view of the visitor, who has to look more closely to appreciate the heritage assets located in these areas.

3.3.3 The landscape that was created as a consequence of the race track's construction provides a somewhat unusual setting for the current forms of development, including the Museum site, which has a unique character with its mix of industrial and war-time buildings within the extensive metalled areas and backdrop of a wooded hillside. To the south and west the flat flood plain of the river Wey is still clearly evident and provides an insight to the former airfield, although there is some distortion to this experience as a result of the addition of modern landscape features, bunds and trees, which have been added to the west side of the Community Park along Sopwith Drive to restrict access onto the open landscape and former runway within.

3.3.4 Within the local area Brooklands holds importance to Weybridge and Byfleet both through the associations with aviation and motor sport, but also as a former major industrial site.

3.3.5 These associations extend to national importance as an historically important place through Brooklands' contribution to and significant influence on the development of motor sport and aviation. For almost quarter of a century, Brooklands remained the only national motor racing circuit - until the opening of Donington Park in 1933 at Castle Donington, near Derby, in the 'new' road circuit style. In terms of aircraft manufacture, it is believed to be Britain's most prolific aircraft manufacturing site – and possibly Europe's too.

3.3.6 Internationally, the Brooklands motor circuit is the world's first purpose-built banked motor circuit. It is also one of the few banked tracks of motoring's pioneering era and one of a handful that survive today. Other analogous examples include:

- Indianapolis, United States (1909)
- AVUS, Germany (1921)
- Monza, Italy (1922)
- Sitges Terramas, Spain (1922)
- Montlehéry, France (1924)

3.4 Designations and Heritage Assets

3.4.1 The site is now divided up between many different owners and lessees therefore management of the heritage assets differs as to the ownerships and use of the assets. The larger areas under the ownership of the principal owners and stakeholders are faring relatively better compared to those which are split into smaller parcels of land. This disparate array of ownership has prevented any form of coherent management for the site as a whole.

3.4.2 To address this, concurrently with the preparation of this plan, Members of the BHP have been sourcing and co-ordinating Land Registry records so that a coherent database of landowners can be compiled to assist with the co-ordination of any future projects affecting the site as a whole as well as assisting with the circulation of this Plan to improve the understanding of all parties involved.

3.4.3 Those protections relevant to the site currently include:

Scheduled Monument
(No. 33961) – "Brooklands Motor Circuit, remains of the pre-WW2 Aerodrome, WW2 'Bofors' gun tower, air raid shelters and the Brooklands Memorial." Designated 1975, amended 2002.

Listed Buildings
Former 'Brooklands Aero Clubhouse' (1932), listed Grade II. Designated 1979, amended 1984.
Air Ministry 'Bellman' Type Aircraft Hangar (1940), listed Grade II. Designated 1999.
Former Flight Ticket Office (1911), listed Grade II. Designated 1984.
Former 'Brooklands Automobile Racing Club' Clubhouse (1907), listed Grade II*. Designated 2002.
Former Members' Hill Restaurant (1907), listed Grade II. Designated 2002.

Conservation Area
The Brooklands Motor Circuit and Aerodrome (which also includes a series of locally listed buildings). Designated 1989 - by Surrey County Council

Locally Listed Buildings
Campbell Circuit Pits, BP, Shell and Pratts petrol pagodas, Malcolm Campbell workshop, ERA Shed, Jackson Shed, Dunlop Mac tyre change building, racing lock-ups, Press Hut and pill box – originally designated by Elmbridge Borough Council in June 2000. (Note: these are only protected via Conservation Area legislation at the time of writing the Plan.)

A plan illustrating the scope and location of the statutory and non-statutory designations are included under Appendix A2. At the time of the appraisal, several of the assets including the Brooklands Memorial, the Flight Ticket Office and the locally listed pill box, were not correctly documented on the HE and EBC records and mapping systems. It is recommended that these records be updated as soon as possible. It should be noted that the current location of three of these assets is not properly recorded on both the Historic England [HE] and Elmbridge Borough Council [EBC] records and mapping systems, these are: the Brooklands Memorial, formerly in the location of Mercedes-Benz World but now within the Museum Site [HE & EBC records]; The former Flight Ticket Office, formerly in the location of a retail unit to the rear of the current Tesco store, but now within the Museum site [HE records]; and the locally listed pill box [EBC records]. A recommendation of this Plan is that the records for these assets be updated to properly reflect the current situation.

3.4.4 A central swathe of land through the site, which includes the Mercedes-Benz World and Brooklands Community Park characterisation areas is designated as Green Belt. The site as a whole falls within the 5km zone of the Thames Basin Heath Special Protection Area, which only has an influence on residential development. There is further protection to the Community Park which is designated as a Site of Nature Conservation Interest, due to there being a large area of dry acid grassland formed on alluvial sand. The Community Park is also designated as a SANG (Suitable Accessible Natural Greenspace) designed to help mitigate the environmental affects for visitors and dog walkers of the Thames Basin Heath Special Protection Area. In order to accommodate these demands on the area, there is a management plan in place, the primary focus of which is the nature conservation importance of the site, safe access management and enjoyment of the public.

3.5 Brooklands Landscape Master Plan

(text prepared by Clare Smith – Heritage, Landscape and Tree Preservation Manager, Elmbridge Borough Council)

3.5.1 Landscape Master Planning was undertaken in conjunction with a major planning application by DaimlerChrysler/Mercedes-Benz to redevelop the central section of Brooklands in 2003. This Master Plan in Fig. 3.24 below and looks at the entire area holistically, identifying the different historic and contemporary elements and how they can be enjoyed and interpreted. The development included the construction of the Heritage and Technology Centre (now Mercedes-Benz World]) at the north end of the runway together with the Brooklands Hotel and offices to the north-west. As noted previously, the central swathe of land is designated as Green Belt and it was important to retain its character and openness as well as recognising the different heritage assets.

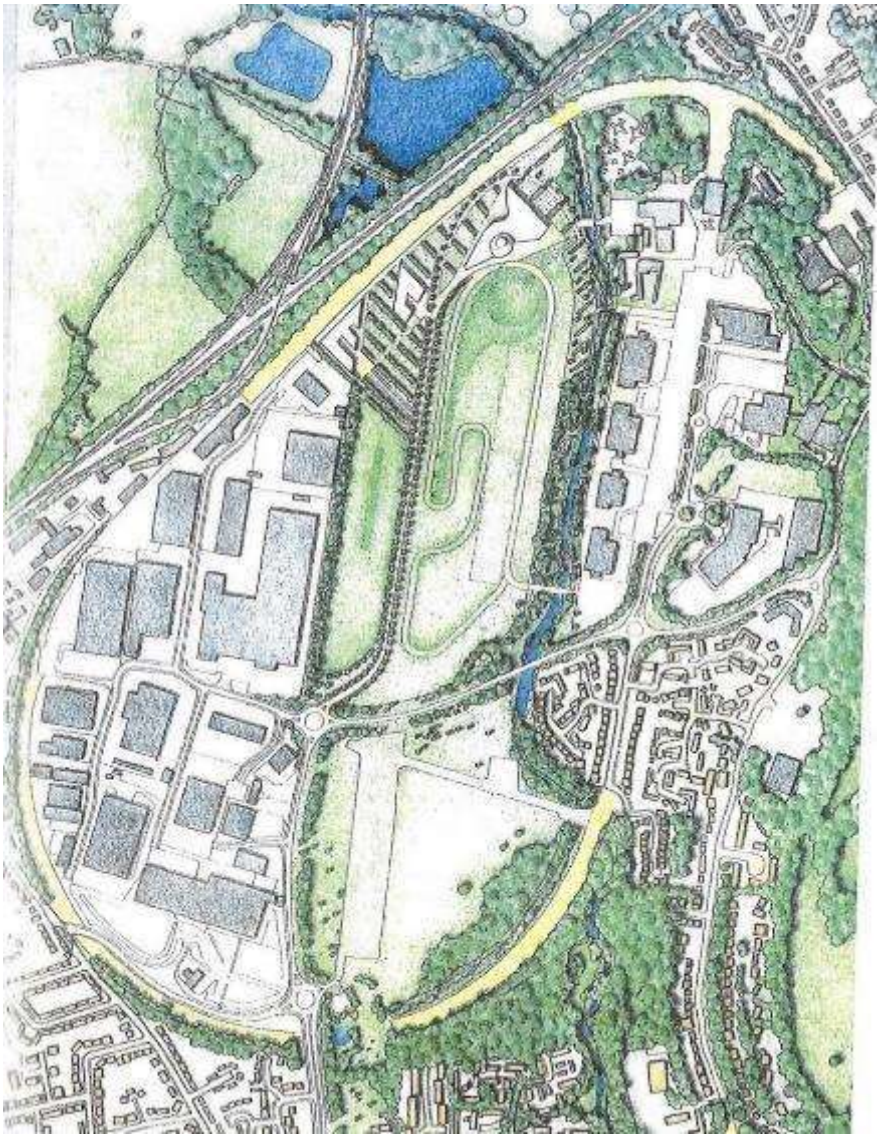

Fig. 3.24 – Brooklands Landscape Master Plan,
reproduced courtesy of Elmbridge Borough Council.
(© Elmbridge Borough Council)

3.5.2 A new access to Brooklands Museum was provided to the north together with a new riverside walkway along the River Wey to the east and a new 60 acre Community park to the south. The original aerodrome runway was kept free from tree planting and development and north-south views from Wellington Way were retained by burying the security fence at a lower level. The southern section of runway is marked by tarmac surfaces with rolled gravel in the Brooklands Community Park and the northern runway section by the straight tarmac access road edged by

inset 'runway lights' and swales and the test track area. The Campbell Circuit remains and the route of the Solomon Straight is marked by ornamental metal roundels where it crosses part of Mercedes-Benz World and the Hotel, and view corridors to the Listed 1907 Clubhouse within Brooklands Museum are retained.

3.5.3 Mercedes-Benz has retained ownership of the Railway Straight, parts of the Byfleet Banking, Campbell Circuit, parts of Five Tonne Bridge and Vickers Bridge and various internal access roads. The Community Park and Riverside Walkway has been transferred to Elmbridge Borough Council to manage and maintain. The Community Park has multiple functions – providing flood compensation for the site, providing a number of different leisure activities for all ages and as a nature reserve and strategic SANG.

3.5.4 The opportunity has been taken to recognise other heritage assets through negotiations when granting other planning permissions including marking the line of the Finishing Straight by avenues of tall conifers and preventing built development on this area. Also, the restoration and installation of new interpretation boards for the Campbell Circuit Pits within The Heights Business Park and planting a splayed avenue of trees leading to the Listed former Aero Clubhouse on Sopwith Drive.

4.0 HERITAGE VALUES AND SIGNIFICANCE

4.1 Introduction

4.1.1 This basis for assessment of the Brooklands site broadly follows the method set out in Historic England's Conservation Principles, Policies and Guidance. This provides a method of assessment of historic assets which enables informed management and a logical approach to decision-making in respect of change.

4.1.2 The Plan will provide a framework for aiding decision-making, so as to ensure the long term future of the remaining heritage assets and their settings across the site, taking into consideration that at Brooklands there are distinct eras of development, which feature historically significant events and technological innovations relating to both the early recreational and later industrial history of the site.

4.1.3 The importance of the site is reflected by the statutory designations but it is the significance of the location, as a sum of the heritage values, which must be taken into account when decisions are made. Therefore significance is not necessarily reflected by individual designations alone (and indeed, future change in conjunction with an improved understanding may cause these to be reassessed).

4.1.4 For Brooklands, heritage values are considered under the following three headings:

- Historical values – the way in which past people, events, and aspects of life can be connected to Brooklands through illustrating important motor racing and aviation developments and their association with notable people and events.
- Aesthetic value – the ways in which people draw sensory and intellectual value from Brooklands.
- Communal value – the meanings of Brooklands to the people who relate to it, or for whom it figures within their collective experience or memory.

It is of course probable with a site such as Brooklands, that many values are inter-related.

4.1.5 Heritage significance considers the relative importance of each part of an asset in order that future management and project decisions may be properly informed. In this instance a system of grading to give a weighting to the perceived significance has not been applied, but a description and reasons why the asset is deemed important is described. The section is concluded in the form of a Statement of Significance.

4.1.6 During the preparation of this report and appraisal of the site, RHP have informally consulted with key stakeholders and land-owners/lessees etc. not only to gain access to the usually publicly restricted areas of the track, but also to try to understand the extent and degree of their awareness and appreciation of Brooklands.

Subsequent formal consultation with the stakeholders, the local community and specialist interest groups is being co-ordinated by Brooklands Museum and Elmbridge Borough Council to further inform the document prior to the endorsement by the Brooklands Museum Trust, Historic England and Surrey County Council. The findings of this consultation have been separately reported by EBC, with comments and amendments being incorporated into the completed Plan where applicable.

4.2 Historical Values

4.2.1 The history of the Brooklands site in general, is broadly of three principal periods:

1. Up to the Second World War (1907-1939) – being dominated, apart from an interlude during WW1 and when aviation (manufacturing, testing and flying training) activities took over, by motor racing up to its cessation at the outbreak of war in 1939. Early aviation achievements also developed in parallel with the period of motor racing.

2. The Second World War (1939–1945) – when mass production of military aircraft by Vickers-Armstrongs and Hawker Aircraft Ltd turned Brooklands into a strategic industrial site for the war effort. Barnes Wallis' design and development of special weapons including the 'bouncing' bomb were also noteworthy achievements.
3. Post-WW2 (1945-1989) – as a major aircraft and weapons design, research and manufacturing facility up to the closure of the industrial site. This period spans from the continued involvement of Barnes Wallis, as Head of Research and Development at Vickers, from early developments in jet aviation through to the design and production by BAC of substantial parts of Concorde. The aviation industry departed from Brooklands in 1989 with the closure of the then British Aerospace site.

Thereafter, the Brooklands story continued but with efforts concentrated upon the conservation, recording and preservation of these diverse heritage assets, which in turn led to the establishment of the Museum.

4.2.2 The extant sections of track, especially where still in the public domain and readily accessible, have exceptional historical value as the focus of the Brooklands circuit and the historic motoring and many record breaking events connected with the place. It has considerable value in connection with the invention of the aeroplane, as the place where Alliott Verdon Roe set up a workshop and attempted to fly his first full size powered aeroplane in 1907-1908 – shortly before he became the first Englishman to design and fly a powered aeroplane in Britain[13].

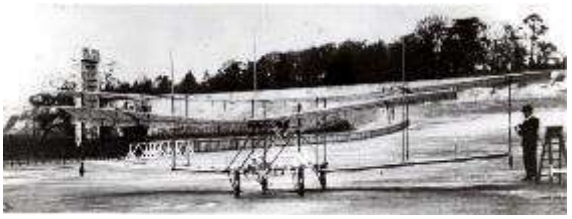

Fig 4.1 – The Roe 1 biplane on the Finishing Straight in 1907
(Radley House Partnership)

Fig 4.2 – Southern section of the former Byfleet Banking
(Radley House Partnership)

4.2.3 The Bellman hangar, Stratosphere Chamber and Acoustics Laboratory buildings are of considerable value as they jointly symbolise the continuous design, construction, testing and production of numerous aircraft at Brooklands from 1907 to 1989. The historical connection with the assembly of Wellington and Warwick bombers in the hangar, the design and work of Barnes Wallis with the Chamber and the connection with the development and subsequent production of Concorde with the Laboratory are of considerable value too.

Below ground archaeology

4.2.4 As recorded in the previous chapter 'Understanding the Heritage', relatively little archaeological significance connecting Brooklands to pre-history is recorded compared to the other areas nearby. Little is known about the site before the construction of the Brooklands race track before it formed part of the Crown Estate as a hunting chase, and later use for agriculture. The land over which the racing circuit developed was open countryside, comprising farm and woodland which, by the late 19th century, formed part of the Locke King Brooklands estate which, just 1/3 mile to the north, included the principal residence 'Brooklands House' (designated a Grade II listed building in 1984

[13] in 1909, from Lea Marshes in East London.

and now part of Brooklands College). The Ordnance Survey map of 1895 records the land use at that time.

4.2.5 In respect of the remaining sections of track and buildings, along with the adjacent land areas, it would be reasonable to suggest that the extensive remodelling of the landscape that occurred during the original construction and subsequent phases of redevelopment at the turn of the 21st century may have obliterated much evidence of earlier use of the peripheral areas.

The built fabric – motor racing 1907-1939

4.2.6 The Brooklands Race Track, as a whole, is of exceptional evidential value as, both nationally and internationally, it is one of the most important early motor racing venues in the world. This importance is underlined through the most intact sections of track being given Scheduled Monument status despite only being built at the beginning of the 20th century.

Although the full circuit is now much disrupted by later alterations, with some sections and significant features lost, the overall layout is still clearly evident – especially when viewed from the air or when moving through the site. The ambition and scale of the banked race track is unparalleled, and retains many unique features of early motor racing of the pre-WW2 era. The surviving physical evidence contributes greatly to people's understanding of the past.

Fig 4.3 – South-eastern section of the former Byfleet Banking within the Brooklands Community Park
(Radley House Partnership)

Fig 4.4 – Extant section of the former Railway Straight
(Radley House Partnership)

4.2.7 The completeness of the northern end of the Finishing Straight, as the focal point of the Brooklands circuit, and juxtaposition with the Outer Circuit, Members' Hill and Paddock, is of exceptional evidential value in its own right as a group. Significant evidential value can also be attributed to the other extant sections around the circuit, which include:

- The remains of the Railway Straight to the north-west; and
- The three disjointed sections of Byfleet Banking to the south, now separated by late 20th century developments.

Whilst the track surface and vistas are now physically interrupted as a result of later structures (and in this respect difficult for the uninformed to properly read and interpret), the extant sections of track still present an insight to the essence of Brooklands' motor racing past. The avenue of trees delineating the edges of the lost section of Finishing Straight through the Heights, between the Paddock and The Fork, subtly extends the perception to give a feeling of scale and aids interpretation to the informed visitor.

4.2.8 The sectional concrete construction of the 1907 track is of some evidential value, being one of the earliest uses of this material for a paved road surface. Within the extant sections of the race track are a number of concrete bays which are finished with a dimpled surface (the presumed original

finish to the race track), they are believed to be examples of early track repairs which are themselves an important part of the Brooklands motor racing story.

4.2.9 As well as the track surface itself, the track edge and site boundary treatments are fundamental to defining the track and circuit and are therefore of considerable value. The inner kerb edges remain, to varying degrees around the extant sections of the track to the Finishing Straight, the Railway Straight and the Members' Banking, with only limited sections to the Byfleet Banking where the remainder appears to have been lost as a result of late 20th century redevelopment works and the impact of unmaintained vegetation eroding the track edge. The majority of the edge treatments to the outer perimeter of the track have also been lost, but during the appraisal process a few sections of the metal-clad timber sleepers were identified on top of the track edge to the Byfleet Banking in the south-west – the last remaining physical evidence of the race track's original safety barriers.

In designing the circuit, it was proposed to be enclosed with a series of boundary treatments positioned at the base of the support banking or track edge (where flat), including a 'Bayliss' Iron fence, corrugated iron fence and an oak fence. Of these three proposals, only the 'Bayliss' fence survives to different degrees around the track, most notably to the south-east section of Byfleet Banking in the Community Park with smaller sections interlinked with 'modern' replacement fencing along the bottom of the support bank behind the Members' Banking at the north end.

Fig 4.5 – Original 'Bayliss' Boundary Railings, north of the Members' Banking (Radley House Partnership)

Fig 4.6 – Test Hill (Radley House Partnership)

4.2.10 Although not part of the original 1907 Race Track, the complete remains of the Test Hill added after 1909 is further important evidential value to the understanding of the evolution and development of Brooklands as a Race Track and as a site for the development of the motor car. Again using concrete, its 352 feet (107.30 metres) long incline with an average gradient of 1:5 increasing to 1:4, was used to test motor cars, motor cycles and certain commercial vehicles. This value is again recognised with its inclusion in the Scheduled Monument designation.

4.2.11 The last notable alteration to the Race Track, before its closure at the outbreak of WW2, was the addition of the Campbell Circuit, which opened in April 1937. Originally designed to connect the Railway Straight to the Finishing Straight with a series of straights and bends before climbing up the south side of Members' Hill to join the Members' Banking, only limited sections of this road circuit now remain: originally names Sahara Straight, Howe's Corner, Test Hill Hairpin and Dunlop's Delight. However, these have significant evidential value not only again to help understand the scale and extent of development at Brooklands at its closure as a motor racing circuit in 1939, but also to further help appreciate and interpret the full story of racing at Brooklands, which as well as the motor racing also included cycle racing, which took full advantage of this later addition to the circuit.

Fig 4.7 – Campbell Circuit (Sahara Straight)
(Radley House Partnership)

Fig 4.8 – Campbell Circuit (Dunlop's Delight)
(Radley House Partnership)

4.2.12 It is considered that these evidential values of the early history of the Race Track and its associated development up to 1939 are of considerable importance to the significance of Brooklands, and that their preservation should be given priority. Other values are to a great extent dependent upon the survival of this fabric.

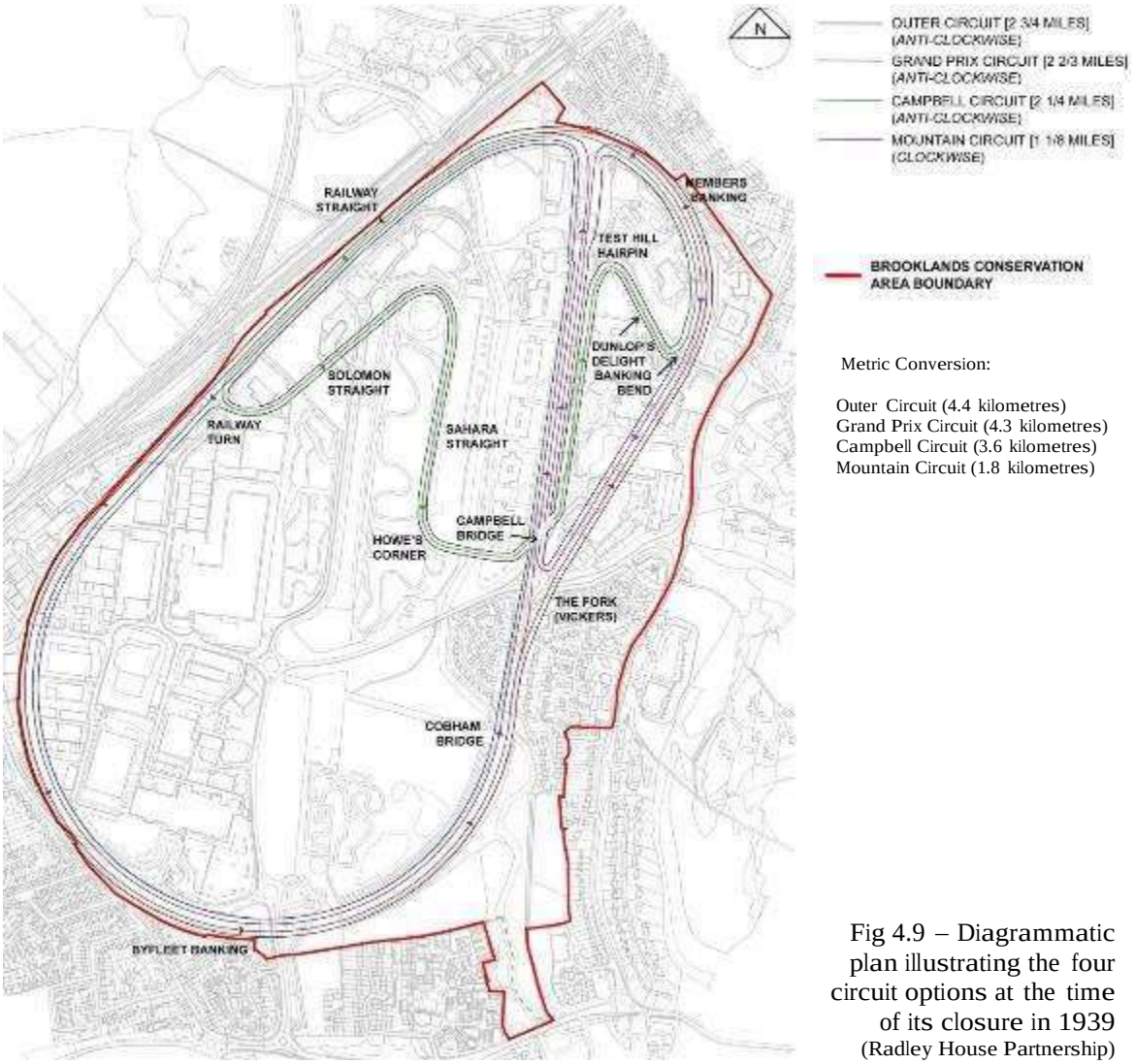

Fig 4.9 – Diagrammatic plan illustrating the four circuit options at the time of its closure in 1939
(Radley House Partnership)

4.2.13 In addition to the Race Track and Test Hill, further exceptional evidential value for Brooklands significance as a motor racing venue exists with the number of original and early buildings that still remain. Except for what remains of the Campbell Circuit Pits in The Heights, all of these early buildings are located within the Museum site. In order of their statutory protection, these buildings are as follows:

- The remaining bays of the Campbell Circuit Pits 1937 (Scheduled Monument)
- The former 'Brooklands Automobile Racing Club' Clubhouse 1907 (Grade II*)
- Former Members' Hill Restaurant 1907 (Grade II)
- Shell Petrol Pagoda 1922 (Elmbridge Borough Council Local List)
- Pratts/Esso Petrol Pagodas 1922 (Elmbridge Borough Council Local List)
- BP Petrol Pagoda 1922 (Elmbridge Borough Council Local List)
- Press Hut 1930 (Elmbridge Borough Council Local List)
- Campbell Shed 1926, extended 1930 (Elmbridge Borough Council Local List)
- ERA Shed 1937-39 (Elmbridge Borough Council Local List)
- Racing Lock-ups 1927 (Elmbridge Borough Council Local List)
- Dunlop Mac's Bungalow 1921 (Elmbridge Borough Council Local List)
- Jackson Shed 1931 (Elmbridge Borough Council Local List)

All of these buildings contribute greatly to people's understanding of the past providing an insight to the scale, use and popularity of the circuit in its heyday – especially those associated with the Motoring Village which is now encompassed by the Museum. Their preservation should therefore continue to be given priority, to ensure that this strong physical connection with the original use of Brooklands remains for the benefit of all.

Refer to Appendix A2 for the current statutory designation map and records; and the separate Gazetteer for summary information on each of these heritage assets.

Fig 4.10 – View towards the BARC Clubhouse and Paddock

(Radley House Partnership)

Fig 4.11 – View across the BARC Clubhouse tower across to the Bellman hangar and Finishing Straight

(Radley House Partnership)

The built fabric – aviation 1909-1989

4.2.14 Although the Brooklands Aerodrome is also significant as one of the earliest aerodromes in Britain, home to many pioneering aviators, designers and flying schools and as Britain's most prolific aircraft manufacturing centre, unfortunately, compared to the notable motor racing evidence still in existence today, relatively little physically remains within the Brooklands site to reflect this. Apart from the WW2 and post-war Vickers buildings now retained within the Museum site, there are only three surviving historic features from the early years of aviation at Brooklands. These are:

- The world's first Fight Ticket Office, built in March 1911, which was originally within the Flying Village and designated as part of the Scheduled Monument (until 2002), as well as being designated a Grade II listed building in 1975. Following the redevelopment of the

south-west area of Brooklands in the 1980s, it came under threat and its context was largely lost which led to it being carefully dismantled in 1989 and rebuilt within the Museum site at the beginning of 1990 (while still retaining its listed building status).

- Remains of Aerodrome Road, which was laid out in Tarmacadam during 1911/12[14] along the inside of the track to provide a vehicular connection between the motor racing Paddock and the Flying Village to the south-west. The extant sections consist of a 300m length located within 'The Heights' just south of the Museum site and also a 500m length parallel to the inside edge of the Byfleet Banking in the Community Park with its 1931 replacement ferro-concrete bridge (originally this had been a timber structure) over the River Wey. The importance of these particular elements is again reflected with their inclusion in the Scheduled Monument designation.
- The former Brooklands Aero Clubhouse, an inter-war building opened in May 1932 on the edge of the Flying Village, to the designs of Graham Dawbarn. Built in the International Modern Style, the symmetrical rendered building consists of a central three-storey tower flanked on its north and south sides with single-storey pavilions. This building became the hub of the social activities for the Brooklands Aero Club and contained a restaurant, lounge, bars, office, watch office and an observation platform[15]. Following the closure of the adjacent aircraft factories, this building was disused until it was restored c.1988 and converted to office use.

Although now somewhat disjointed across the site and lacking their original context, this surviving physical evidence of the pre-WW2 aviation activities at Brooklands again contributes greatly to people's understanding of the past.

4.2.15 As previously discussed in the preceding chapter of this report, the young aircraft industry continued to evolve and grow at Brooklands particularly with the development of military aircraft, through both WWI and WW2 and then concentrating more on civil airliners post-1945 through to the 1988 closure and redevelopment of the British Aerospace factory. During this period of nearly 80 years, the technical advances achieved and aircraft manufactured by the various designers and companies, were not only of national but also international significance for the aircraft industry.

4.2.16 As a consequence of the closure, all of the associated aircraft factory buildings on the east side of the track and in the south-west corner of the Byfleet Banking were demolished – except for those that are now located in the Museum site at the north-east end and what remains of the Vickers/BAC runway running north-south through the site. In addition a handful of the WW2 defensive features remain as well as a large air raid shelter complex nearby under part of St. George's Hill golf course. This now somewhat limits what remains of evidential value for the post-1939 era – but inadvertently may be seen as increasing their value as a result of their rarity in the context of the Brooklands site.

4.2.17 To maintain the chronological process of this evaluation, the WW2 features should be considered ahead of the extant later Vickers/BAC structures – these include the Grade II listed Bellman hangar, Bofors anti-aircraft tower and series of air-raid shelters within the Museum site, as well as another shelter and gun emplacement located on the edge of the Byfleet Banking (which are all included within the Scheduled Monument designation), and the locally listed pill box to the north of the Clubhouse.

4.2.18 It is considered that these WW2 structures and the associated alterations to the site (including previously discussed works to the two tunnels under Members' Banking) are of considerable evidential value in the context of the aviation history of the site and the relationship to the technological achievements and operation of both the Hawker and Vickers-Armstrongs factories. The value of the Bellman hangar is further heightened through not only its association with the dispersed production line process of Wellington MkII bomber manufacture at Brooklands, but also by the fact it is a rare survivor of the taller 25 foot high variant.

[14] Brooklands Museum Records – 'Aerodrome Road' at Brooklands, Surrey Timeline document (v3) 2013.

[15] VENABLES, DAVID: op. cit. p. 232.

4.2.19 While it has already been stated that the original track surface is to be given priority, later interventions to its paved surface that are associated with WW2 developments on the site should be judged on their own merits. For example, the surviving base of a WW2 emergency water tank, and other associated war-time defence and other post-war structures which impinge upon the Finishing Straight provide good evidential value of the later history and are of some significance in the overall context of the site.

4.2.20 The post-WW2 developments that remain at Brooklands are the Vickers runway built in 1951 which remains clearly visible within the Brooklands Community Park, as well as the Vickers-Armstrongs Research & Development Buildings within the Museum site, which include:

- The Stratosphere Chamber (1947)
- The Acoustics Laboratory (1965)
- Balloon Hangar and Supersonic Wind Tunnel (1958)
- The Fire Test Chamber (c.1969)

4.2.21 All of these buildings and their original contents, where still in existence, are considered to have significant evidential value in the context of the substantial post-war growth of the Vickers-Armstrongs factory and associated developments in aviation. However, it is further considered that the evidential value of the Stratosphere Chamber is increased, due to its connection with Barnes Wallis who oversaw its design and construction, and that of the Acoustics Laboratory is increased due to its connection with the development of Concorde.

4.2.22 Other features of the post-war era, which relate to the wider activities of the industrial site are too fragmentary and of relatively little evidential value. These are most evident on the Finishing Straight and include the post-war road cut into the racing track, where their significance is considered to be neutral. In fact these same features may be considered to be detrimental to the architectural integrity and functionality of the 1907 track, if the developing proposals to relocate the Bellman hangar and reinstate the Finishing Straight are realised. Examples would include the column bases of the boiler house pipework on the north-east side. In such circumstances, and subject to the necessary statutory consents being forthcoming, it is suggested that it would be appropriate to record these items archaeologically prior their removal.

Similar features, such as the raised paved roadway to the former T194 hangar site which linked the industrial facilities on the Members' Banking to the rest of the Vickers factory, are of neutral significance but may be detrimental to remove so would be more prudent to leave in-situ.

Illustrative value

4.2.23 The illustrative value of the northern part of the Finishing Straight (in particular its juxtaposition with the Members' Banking, Clubhouse and Paddock) and the extant sections of the Outer Circuit are all exceptional because of their unique qualities. Although partially interrupted by later development and therefore compromised, making interpretation difficult for visitors, the completeness of the design is vital to illustrate the history and birth of motor racing pre-1930 before the style of motor racing circuits changed forever. That is to say, the notion of the idea and relationship with horse racing before the predominance of road-style circuits. From 1907 to 1933, when Donington first opened for motor racing, Brooklands dominated the British racing of both cars and motorcycles.

4.2.24 The illustrative value is further enhanced by the Museum's unique collection. Many exhibits are famous in their own right for record-breaking achievements, such as the Napier-Railton owned and driven by John Cobb who recorded the fastest lap time for the Outer Circuit in 1935, or for engineering advancements proven at Brooklands.

Fig 4.12 – Napier-Railton and other museum exhibits inside the former Malcolm Campbell Workshop
(Radley House Partnership)

Fig 4.13 – Aviation collection, including Wellington bomber, contained within the Bellman hangar
(Radley House Partnership)

4.2.25 The surviving aviation buildings across the site also provide considerable illustrative value in respect of aviation manufacturing and development activities, particularly in relation to the WW2 and post-war era when these took over from motor racing at Brooklands. Within the Museum however, their considerable value is further enhanced by their links with the collections they house and original features and equipment they still contain. Most importantly, the exceptionally rare Vickers Wellington salvaged from Loch Ness in the Bellman Hangar, which was originally built and first flown at Brooklands before it saw active service at the start of WW2 along with the original equipment associated with Stratosphere Chamber designed by Barnes Wallis.

Associative values

4.2.26 The Brooklands Motor Circuit has exceptional associations with many of the great names of early motor sport, and landmark events in the history of motor sport such as world land speed records, the first British Grand Prix and the first person to drive 100 miles in one hour.

4.2.27 In terms of aviation achievements through the 20th century, the associative values of Brooklands are beyond compare. Many of the most famous aircraft manufacturers and personalities (e.g. Harry Hawker and Tommy Sopwith) in British aviation passed through Brooklands – although such connections are now largely captured through the Museum's collections and archives as much of the physical built evidence has been completely lost through subsequent development.

4.2.28 Barnes Wallis (later Sir), designer of the Wellington bomber's geodetic structure and inventor of the bouncing bomb, was based at Brooklands with Vickers and alter BAC for most of his working career. There is an associative value in the context of his former office being located in the Clubhouse and also with the Bellman Hangar through its exhibition content.

4.2.29 Further aviation associations are continued through the post-war achievements of the Vickers-Armstrongs/ BAC/ British Aerospace factory site, and these companies' connection with many significant military and civil aviation projects including the Airbus, Concorde and Tornado manufacturing programmes.

4.3 Aesthetic Values

4.3.1 The diverse collection of historic buildings at Brooklands, with the majority being within the Museum site, may at first be a surprise to the visitor, as they are a peculiar mix of aviation, heavy industrial and motor racing related buildings. However, the diverse mix of scale of building and architectural style not only provides points of reference but also helps to promote an understanding

of the history of the site, and in this respect they have some aesthetic value both as individual buildings as well as in the context of a group.

4.3.2 The sculptural quality of the Members' and Byfleet Banking is of considerable aesthetic value, though the relationship to the scale of the original full length of the Railway and Finishing Straights have, to some extent, been lost due to the post-1939 intrusive developments that have occurred. In common with many redundant or abandoned historic structures, some of this aesthetic appeal is derived from the appearance through its unfortunate disuse and decay which evokes images of a bygone era. In this way the mixed condition combined with the patina of age, which gives character and a physical sense of age and history to the extant concrete surfaces of the race track, hold considerable interest.

4.3.3 The heavily industrial, functional, and 'massive' aesthetic of the WW2 and post-war aviation buildings is not unfamiliar within an airfield setting, and therefore, in the context of Brooklands' aviation industry, has some significance despite there being little semblance of the appearance of an airfield now remaining. This value is not necessarily as a function of their siting. When considered against the motor racing elements as a whole, the aviation buildings' aesthetic values may be seen as intrusive as they prevent the original form and layout of the race track and associated buildings from being viewed in their correct context.

4.3.4 Although it only occupies a small area of the complete Brooklands site, the aesthetic value of the Museum as a whole is considerable, enabling people to draw sensory and intellectual stimulation from the exhibits, setting and general environment. These qualities perhaps derive from the unique nature of the site, rather than as a consequence of intentional design, and the originality of the location which the Museum has succeeded in enhancing through careful stewardship. Sensory and intellectual stimulation may also be drawn from the extant sections of track to the remainder of the site – although this is currently lessened by the reduced extent of involvement and interpretation visitors can experience with these.

4.4 Communal Values

4.4.1 Through interrelationship between the historical and aesthetic values, Brooklands provides a strong association in the collective memory of local people, and for those who worked there through the 20th century aviation industrial era – although as time passes, this particular resource will inevitably dwindle unless it is further recorded and documented.

4.4.2 There is pride both in respect of both the WW1 and WW2 associations, as well as later technological developments on the industrial site. In terms of the war effort this additionally gives Brooklands a high degree of national and international importance.

4.4.3 Although now only within the living memory of a diminishing few, Brooklands still resonates strongly with aviation and motor racing enthusiasts worldwide. It is remembered as a place of extraordinary achievement, and as a place of recreation and enjoyment for a lost generation. Fortunately, the Museum is able to perpetuate much of this atmosphere through not only its important and unique collection of artefacts and exhibits, but also through its provision of regular motoring and aviation events.

4.4.4 For the public, the Community Park to the south-east not only provides a much valued open space resource for the local communities and visitors alike, but with the limited interpretation panels and design of signage and furniture, some insight is provided into the combined motoring and aviation histories of the site. This can also readily be seen and accessed in the Park, not only with a section of the Byfleet Banking, but also the corresponding length of Aerodrome Road and the remains of the Vickers' 1951 runway running north through central open space of the Park.

4.4.5 The majority of the Brooklands site (including the Museum) is privately owned and should be respected by the local communities and visitors alike. Visual and physical access to many areas is therefore different according to land ownerships and reduces communal values accordingly.

4.4.6 Finally, the Museum also provides a community resource for learning and offers a unique knowledge base through the Museum's site specific exhibitions, assets (including staff and volunteers) and character. In summary, Brooklands holds wide and universal appeal through the breadth of the Museum subject matter: ranging from motor racing to a centre of excellence and innovation in British aeronautical engineering.

4.5 Statement of Significance

4.5.1 The exceptional significance of Brooklands as an historic place is unquestionable, being justifiably recognised through its various statutory designations. The assessment of the different types of non-designated and designated heritage assets and a detailed understanding of the evolution of the place enables relative value judgements to be made. At Brooklands the distinctively different types of heritage (i.e. that of the motor car and aeroplane) can be said to run in parallel but, to some extent, may also conflict with each other. Thus the significance of the heritage is often difficult to readily assess as a whole.

Furthermore, the establishment and current use of the Museum contributes to the significance of the heritage, as the scope and content of the Museum collection bears direct relevance to the site and its evolution, and through this the visitor experience is greatly enhanced.

4.5.2 The development and funding by Hugh Locke King of the pre-WW1 race track, of which the Members' and Byfleet Banking, Railway Straight and north section of the Finishing Straight remain as major features, was unprecedented as an entrepreneurial venture of its time. From the day of opening, the site became the focal point of British motor sport and of automotive engineering developments. The site retained this unique position for over a quarter of a century. The importance of the site is unrivalled, as many aspects of motor sport development may be traced directly back to Brooklands. The quality of the disused track still retains the essential character of the original circuit through the completeness of its remaining sections, scale, sculptural and the aesthetic quality provided through the construction materials used. While reflective of a bygone era, the evocative nature of the site is valued by the local community and businesses who choose to be based there, as well as more widely as a national, and international, highly important place.

4.5.3 In summary, the extant race track elements are of exceptional value and of crucial significance to the location. They should therefore be preserved and enhanced as the primary objective of the Brooklands site.

4.5.4 Alongside the principal track features, considerable significance is also associated with the extant historic buildings which remain, as further physical connections with the aviation and motor racing eras associated with the site. They are a valuable resource, not only as individual buildings in their own right, but more importantly as a group in the context of Brooklands, where they are able to help bring the area to life and allow the local community, businesses and visitors to better understand and appreciate the important events and developments that have occurred during the relatively short existence of the site.

4.5.5 In most cases, the original features and characteristics of each of these built assets are readily identifiable and therefore their significance can be recognised and properly understood. However, more often than not, later alterations have inevitably occurred as they have evolved and developed during the 20th century – the significance of such later alterations and accretions are therefore of limited value.

4.5.6 In summary, the extant built heritage assets are of substantial value and significance to the place. They should therefore be preserved and enhanced as the secondary objective of the Brooklands site.

4.5.7 The former Brooklands aerodrome and motor racing circuit has many important associations with notable personalities in both early aviation and motor sport, as well as later in aeronautical design and manufacturing activities. Through these interrelationships, the extant buildings and sections of race track are again of prime historical significance to the site as a whole.

5.0 RISKS AND OPPORTUNITIES

5.1 Introduction

5.1.1 The purpose of this chapter of the Plan is to identify what is happening to the heritage, and how it might be vulnerable. It also considers areas where, having considered the history and significance of the assets, there may be opportunities for improvement. In conjunction with the previous sections of the Plan, these findings and recommendations will be used to develop a series of principles and recommendations which will be aimed at trying to achieve a long-term future for the Brooklands site and its heritage assets.

5.1.2 A wildlife survey of the Museum site, separately organised by the BMT, was carried out between October 2007 and January 2011 by volunteers from the Elmbridge Natural History Society. Their results were published in May 2011, the findings of which have informed related aspects of the Plan.

5.1.3 Through the development of the Plan, the consultants carried out a series of site appraisals covering the full extent of the Brooklands site and immediate environs beyond its boundary, where public access allowed. This process was aided by the breaking down of the site into a series of eight readily identifiable characterisation areas:

- The Dell
- Brooklands Museum
- Mercedes-Benz World
- JTI UK
- The Heights
- Residential
- Brooklands Community Park
- Light Industrial & Retail Units

Refer to Appendix A4 for map 5670/SK2 which identifies these areas in the context of the Brooklands site.

5.1.4 It is important to recognise that in some cases the significance of an asset can be at risk as a result of its condition, ownership, use and location, as well as from the potential impact any restoration or potential alterations may have alongside the future management and maintenance of the asset. Without an overall strategy for the management of Brooklands, there will always be a risk that the heritage value of its assets will diminish. Therefore these matters must be addressed in order to secure a long-term sustainable future for Brooklands.

5.1.5 Fundamental issues for conservation and/or restoration projects relating to heritage assets are resources and funding. Without substantial public funding through the Heritage Lottery Fund, the Architectural Heritage Fund and other grant-giving bodies, more often than not there will be insufficient resources, both financial and in-kind (i.e. volunteer labour etc.) which can be used to protect and maintain large sites such as this as a whole and ensure that a long-term viable future can be secured. Limited funding presents a constant challenge as it may only sustain piecemeal, short-term solutions which in the long term may lead to detrimental impact on the asset(s). While such economic solutions do not always imply that the heritage asset will suffer, any future restoration policies must identify a range of standard criteria which can ensure that there is adequate protection for the variety of heritage assets.

5.1.6 The key risks and opportunities relating to both the current state of Brooklands' historic assets and to any future restoration or alteration works, can be encapsulated under the following headings:

- Built Heritage – Condition and Repair
- Ownership and Responsibilities
- Access and Amenity
- Environmental

5.1.7 A series of drawings have been marked up to be read in conjunction with the written findings that follow, to illustrate and locate the key findings within each of the characterisation areas. They are separate to the Plan:

			scale	paper size
5670/	CAS1	Character Area Survey Sheet 1: The Dell; Brooklands Museum & JTI UK	1:1250	A2
5670/	CAS2	Character Area Survey Sheet 2: The Heights	1:1250	A2
5670/	CAS3	Character Area Survey Sheet 3: Mercedes-Benz World	1:2000	A2
5670/	CAS4	Character Area Survey Sheet 4: Light Industrial & Retail Units	1:2000	A2
5670/	CAS5	Character Area Survey Sheet 5: Brooklands Community Park & Residential	1:1250	A2

5.2 The Dell (reference 5670/CAS1)
(The Dell is now known as 'Railton Place' following the completion of the redevelopment of the land which post-dated the implementation of this site appraisal work)

Built Heritage – Condition and Repair

5.2.1 Located at the northernmost point of Brooklands, in terms of heritage assets this area provides the 'external' access to the Shell Way Tunnel, while its southern boundary is aligned along the bottom edge of the support banking to the north-west sections of the Members' Banking – where only very limited sections of the original iron boundary railings remain adjacent to the tunnel entrance.

5.2.2 As part of the planning permission and Scheduled Monument Consent to redevelop the area for 48 affordable housing units, in early 2014 improved visitor access facilities were provided on the north side of the Shell Way Tunnel for occasional large events that may be held at the Museum and to maintain the physical link to Brooklands House (now Brooklands College) beyond. Although the new stepped changes in level will prevent the road from being readily used as a means of vehicle access without the use of temporary ramps.

5.2.3 At the time of the site appraisal, the extant sections of railings are badly damaged and distorted as a result of ground movements in the banking and a lack of maintenance/vegetation clearance over a long period of time. As a condition of the Scheduled Monument Consent, new railings have been erected to reinstate this significant boundary.

Fig 5.1 – North side of Competitors' Tunnel during construction works at Railton Place
(Radley House Partnership)

Fig 5.2 – Support banking to the Members' Banking overgrown with vegetation.
(Radley House Partnership)

Ownership and Responsibilities

5.2.4 Ownership and management of Railton Place lies with the Paragon Community Housing Group [PCHG] who will operate the affordable housing. The support banking is under the ownership of Brooklands Museum, with PCHG believed to be responsible for its maintenance. As a community housing provider, it is likely their available funds will understandably be focussed towards the affordable housing needs. This may unfortunately mean that in the long-term there is a risk that sufficient funds would not be available to provide regular upkeep of the boundary treatments and support banking.

Access and Amenity

5.2.5 At the time of carrying out the site appraisal, access and amenity was understandably restricted and limited as an active construction site. However, it is acknowledged that a public right of way runs along the north-west boundary of the area, which gives access to the River Wey and routes beyond at the south-west and through to Weybridge in the north.

Fig 5.3 – The west end of the public right of way, blocked and diverted during the construction works at Railton Place
(Radley House Partnership)

Fig 5.4 – The public right of way leading to the River Wey, pooling water and boggy ground evident.
(Radley House Partnership)

5.2.6 On completion of the construction works, the public right of way was reopened. The amenity and historic understanding of the area may be limited as a result of the new development obscuring much of the support banking and Shell Way Tunnel. However, another requirement of the planning permission and Scheduled Monument Consent, has ensured that an interpretation panel has been added adjacent to the Shell Way Tunnel access to provide appropriate historical information about Brooklands and the use of the tunnel.

Environmental

5.2.7 Although on slightly raised ground above the level of the River Wey much of the undeveloped land to the south-west does have a propensity to become soft and boggy following heavy rainfall. Through the relaying and reinstatement of the public right of way, this has hopefully now been addressed. The flood protection measures incorporated within the Mercedes-Benz World site should alleviate and address any potential flooding risks that may arise at the northern end of the Brooklands site (see 5.4 below for further information).

5.2.8 The adjoining wooded area and trees within the support banking provide potential habitats for the local flora and fauna. The trees would require regular monitoring to ensure that they do not lead to damage of the track edge at the top of the banking or the instability of the supporting earthwork.

5.3 Brooklands Museum (reference 5670/CAS1)

Built Heritage – Condition and Repair

5.3.1 Occupying one of the smaller areas (approximately 30 acres) within the Brooklands site, the museum is located at its northern end and is focussed around the location of the former Motoring Village. Since its opening in 1991, it has understandably drawn the greatest focus and public attention. This is principally through its museum operation, which successfully provides an insight into the operation and history of Brooklands – as a motor racing venue and place of recreation and pioneering achievements, through to its parallel and later development as a place of aeronautical industry and engineering excellence.

5.3.2 The museum site also has the advantage of containing the greatest density of heritage assets. As well as sections of the concrete race track, this also includes landscape features and buildings and memorials which have particular connections with Brooklands' motoring history, war-time operation and aviation industry. All of these heritage assets are individually identified and referred to in the separate Gazetteer document. For ease and clarity, with regard to the purpose of this chapter of the Plan, these assets have been grouped together under the following headings: Race Track (Members' Banking, Finishing Straight, Campbell Circuit); Members' Hill (including Test Hill); Buildings and Memorials. The importance of the Race Track and Members' Hill is recognised through their inclusion as part of the Scheduled Monument, with the value of the majority of the historic buildings then being acknowledged through either their statutory or local listing (see 3.4.3 above).

Members' Banking

5.3.3 Originally forming the north-eastern end of the Outer Circuit, this curved banked section of the Race Track once connected the east end of the Byfleet Banking via 'The Fork' with the Railway Straight (via the Hennebique Bridge over the River Wey) on the west side. The extent of banking that now remains is significantly less than originally built, as a result of later redevelopment and safety works. These principally included the addition of a row of terraced houses being built between 1962 and 1971 and the subsequent Gallaher office development (1984/85) to the east (all within the JTI UK zone), while to the west, the Hennebique Bridge was lost as a result of storm and flood damage in 1968.

Fig 5.5 – Panoramic view of the Members' Banking with the Finishing Straight in the centre.
(Radley House Partnership)

5.3.4 What remains of this curved section of concrete race track, as elsewhere, clearly demonstrates how the surface was originally cast in-situ in approximately 10' wide bays – a significant factor in the character of the race track. Inevitably many of the joints have opened up allowing weeds and grasses to become established, however, a cyclical maintenance regime is in place to monitor and treat the weed growth between the joints and moss across the surface of the track so that it can be appropriately managed to reduce the risk of damage. The occasional limited use of the track during motoring events and demonstrations also helps to address the weed growth, although adversely the risk of surface degradation is increased as a result of the wear and tear.

5.3.5 The upper track edges and support banking are also at risk of damage from vegetation. As is noted with the Brooklands Community Park (see 5.8 below), the flora and trees that have become

established on the support banking make a significant contribution to the character and atmosphere of the Conservation Area, as well as providing a visual and acoustic buffer between Brooklands and the residential areas to the north. However, where previously unmanaged trees have become established close to the track edge, damage has been caused to the concrete track surface with localised areas of cracking and collapse. The ongoing cyclical maintenance regime should continue to monitor all tree growth close to the track edge, as well as any potential undermining as the result of burrowing animals, to ensure that any issues are dealt with before further damage can occur to the race track.

Fig 5.6 – Partial collapse and undermining to the top edge of the race track

(Radley House Partnership)

Fig 5.7– Vegetation and weed growth becoming established to areas of track degradation.

(Radley House Partnership)

5.3.6 Unique features to this section of the race track are the two tunnels which were constructed below the track to originally allow vehicle access to the Paddock area (Shell Way Tunnel – west side) and pedestrian access into the circuit (a series of three interlinked parallel corridors – north-east side of Members' Hill). Only the Shell Way Tunnel remains as a complete through tunnel, exiting into 'The Dell' to the north (see 5.2 above), whereas the pedestrian tunnel has been blocked off at its northern end. Subsequent alterations and their use during World War Two is clear to see, with a lowered reinforced ceiling and lifting beam to the south end of the Shell Way Tunnel, while ventilation and tiered flooring was added to the pedestrian tunnel – allowing them to be used as workshops which could continue functioning during air-raids. The Shell Way Tunnel was also used as a convenient route for post-war utilities including a large sewer pipe. Both are now principally used for storage purposes, so are not readily accessible to the public.

5.3.7 The southern entrance to the Shell Way tunnel has experienced significant structural movement, while internally a history of long-term water penetration is evident with corrosion to the World War Two reinforcing metalwork as well as staining and damage to the concrete ceiling and wall surfaces. Ongoing water penetration is also evident towards the southern end of the pedestrian tunnels. The structural movement should continue to be monitored and consideration given to discrete strengthening works if found necessary, especially if the opportunity arises to bring it back into greater public use as a potential exhibition area. Although much of surface water is likely to run off and away from the track surface along its lower edge, water penetration to the tunnels is unfortunately unavoidable as a consequence of the race track's construction and numerous joints between concrete bays. Typically, major intervention works would be required to introduce some form of waterproofing layer, which in this situation would be greatly detrimental to both the significance and character of this heritage asset. Therefore all gullies and drains should be kept clear as part of routine maintenance works and large open joints sympathetically repaired to minimise further damage – while internally, the spaces should be monitored and consideration given to improving any internal drainage to ensure that excess water is routed away from the race track and its associated structures.

Fig 5.8 – Southern entrance to the Competitors' Tunnel, structural movement evident on left hand side.
(Radley House Partnership)

Fig 5.9 – World War 2 alterations to interior of the Competitors' Tunnel evident to the lowering and reinforcement of the ceiling.
(Radley House Partnership)

Fig 5.10– Southern entrance to the Pedestrian Tunnel, with World War 2 alterations to the exterior.
(Radley House Partnership)

Fig 5.11 – Internal view of one of the three corridors within the Pedestrian tunnel.
(Radley House Partnership)

5.3.8 Further original features can also be identified along the bottom of the earth support banking on its northern edge, in the form of the 'Bayliss' iron railings. The extent of these remains is somewhat sporadic and their condition fair to poor, with some sections having been completely lost, or over-run by tree growth and vegetation causing significant damage and distortion. Missing sections have been replaced by modern chain-link fencing. An informal footpath has evolved along this line of support banking so, should funds permit, consideration could be given to the sympathetic repair of any extant historic railings and then the replacement of the modern chain-link fence with new metal railings of a matching design to the original 'Bayliss' type.

5.3.9 War-time 'scars' and associated alterations are also clearly evident to the surface of the race track. These are most noticeable at the junction with the Finishing Straight and the north side of Members' Hill. During World War Two, part of the banking was removed under the Members' Bridge to allow a temporary hangar (later identified as T194) to be built for the manufacture of Vickers Wellington and Warwick aircraft – this dispersed production system then allowed wingless aircraft to be towed down to the extant Bellman hangar (located on the Finishing Straight, later known as T202) via the former race track. The scars of this structure, its three associated air raid shelters and a post-war service road (cut and cast through the race track surface) still remain and add to the character and history of the site. As large numbers of visitors are not typically drawn up to this area of the site, there are currently no interpretation panels in the vicinity to provide information about this important part of Brooklands history. When the track is not in use for

motoring and demonstrations events and public access is possible around this section of the track, consideration could be given to providing moveable panels to enlighten and guide visitors around these features.

Fig 5.12 – Members' Banking to the north-east side of Members' Hill. Air raid shelters built into the Hill and the scar in the track surface showing the late-twentieth century repairs in the location of the former hangar.
(Radley House Partnership)

Fig 5.13 – Alterations and repairs to the inside track edge over the southern entrance to the Competitors' Tunnel.

(Radley House Partnership)

5.3.10 Later scars can also be seen above the Shell Way tunnel with the remains of metal columns having been cast into the track surface, their original purpose is currently unknown, as well as a series of track repairs following works associated with drainage repairs. The most recent repairs were properly considered at the outset and an appropriate concrete mix used to achieve a sympathetic match with the surrounding historic surfaces, but unfortunately the workmanship with the finishing of the surface did not match that of the original. Although clearly visible, this is not detrimental to the Members' Banking as a whole – moreover it illustrates the risks that are involved with carrying out repairs to the race track and the attention to detail required in terms of laying and finishing the concrete, as well as having the correct specification.

FinishingStraight

5.3.11 This section of race track was built in the form of a direct link between 'The Fork' on the Outer Circuit, at the east end of the Byfleet Banking, to the northern section of the Members' Banking. Motor cars and motorcycles accessed the race track from the Motoring Village located at the northern end of the Finishing Straight (on the western side) where the Paddock, Workshops, Fuel Depots and the Clubhouse were all located. Originally it measured approximately $^{5}/_{8}$ mile long and 100 feet wide, however following the growth and development of the Vickers-Armstrongs and later aircraft factories and the more recent commercial development of 'The Heights', only the steeply climbing northern section now remains from the southern side of Members' Hill up to the Members' Banking to the north.

5.3.12 Again constructed with in-situ concrete bays, the different surface finishes along its length indicate different phases of repair. Sections of the original gully and kerbing also remain along its eastern edge. There are signs of varying degrees of surface degradation to the track surface and as noted with the Members' Banking, scars associated with its war-time and post-war industrial use and alteration are also clear to see. Principally through the continuation of the concrete road cut and cast through the west side of the former race track surface linking hangars T194 and T2020 (see 5.3.9above). A significant number of other factory-related smaller structures were built towards the northern end of the Finishing Straight during the 1940-41 period. To the north of the Bellman hangar, on the east side of the former race track, a Boiler House, Sub-Station and Trailer Pump House were built – the concrete bases supporting the pipework between these building still remain. Another small storage building (later known as T190) was erected at the western edge of

the Finishing Straight, near to where it joined the Outer Circuit, together with an emergency water tank – the raised bases of both structures remain today.

Fig 5.14 – View down the Finishing Straight towards the Bellman hangar with the scar of the concrete post-war road, originally between hangars, in the foreground.
(Radley House Partnership)

Fig 5.15 – The southern elevation of the Bellman hangar.

(Radley House Partnership)

5.3.13 With free space at a premium within the museum site, the extant section of the Finishing Straight is now typically used for vehicle parking (mainly by museum staff and volunteers) and lightweight equipment storage so much of the track surface and its associated features can become hidden from visitors. As elsewhere, there is opportunity to overcome this with the inclusion of interpretation panels located at key vantage points to help illustrate the purpose and its later evolution in context.

5.3.14 At the time of writing this Plan, a project is being finalised which will involve the relocation of the Bellman hangar adjacent to the Acoustics Laboratory to the west which in turn will allow the restoration of the Finishing Straight which is believed to remain under the hangar and beyond to the south. Not only will this allow a further section of the race track to be revealed and better understood in the context of the Brooklands site, but it will also provide an opportunity for the Scheduled Monument designation to be increased so that all known and visible sections of the original 1907 race track are appropriately acknowledged and protected.

CampbellCircuit

5.3.15 Three of the sections of this 1937 road racing circuit: Test Hill Hairpin, Dunlop's Delight and Banking Bend are the only remains of the Campbell Circuit within the museum site. Again constructed in a series of concrete bays, these sections of track formed the eastern end of this later circuit, which allowed the course to rise up the southern side of Members' Hill and connect with the higher Members' Banking beyond.

5.3.16 Fortunately, as well as the track surface itself, many of the original features and details still survive along these three sections of the former Campbell Circuit. These include: sections of the in-situ cast concrete retaining walls around the north side of the Test Hill Hairpin and north-east side of Dunlop's Delight – the latter having three openings with steps beyond which would originally have 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 south-western edge of the track surface; and the remains of the pre-cast drainage gully at the southern end of Dunlop's Delight and the inner radius of the Banking Bend.

Fig 5.16 – Campbell circuit – Test Hill Hairpin

(Radley House Partnership)

Fig 5.17 – original boundary treatments along the western edge of Dunlop's Delight, part of the Campbell Circuit.

(Radley House Partnership)

Fig 5.18 – One of the stepped entrances leading into the former spectator enclosures off Dunlop's Delight.

(Radley House Partnership)

Fig 5.19 – Low-level in-situ cast concrete kerbing to the south-western edge of Dunlop's Delight.

(Radley House Partnership)

5.3.17 As this was the principal vehicle entrance to the museum site until 2010 and is still the vehicle entrance for most museum staff, volunteers and deliveries, the track surface has predictably suffered an increased degree of wear and degradation compared to other sections of historic track surface. This is clearly apparent with the increased degree of cracking and edge damage to the bays of concrete, as well as the number of potholes developing and the quantity of 'modern' temporary tarmac repairs (including areas of re-surfacing) that have been carried out more recently. Attention and thought need to be given to the long-term use and management of this section of track, as the surface degradation will certainly continue through ongoing vehicular use. It may be accepted that a cycle of sympathetic concrete repairs will be necessary to sustain the track surface for future managed use – as would have been the case during its life as a racing circuit or, as has been recently considered and accepted with the Railway Straight section of the Outer Circuit (see 5.4 below), an expendable modern replica surface could even be laid over the top of the original surface to allow the valuable historic fabric to be retained and protected below.

5.3.18 A consequence of its use for vehicle access, in conjunction with the focus of museum exhibits being to the west of the site, visitor access is limited to these extant sections of the former Campbell Circuit. Consideration could possibly be given to further restrict the use of this route by vehicles during the museum's operational hours, through enhanced increased site management, to allow visitors the opportunity to fully access these sections of race track. The addition of interpretation panels along the edge of the three different sections of track can then also be added to further illustrate and explain how this circuit evolved and functioned in the context of Brooklands motor racing history.

Members' Hill

5.3.19 This natural topographic feature, which once formed part of an 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' Hill Restaurant and main grandstands during the motor racing period. In 1909 the Test Hill was added, bringing more focus to the hill and then with the outbreak of World War Two, the grandstands were removed and a Bofors Gun Tower added on the north side of the former restaurant buildings along with other war-time structures, including a series of air raid shelters built against and into the bottom of the Hill on both the west and north-east sides. This combination of landscape features, buildings/structures, track surfaces and remains of race track features raises a series of challenges both as individual assets and in combination.

5.3.20 The earliest surviving structure here is the former Members' Hill Restaurant, a complex of buildings which fell into disrepair and were 'at risk' for a number of years, partly as a result of the difficulty in finding a viable use in its somewhat isolated location. Fortunately this risk has now been removed through its current tenant (motor vehicle restoration specialists), who is in the process of bringing the buildings back into full use while carrying out an ongoing phased programme of sympathetic repairs. There is also a long-term aim of allowing visitors access to limited parts of the buildings so that they are able to gain a fuller understanding of the buildings and also see traditional vehicle manufacturing/repair techniques being carried out in the context of historic cars. Such a sympathetic approach should continue to be encouraged to aid the viability of the buildings' future, although access to and around them will need to be properly managed to avoid the risk of damage to the landscaping through increased footfall (see 5.3.22 below).

Fig 5.20 – Members' Hill Restaurant, undergoing a phased programme of restoration work.
(Radley House Partnership)

Fig 5.21 – Looking up the Test Hill, with areas of worn grass up the left hand side as a result of visitor impact.
(Radley House Partnership)

5.3.21 The Test Hill itself and its exit route are the only track surfaces which were built on Members' Hill. Cut into the 'natural' contours of the Hill, the concrete surface is laid in a series of bays across three increasingly steeper inclines, before levelling out at the top of the Hill where a tarmac surface gently falls back down around to the east before joining with the Outer Circuit below. As elsewhere with other concrete track surfaces, some of the bays are fractured and at further risk from

vegetation and weed growth which grows in the joints between the bays. It is acknowledged and accepted that the museum holds popular demonstration and motoring events on the Hill throughout the year, to allow visitors to experience this and part of the Members' Banking. In addition, the management of the site includes the employment of landscape contractors who deal with weed growth and vegetation on the track surfaces during the year. The management of the use and upkeep of the track should continue to ensure that the surface is not put to any undue risk. Should the need arise to carry out any repairs to the surface, then they should be carried out sympathetically and be appropriate to the material, finish and orientation of the original surface.

5.3.22 While the museum requires a regular flow of visitors to ensure its survival, it also has to consider their access and movement around the site – especially with respect to the grassed areas on Members' Hill. With no hard-surfacing alongside the Test Hill surface itself, the grass inevitably becomes badly worn exposing the earth and tree roots as a result of the visitor footfall – which in turn can lead to further damage with routes being worn into the surface. Consideration should be given to how this can be managed in the long-term, so that visitors are able to fully and safely access the Hill and its assets, without causing long-term harm to surviving features. This may include adding grass reinforcement to areas likely to suffer the greatest degree of wear, so that the green and natural appearance of the Hill can be maintained, without it being scarred by excessive wear or the addition of an inappropriate hard surface instead.

Fig 5.22 – Extant distorted sections of railings that originally separated different spectator enclosures on Members' Hill.

(Radley House Partnership)

Fig 5.23 – The remains of the footbridge that allowed access from Members' Hill, over the Campbell Circuit, to the spectator areas beyond.

(Radley House Partnership)

5.3.23 In addition to the buildings and Test Hill, which can be clearly seen and appreciated in their setting, elsewhere on the south side of Members' Hill other surviving features from the pre-1939 period of Brooklands can be found. Many of these remains have now become obscured by vegetation or are overlooked by visitors due to their lack of context and understanding. These features range from sections of old metal railings which would once have divided the Hill into its different spectator enclosures, to 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. As these features can be overlooked by the uninformed visitor, their understanding and existence could be greatly increased through reference to them in the Museum Guidebook(s) and/or the addition of interpretation panel(s) on Members' Hill to illustrate the former layout and original context of the surviving features. It should also be possible to remove some of the undergrowth and maintain these features free from vegetation in the future.

5.3.24 With the outbreak of World War Two, Members' Hill was an ideal location for the addition of some of the necessary measures to help defend and protect aircraft manufacture at Brooklands. This therefore led to the construction of the reinforced concrete Bofors Anti-Aircraft Gun Tower, to the

north-east of the former restaurant buildings. Now obscured by trees, it is not readily visible unless you are actually on the top of the Hill and as with other war-time concrete, it has suffered as a result of the reinforcement corroding – making it unsafe to walk around or below. In March 2012 the museum commissioned a specialist survey of the structure to assess its condition and consider options for its repair. As funds become available, consideration should be given to the long-term repair of this structure – in the short-term further information in the Guidebook could be made available along with an interpretation panel at the top of the Hill.

Fig 5.24 – Bofors Anti-Aircraft Gun and Sighting Tower

(Radley House Partnership)

Fig 5.25 – Pre-cast concrete frames and bases on the south side of Members' Hill obscured by vegetation.

(Radley House Partnership)

5.3.25 As well as the gun tower, other important war-time features around the Hill include a series 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. A series of air raid shelters were also built into the west and north-east banks of the Hill, for use by the Vickers staff who were working in the two adjacent hangars on the Members' Banking and Finishing Straight. To the north-east they comprise of a series of three brick and concrete shelters, each divided into a four cells behind an access corridor and outer blast walls; while to the west a subterranean reinforced concrete tunnel was built into the Hill with external blast walls on the edge of the track surface. This tunnel has been opened up to the public – with duckboards laid across the floor due to the small amount of water that now penetrates the tunnel from the banking above. Water is a risk for all of the shelters and should be monitored so that any further decay and damage can be properly assessed, guidance information has been added to the tunnel – the same could be done for the other shelters, although it is acknowledged that this part of the track is not regularly accessed by many visitors.

5.3.26 At the north point of the hill is the reconstructed Members' Bridge – a 1988 replica of the original 1907 structure built by 'Head Wrightson & Co. Ltd.'. Although of less historic value than other assets on the Hill, this replacement bridge usefully demonstrates how Members' and their vehicles

gained direct access to the Hill and its facilities, as well as now allowing visitors to look down and across the surviving stretch of the Members' Banking below. For understandable security reasons, the north end of the bridge is closed off with a brick wall and anti-intruder spikes.

Buildings

(excluding Members' Hill Restaurant and Bofors Gun Tower – see 5.3.19-5.3.26 above)

5.3.27 The museum is centred on what was originally the location of the 'Motoring Village' throughout the period of motor racing at Brooklands. The type and arrangement of many of the surviving buildings on the site today still strongly reflect this – with World War Two and post-war aviation industry structures adding to the overall array and complexity of historic buildings now contained within the site. The majority of the surviving buildings are designated heritage assets, be they statutory listed or locally listed (see Appendix A2). Three of the remaining buildings are also of historic value and importance in the context of the war-time and post-war aviation industry activities at Brooklands, these are: (i) T222 – Substation No. 23; (ii) the Stratosphere Chamber and Balloon Hangar; and (iii) the Acoustics Laboratory.

5.3.28 Each of the designated and non-designated assets raise their own challenges in terms of protection, conservation and use in terms of the context of the museum, which are identified in their respective Gazetteer entries. For the purposes of this section of the Plan, a holistic appraisal of the risk and opportunities is made which reflects the common themes and issues.

Fig 5.26 – The BARC Clubhouse, with the AV Roe memorial in the foreground
(Radley House Partnership)

Fig 5.27 – BP Petrol Pagoda, on completion of recent restoration works.
(Radley House Partnership)

5.3.29 For the early buildings, which relate to the motor racing period at Brooklands, a range of architectural styles and materials was used, reflective of their type and period of construction. The former BARC Clubhouse and the later fuel supply buildings being predominantly of traditional brick construction, while the workshop buildings were timber-framed and timber-clad. The robustness of masonry construction is typically better able to withstand the effects of weather, use and alteration compared to timber, which is replaced on a cyclical basis. This can be clearly seen with both the Jackson Shed and the Racing Lock-Ups, where the replacement timbers are cupping and moving, leaving open joints between, potentially putting the structure within at risk. Also with the Jackson Shed, it would appear that inappropriate 'modern' T&G boards have been used with a minimal lap and minimal fixings, which are noticeably shrinking and cupping, instead of a traditional deeper shiplap board which would have had a greater lap and greater durability.

Fig 5.28 – The Jackson Shed on the west side of the Paddock.

(Radley House Partnership)

Fig 5.29 – Examples of cupping and distortion to inappropriate replacement weatherboarding on the west side of the Jackson Shed.

(Radley House Partnership)

5.3.30 However well-intentioned repair proposals may be, often the use of an inappropriate method or type of material can be detrimental to the building in the long-term both in terms of its aesthetics and its structural integrity – this can apply to masonry and timber buildings. Therefore when considering any works of repair or alteration to any such asset, consideration must be given to the value and importance of the building, to ensure that any future work is sympathetic. This Plan and its associated documents will help to provide the understanding required to achieve this and also assist the volunteers and contractors who greatly contribute to the viability and success of the site.

5.3.31 The war-time additions to the site, as with the early motoring structures, again reflect both robust and lightweight methods of construction with the Pill Box and T222 both being of masonry construction whereas the Bellman hangar is a 'lightweight' construction in comparison, with its demountable steel frame and lightweight cladding sheets. Although the Pill Box and T222 are not accessible internally to visitors, they are important in terms of the overall site context clearly demonstrating the war-time connections, which the Bellman hangar more readily achieves through its exhibits and display information contained within. There is an opportunity to improve this understanding and evolution of the site during World War Two, through additional guidance information and/or interpretation panels for these two assets.

5.3.32 Developed as a temporary demountable building that could be erected quickly during war-time, the hangar was never intended to be a permanent building. As a consequence of its lightweight construction the elemental components of the steel assembly are inherently vulnerable. The life of the corrugated iron sheet cladding is limited and after more than 70 years' service the effects of corrosion are clear to see, with areas of the roof where pin-holes are evident and rain is now able to penetrate, which is consequently leading to the deterioration of the supporting structural frame. In need of extensive re-cladding and a detailed programme of structural repairs, plans are being developed which would lead to the dismantling and relocation of the hangar to the west side of the Finishing Straight. Not only will this give an opportunity for the necessary repairs to be carried out, but also a series of sympathetic alterations and improvements to be completed in parallel which will provide a long-term future for the building and enhance its potential for displaying important exhibits within – refer to the 'Brooklands Museum Aircraft Factory & Race Trace Revival' Conservation Management Plan, prepared by Hockley & Dawson and Radley House Partnership, January 2010.

Fig 5.30 – World War 2 Pill Box – locally listed.

(Radley House Partnership)

Fig 5.31 – 'T222' Vickers-Armstrongs Substation No. 23, still retains its early ceramic fuses and switch gear inside.

(Radley House Partnership)

5.3.33 After the war, as discussed previously, the aviation industry became the dominant activity at Brooklands. Through this, some former motor-racing buildings and structures were demolished by the 1960s but many were taken over and converted for use as research buildings, with other structures then added on the site to aid the factory expansion. These principally included the Stratosphere Chamber, Balloon Hangar/Supersonic Wind Tunnel and the Acoustics Laboratory – all to the north of the former Clubhouse.

5.3.34 At the time of carrying out the appraisal, the Stratosphere Chamber was undergoing 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. However, similar to the Bellman hangar, the external envelope comprises of a steel frame clad with profiled sheets – which in this case are cement-based (which may contain asbestos), and are known to be vulnerable on the roof with a history of leaks experienced. Therefore although it is of benefit for visitors to enhance the internal areas, thought should also be given to overhauling and possibly replacing the external roof cladding to provide a weathertight structure. 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.

5.3.35 The Acoustics Laboratory retains a number of its original features, such as the heavy sound-proofed doors between the rooms. However, the acoustic linings to these rooms have been lost as the spaces have been converted to store archive materials and house the Concorde simulator and a vehicle workshop. Change is inescapable, especially with museums which need to evolve and grow to keep attracting visitors. However, there is a risk that visitors could miss out on learning about the original purpose of this building, with the current interpretation information being positioned discretely. Thought should be given to enhancing this information further, allowing visitors to learn more about the building through the Museum Guidebook(s) and interpretation panel(s) within the building itself, this can then also be used to enhance and strengthen the Brooklands connection with Concorde and its associated exhibits.

Fig 5.32 – The Balloon Hangar (right hand side) and the Supersonic Wind Tunnel (left hand side), viewed from the north, which are joined to the Stratosphere Chamber (off the left hand side of the photograph).
(Radley House Partnership)

Fig 5.33 – The Acoustics Laboratory viewed from the south-east.
(Radley House Partnership)

5.3.36 It is acknowledged that the operation and future success of the museum, as with any other in the UK, is heavily reliant on visitors, public donations and grants, as well as its permanent staff and team of volunteers. However, due to the different building types and structures on the site and their variety of uses (former and current), there is an inevitable risk that a disjointed approach can develop as the museum continues to try to evolve and grow within its finite boundaries. For example, focus may be put on a particular building or period of history and their associated exhibits, to satisfy the criteria of a particular grant or donation, which may unfortunately have a consequent detrimental impact elsewhere in the museum. Or, as was acknowledged during the writing of this Plan, the museum contains an important and unique archive of Brooklands and associated motoring and aviation material – however, as this volume of information, materials and exhibits continues to grow, the challenge of their appropriate storage, sorting and indexing increases too.

5.3.37 As the success of the museum continues to grow, to avoid such a risk arising and impacting on its success and future viability, it is important for the museum to have a long-term 'Forward Plan' which has the facility to take a holistic approach to the site with all of its buildings, structures and exhibits and so also financially budget accordingly. Within this should be a rolling cyclical 10-year maintenance plan and repair framework, guided by this Plan, to ensure that there is regular inspection of buildings and structures (at least every five years) and that the most appropriate methods of repair are carried out when required.

5.3.38 Such a 'Forward Plan' may also be used to negotiate a 'Heritage Partnership Agreement' with Elmbridge Borough Council and Historic England, under the Enterprise and Regulatory Reform Act 2013. If established, this would allow the museum to carry out certain alterations, repairs or maintenance work within pre-agreed parameters, which may otherwise require either Listed Building or Scheduled Monument Consent.

Memorialsand Plaques

5.3.39 The Brooklands Memorial, first erected in 1957, was originally located on the north-west side of the former airfield, facing the railway line beyond. Commissioned by Vickers-Armstrongs, it was erected to commemorate the 50th anniversary of the site. However, to make way for following the construction of the Mercedes-Benz World building, it was relocated in 2003 to its current location on the museum site (but with the same orientation). It is constructed from panels of 'white spar stone' over a solid masonry core and surrounding by an area of concrete paving. The impressive original bronze plaque and lettering were stolen in the 1960s and only the plaque was later recovered – this is now displayed inside the former BARC Clubhouse main entrance foyer with a

replica made in composite materials now fixed to the Memorial. The lettering is also replicated in the same material.

Fig 5.34 – The Brooklands Memorial
(Radley House Partnership)

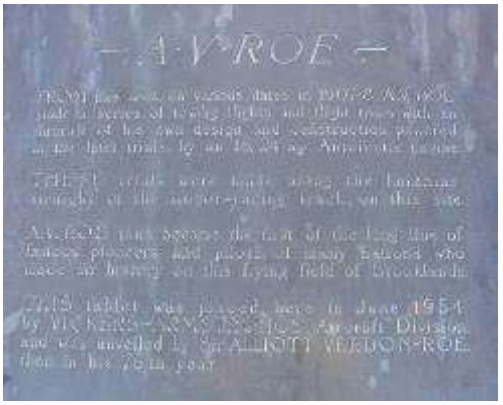

Fig 5.35 – The A V Roe Plaque
(Radley House Partnership)

5.3.40 Unfortunately, the principal north-west elevation can only now be seen from within the site, as trees and vegetation along the riverbank obscure the view of the memorial from elsewhere outside the site – consideration could be given to clearing and pruning some of these trees to allow the monument to be viewed from the west side of the river. The reconstituted stone blocks facing the memorial show some discolouration and corner sections are beginning to fracture and break away from the remainder, possibly as a result of water/frost damage – these should be discreetly pinned to the structure and made good. Consideration should be given to cyclically monitoring the fabric of the memorial alongside the monitoring of the other built heritage assets on the site.

5.3.41 While the Brooklands Memorial is specifically included as part of the Scheduled Monument, there are other memorials and plaques within the museum site that are of historic value yet have no statutory protection, which should be recorded in this Plan. Firstly, this includes the bronze relief memorial plaque, fixed to the south side of the former BARC Clubhouse, which is dedicated to the memory of Sir Henry Birkin BT, a pioneering racing driver who had many successes at Brooklands. A small explanatory brass plaque is positioned below and both are in a reasonable state of repair.

5.3.42 To the south-east of the Clubhouse, is a small engraved bronze plaque on a concrete base, dedicated to the achievements of Alliot Verdon Roe – one of the first aviation pioneers who was based at Brooklands for a period of time. Such plaques and memorials are an asset to Brooklands, strengthening the physical connections with important events and people. Located in an area of well-maintained lawn, the plaque and its plinth are in a good state of repair.

Ownership and Responsibilities

5.3.43 Owned by Gallaher Ltd. from 1984-2010 (now JTI UK Ltd), the site was leased by the Brooklands Museum Trust Ltd. with a peppercorn rent (originally via a sub-lease from Elmbridge Borough Council when the Trust was formed in 1987). Shortly after the takeover of Gallaher Ltd, by JTI UK Ltd in early 2010, Brooklands Museum trust was given the freehold of its site as well as an additional part of the Campbell Circuit (Dunlop's Delight). The Trust is responsible for the maintenance, upkeep and operation of the site and its buildings this is carried out by a combination of employed staff, specialist contractors and volunteer labour.

5.3.44 With the Brooklands Museum Trust Ltd. being the freehold owner of the museum site, with its greatest density of heritage assets, it has a major advantage in terms of its long-term protection and future through the improved understanding and approach to the use of the assets and their setting. There is opportunity for further sharing this knowledge and the focus of attention that the museum site inevitably brings to Brooklands, with the other owners and stakeholders across the site, to achieve greater coherency and understanding across the site as a whole.

Access and Amenity

5.3.45 Although not a freely accessible area of Brooklands, the heritage assets discussed above can be seen and experienced by paying visitors to the museum, the majority of which can also be accessed internally to view the wide range of exhibits contained within. It is also possible to catch views of some aspects of the larger assets from areas within the public domain which lie further afield – i.e. Wellington Way and the Brooklands Community Park to the south and from the footpath along the west side of the riverbank.

5.3.46 Through the operation of the site and its heritage assets as part of a museum, the Trustees, staff and volunteers have the advantage of being able to approach the management and amenity of the site from a position of greater understanding and coherency. To the visitor, this is made evident through the museum guidebook and brochures, in conjunction with the many information and exhibition display panels positioned within and around the buildings on the site. These help to improve the visitor experience through not only providing background history to Brooklands as a whole, but in some cases more detailed information about buildings and their specific use and relevance to the evolution of the site.

5.3.47 Compared to the availability of information and improved understanding that is offered to the visitors who enter the museum site, for those that pass by along the river or catch views from Wellington Way and the Community Park to the south, the full amenity is restricted and therefore not necessarily understood. This could be addressed through the addition of further interpretation panels located at key vantage points, explaining what can be seen and what its importance is to the history and evolution of Brooklands as a whole.

Environmental

5.3.48 The Museum site has a wide variety of wildlife habitats as a consequence of the River Wey on its western boundary and the wooded areas to the support banking to the north and Member's Hill to the east – as well as the track tunnels which are believed to be hibernation and summer feeding roosts for brown long-eared bats[16]. Although much of these habitats have evolved during the twentieth century following the creation and subsequent development of Brooklands, some features of the woodland to the south slope of Members' Hill are the remnants of older woodland which have now become somewhat isolated – in particular these include the ancient oaks alongside the access road at the top of the Test Hill.

5.3.49 It is acknowledged that the museum employs specialist landscape contractors who implement a cyclical regime of maintenance, with volunteers then providing additional labour as necessary, more recently this has included the clearance of bracken and low-level vegetation from the south side of Members' Hill. This approach should be encouraged and maintained.

5.3.50 During the autumn of 2006, following the development of Mercedes-Benz World on the west side of the River Wey, associated flood alleviation measures to deal with the northern end of the Brooklands site, were completed ready for use (see 5.4. below). There are no specific flood alleviation measures included within the museum site itself, but based on repeated and recent experiences, consideration may need to be given to upgrading the existing off-site alleviation measures, or the provision of on-site measures – although it is acknowledged that any such additional works will have significant cost implications and must fully and properly consider any potential impact on the heritage assets as well as the viability and usability of the site as a visitor attraction. In the meantime, the Trustees and staff should continue to liaise with neighbouring landowners and the Environment Agency not only to monitor river levels, but also to ensure that the current alleviation measures are properly maintained and cleared so that they are fully functioning whenever they are required.

5.4 Mercedes-Benz World (reference 5670/CAS3)

[16] Elmbridge Natural History Society – Wildlife Survey of Brooklands Museum, October 2007-January 2011.

Built Heritage – Condition and Repair

5.4.1 At the north-western end of the Brooklands site, this is the first of the three larger characterisation areas and it is now occupied by the Mercedes-Benz World development and its five courses for teaching advanced motoring skills (completed in 2006). The physical associations with motor racing can be seen in the form of the Railway Straight section of outer race track which forms its north-western boundary and also the remains of the Sahara Straight, Howe's Corner and the Campbell Bridge over the River Wey from the Campbell Circuit on its east side. Aviation connections are less readily visible, as they are more evident from above with Brooklands Drive and part of the inner test circuit (which both run in parallel) which are aligned with the former Vickers runway (see 5.8.12), the former Vickers Bridge which crosses over the River Wey and then, when looking more closely, the scars from the later aircraft factories can be seen on sections of the race tracks. The importance of the Railway Straight, the Campbell Circuit and the Vickers Bridge are recognised through their inclusion as part of the Brooklands Scheduled Monument. The Macgregor Smith Landscape Masterplan also ensured the legibility and openness of the north and south sections of the old Vickers runway.

RailwayStraight

5.4.2 Originally linking the Members' Banking, via the Hennebique Bridge over the River Wey, at the north end of the Outer Circuit with the Byfleet Banking at the southern end, this long straight is generally flat apart from its northern end where it begins to slowly rake up towards its outer edge to line up with the Members' Banking. Now wholly contained within Mercedes-Benz World, the majority of this section of the race track remains although scarred by later uses and occupation associated with the aircraft factories – and at the time of writing this Plan, trial works were beginning to lay a modern replica track surface over the top of the original in an attempt to protect the asset while providing a new useable durable surface for the future.

Fig 5.36 - The flat Railway Straight (in the distance) gradually rising up to meet with Members' Banking (behind).
(Radley House Partnership)

Fig 5.37 - Small length of the original 'Bayliss' iron boundary railings being subsumed by overgrowth and vegetation.
(Radley House Partnership)

5.4.3 The typical 10' wide (3m) bays of concrete, forming the track surface are evident across this section of race track – although somewhat harder to distinguish as a result of the degree of degradation, patch repairs and the numerous scars left behind from the war-time and post-war aviation occupation of the site. An exposed top edge at the northern end of the track clearly displays the overall thickness of the track (14"/350mm) along with evidence of a later repair (date unknown) with the top 6" (150mm) having been replaced and a diamond-style expanded metal lath (EML) included as a form of reinforcement between the base and top coats (such reinforcement is not believed to have been an original feature). Another original feature of the race track can be found along its outer boundary (west side) a small 3' length (915mm) of the

original 'Bayliss' iron railings remain along the bottom edge of the banking as the track begins to rise up at its northern end.

Fig 5.38 - Exposed top edge at the northern end of the Straight, demonstrating the construction build up and inclusion of expanded metal lath reinforcement (non-original) in between the layers.
(Radley House Partnership)

Fig 5.39- Remains of a Bellman hangar T184, including the metal channels for the sliding doors and metal columns now cut off flush with the raised concrete floor (laid over the former race track).
(Radley House Partnership)

5.4.4 As briefly noted above, evidence of the later use of the track during World War Two and then by Vickers-Armstrongs and the post-war aircraft industry is clearly evident along this section of track. This is most notable in the location of a former Bellman hangar, where its raised concrete floor (laid over the former race track) and the metal channels for the sliding doors at its north and south ends are still evident. During Vickers-Armstrongs' ownership of the site, this hangar became the post-war 'Hammer Shop' (VA Reference T184) with a crane being located externally at its southern end and a series of 'Swarf Bins' and a Sub-station (VA Reference T186) built along its eastern edge – for which a number of the scars and repairs in the track are likely to relate. Further north, perpendicularly aligned with the former Vickers runway are a series of three diagonal scars running across the surface of the track – these identify the position of a series of large post-war sound deflectors. Associated with ground running engines on VC10s and other large aircraft being prepared for test flights.

Fig 5.40 - Surface degradation and scars associated with Vickers-Armstrongs occupation in the track surface (including the likely location of the Hammer Shop crane above)
(Radley House Partnership)

Fig 5.41 - Further surface degradation, patch repairs and scars of previous uses on the track towards the southern end of the Railway Straight.

(Radley House Partnership)

5.4.5 Along its outer edge, towards the southern end of the track, are a series of modern lamp standards positioned close to the former track edge. These are understood to have only been temporary features associated with the Mercedes-Benz World development, when the contractors' site compound was based in this location. They have never been removed and continue to appear incongruous with the former race track – now redundant, these should be removed with care, along with any associated electrical services and the ground made good.

5.4.6 Both the inner and outer edges of the track, for much of the length of the Railway Straight have become lost as a result of the encroaching vegetation – with only a relatively small length of the inner kerbing and gully (now filled) remaining towards the northern end alongside the earth bund. Although weed growth between the bays of concrete is minimal – this is likely to be as a consequence of regular maintenance and the track being in relatively regular use for driver training. Much of the tree growth along this section of track forms a buffer to the railway line to the west – unlike other sections of the track, they are generally not against or close to the track edge so unlikely to cause damage in the short-term. However, they should be monitored and regularly maintained to ensure that there is not a long-term risk to the track as a result of root growth.

Fig 5.42 – Inappropriate modern lamp standards positioned close to the former track edge.
(Radley House Partnership)

Fig 5.43 - Vegetation encroaching across the track obscuring and potentially destroying the original edge treatments and alignment.
(Radley House Partnership)

CampbellCircuit

5.4.7 Along with the Test Hill Hairpin, Dunlop's Delight and the Banking Bend located on the Brooklands Museum site, discussed above, these two sections of track (Sahara Straight and Howe's Corner) along with the Campbell Bridge over the River Wey are all that remain of Sir Malcolm Campbell's Road Circuit which opened in 1937. As with the Outer Circuit, the Campbell Circuit is constructed in a series of regular concrete bays, with scarring evident from later use by Vickers-Armstrongs et al.

5.4.8 The first curve to the north, which would have connected the Solomon Straight with the extant Sahara Straight, is constructed in tapered bays to address the radius of the bend – with a slight incline in the track up to the west. There is a lot of degradation, fracturing and potholes to this section of the circuit – as well as replacement concrete bays, a series of inappropriate concrete and tarmac patch repairs is also evident. This pattern of decay and repair continues into the northern end of the Sahara Straight, with the worst decay being on the inside edge (west) where the track surface is so badly broken up that the concrete bays are no longer evident and the track surface indistinguishable. The condition of the track surface improves to the south as Howe's Corner is approached, with a number of the bays clearly having been replaced when Mercedes-Benz World was being built in 2004-06, with wide open joints left between the old and new elements – these should be appropriately filled to prevent weed growth becoming established and causing damage to the exposed concrete edges in the long-term. Further repairs and conservation of the Campbell Circuit were discussed in 2014 between M-B and HE and a programme of agreed works is currently being prepared.

Fig 5.44 - Various degrees of surface degradation to the track, including some tarmac surfacing and modern patch repairs.
(Radley House Partnership)

Fig 5.45 – Significant surface degradation to the northern end of the 'Sahara Straight'. Inappropriate replacement concrete bay in the foreground.
(Radley House Partnership)

5.4.9 Tarmac appears to have been laid as a thin top coat over the original concrete track, date and purpose unknown, with much now being worn away leaving sporadic random patches. As found elsewhere on the Outer Circuit, there are scars across the Campbell Circuit, following the laying of buried service routes. An attempt has been made to blend these into the track with a concrete finish, yet the quality and crudeness to the edging of the channel defeats this and makes the scars more pronounced.

5.4.10 Both the inner and outer edges of the circuit, for much of its length, have become lost as a result of encroaching grass – with only a few of the concrete bays having a clearly defined edge. It would appear that there was no kerbing or gully edging to this circuit as there is no evidence of any remains, only the grass abutting/overgrowing the edge of the concrete bays.

Fig 5.46 - Remains of tarmac top coat to surface of 'Sahara Straight' and erosion to track bays along their outer edges.
(Radley House Partnership)

Fig 5.47 - Line of services cut through the track surface at 'Howe's Corner', inappropriately filled and finished.
(Radley House Partnership)

Fig 5.48 - Remains of metal posts (former barriers?) in track surface at southern end of the 'Sahara Straight'.

(Radley House Partnership)

Fig 5.49 - Remains of the tarmac access road, off the 'Sahara Straight' which is understood to have provided access to Vickers-Armstrongs' 'Hydraulic Testing' building in the 1960s.

(Radley House Partnership)

5.4.11 As identified elsewhere on the remaining track sections, the previous use of the site by Vickers-Armstrong's et al is clearly evident. However, in terms of their impact on the Campbell Circuit itself, this would appear to be minimal with only the remains of steel posts and columns (now cut off at ground level) being evident towards the southern end of the Sahara Straight. The pattern and orientation of these would suggest that they once formed some sort of fencing/barrier – which was not there before WW2. However, at the south-eastern end of the Sahara Straight a series of concrete bases and a metal cover over a possible chamber, along with the beginnings of a 'modern' tarmac access road remain. It would appear that these all relate to a series of Vickers buildings that were located in this areas, initially there was a 4,650 sq ft 'Engine Test Hangar' (c.1952), then there was the former 'Hydraulic Testing' building (VA Reference T85, c.1962 – which is later recorded as a 11,775 sq ft 'Air Systems & APU Testing' building, c.1968), which then later became their 'Jig & Tool Store' (VA Reference T85A – c.1971).

5.4.12 Beyond Howe's Corner, to the east, are the remains of the former Campbell Circuit Bridge (also known as Howe's Bridge and originally the Vickers Bridge (1932-37) and latterly the 'Five Tonne' Bridge) which crosses the River Wey to 'The Heights' development. There is no public access to this asset as it has now been fenced off for unspecified safety reasons – however, it is clear that the east side of the structure which would have connected with the river bank has been removed (this was noted in April 2011)[17] and is yet to be reinstated and properly repaired. As part of the designated Scheduled Monument, every effort should be made to address the 'issue' 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 the bridge and its abutments.

VickersBridge

5.4.13 A 'Bailey' type bridge was believed to have been first constructed in this location circa 1937, possibly to have allowed vehicles and pedestrians to access the Campbell Circuit beyond. This current bridge was built presumably in late 1940 to enable Wellington and later Warwick aircraft (produced in the Bellman hangar (T202) on the Finishing Straight) to be towed across the river to the aerodrome. This bridge now provides a secondary 'private' means of access to the Brooklands Museum site and the movement of historic aircraft from the museum to the grass runway alongside the Sahara Straight.

[17] Brooklands Museum Records – 'The Campbell Road Circuit (1937)' Timeline document (v3) 2013.

Fig 5.50 - The Campbell Bridge, spanning the River Wey (viewed from the south-west). (Radley House Partnership)

Fig 5.51 - The Vickers Bridge, spanning the River Wey (viewed from the north-west). (Radley House Partnership)

5.4.14 Although no structural assessment has been made, the current structure appears to be in a sound condition. However, it was noted that on occasion heavy goods vehicles were left parked on the bridge and buses were using it as a turning point – instead of the designated area to the south next to the Museum car park. While such uses are unlikely to cause long-term damage to the bridge itself through loading, care should be taken to avoid any form of accidental damage from reversing vehicles to the structure itself. Consideration could be given to the addition of explanatory signs advising users and visitors of the importance and value of the bridge.

Ownership and Responsibilities

5.4.15 The whole of this area is owned by Mercedes- Benz maintain the area as a motoring attraction for use by their guests and visitors. Having a single owner across an area can of course be a great benefit, as it overcomes the risk of disjointed approaches to maintenance and repair. However in some situations, focus can unfortunately be lost in terms of the bigger picture.

5.4.16 There is a clear interest in wanting to make use of the extant sections of track for their young driver experiences, although this is not necessarily related to any historic Brooklands associations, which is inevitably causing further wear and tear to the historic surface. However, Mercedes- Benz do desire to protect what remains of the Railway Straight through their current approach to overlaying a new replica surface. Although the less-used areas appear to show a reduced degree of attention as shown with the failure to remove the temporary lights alongside the Railway Straight and to make good the eastern side of the Campbell Bridge.

Access and Amenity

5.4.17 There is no general public access to any of the track sections of the heritage assets discussed above for health and safety reasons – only those who are taking part in the driving course are able to gain direct access. Members of the public are able to view the track sections from the adjacent guest viewing areas, which have interpretation panel for the immediate site, when within the area itself or walking along the footpath alongside the River Wey from which they can then also directly access the Vickers Bridge and also see the Campbell Bridge through fencing.

5.4.18 Although some of these assets are visible from nearby or their boundaries, their full amenity is restricted and not necessarily fully understood by the visitor – especially in the context of the Brooklands site as a whole. As elsewhere, the amenity of all of these areas could be greatly improved through the addition of interpretation panels located at site entry points and particular vantage points around the assets themselves. With a coherency to the

panels across the site, these can be used to simply yet effectively illustrate the history and importance of the features in the context of the motor racing and aviation history of the site. Furthermore, consideration could be given to opening up the restricted sections of the track to allow visitors to gain a closer appreciation of these assets, when they are not in use for driving activities.

Environmental

5.4.19 The wooded, overgrown and grassed areas alongside the remaining sections of track provide potential habitats for the local flora and fauna – especially to the west alongside the railway embankment and to the north and east alongside the River Wey. Muntjac deer were witnessed on the railway embankment at the time of the site appraisal work and rabbits are known to be present between the Sahara Straight and river, through the evidence of burrowing on the open grass areas. Damage from burrowing animals should continue to be monitored, especially as this area also occasionally doubles as a grass runway for the arrival and departure of historic aircraft participating in museum events and by helicopters visiting the museum or local businesses.

5.4.20 As part of the redevelopment of this area, a series of flood alleviation measures were required to address the impact of potential high water levels in the River Wey, at the northern end of the Brooklands site (the southern end being dealt with in the Community Park –see below). This takes the form of a deep open drainage gully connected to the river, to the north of the Vickers Bridge, which then runs alongside the inside edge of the Railway Straight before being diverted to the east into the 4x4 off-road driving course. This was designed to fill and flood, along with an area of the Community Park to the south, to protect the remaining developed areas of Brooklands.

Fig 5.52 - Muntjac deer foraging along the embankment to the west of the Railway Straight

(Radley House Partnership)

Fig 5.53 - Wide drainage channel, constructed c.2005 alongside the eastern edge of the Railway Straight, as part of the flood alleviation measures for the northern end of the Brooklands site.

(Radley House Partnership)

5.4.21 The different alleviation measures have been tested since they were completed in 2006 when the River Wey has been in flood – refer to the Timeline Documents appended to the separate Gazetteer document. The most recent being at the time of the compilation of this document, when high rainfall levels caused the River Wey to flood badly during late December 2013 and again during the early Spring. Unfortunately, it is understood that the flood water did not reach the off-road course and instead backed up in the open gully – which potentially in combination with the high volume of water led to significant areas of the museum site being flooded (including the motoring sheds and Clubhouse). Subsequently a few weeks later, the low-lying areas of the Mercedes-Benz World site, including the skid pan, grass airstrip, museum car park and northern end of the Campbell Circuit were flooded for a period of time.

5.4.22 The owners should continue to work with the Environment Agency not only to monitor river levels, but to also ensure that the current alleviation measures are properly maintained and cleared so

that they are fully functioning whenever they are required. At the time of the site appraisal, there was a lot of reed growth and associated vegetation within the drainage gully – this may have unfortunately contributed to the restricted flow of flood water experienced in December 2013. Consideration should not only be given when carrying out any re-landscaping or construction works in and around this area, but also to the potential incorporation of additional measures to deal with the apparent increase in frequency of high rainfall levels – however, any such additional works must fully and properly consider any potential impact on the heritage assets as well as the viability and usability of the site as a visitor attraction.

5.5 JTI UK (reference 5670/CAS1)

Built Heritage – Condition and Repair

5.5.1 Now principally occupied by a series of five commercial office buildings (the JTI UK Ltd building, associated car parking and service buildings dominating the west side of this area) and a terrace of ten houses in the north corner, the site now occupies what would have originally been the north-east section of the Members' Banking. The track was originally breached by the housing development built at some time between 1962 and 1971, with the remainder then being removed at the end during 1984/85 to facilitate the commercial redevelopment by Gallaher Ltd. As a result, the only extant built heritage in this area which is clearly distinguishable, relates to what would have been the upper curved section of the former Campbell Circuit (1937) – the 'Banking Bend', which would have originally connected with the Outer Circuit.

5.5.2 As with the other track sections, this consists of a series of concrete panels which also retain a profiled gully kerb to the north-west edge. The principal challenge here with the conservation of remaining sections of track, as identified previously, is the acknowledged and long-standing vulnerability of degrading surfaces and need to retain the originality and patina of age in terms of its aesthetical value. A key aspect of this is related to the ongoing maintenance through weed control and management of vegetation growth.

5.5.3 Further vulnerability and competing challenges exist through the effect of its current use as overflow staff parking for JTI UK Ltd.

Fig 5.54 – The remains of the 'Banking Bend' from the former Campbell Circuit, which once led round to the Members' Banking on the Outer Circuit. Now used as car parking by JTI UK staff.
(Radley House Partnership)

Fig 5.55 – The inner gully detail and concrete bays forming the surface of the Campbell Circuit Banking Bend.
(Radley House Partnership)

5.5.4 It should also be noted that it is evident from historic photographs and analysis of old maps that the south-west edge of the site contained grandstands and spectator enclosures with stepped

access from the edge of the Campbell Circuit (still evident within the Brooklands Museum site). Due to the dense vegetation and built-up ground levels in this area it is unclear to what extent any evidence may remain or what condition it may be in – although the footings of the eastern Grandstand are known to exist. The removal of the undergrowth and vegetation covering architectural and structural remains, should become a medium to long term aim and then continue with the implementation of an ongoing maintenance regime.

Ownership and Responsibilities

5.5.5 Ownership and responsibility for this specific extant section of Campbell Circuit is understood to lie with JTI UK, through their use of the area as a staff parking area. The rest of the nearby Campbell Circuit is owned and maintained by Brooklands Museum Trust.

5.5.6 Inevitably risks may arise as a result of a lack of understanding by the owners if they were to use inappropriate tarmacadam for repairs or to carry out incremental concrete maintenance repairs which could potentially diminish the value of the asset being conserved. However, through the development of this Plan and the use of appropriate management processes and correctly specified repairs, this can be appropriately mitigated with the correct design of the concrete mix(es) and their application by skilled personnel, or through the use of 'sacrificial' toppings to protect the track below.

Access and Amenity

5.5.7 Accessed via the private roads to the Museum and JTI UK sites, this section of track is no longer within the public domain and therefore not fully appreciated by visitors and enthusiasts. Use for JTI UK Ltd staff parking further obscures the surface and layout of panels from public view.

5.5.8 Although this track section may be appreciated by the informed visitor who is able to read it in context with the adjoining section of Campbell Circuit track (Dunlop's Delight), which is now used as staff and deliveries access to the Museum site, unfortunately most passers-by do not appreciate the value of what is there.

5.5.9 As suggested with a number of the other areas, the amenity of this area could be greatly improved with the addition of a properly considered and designed interpretation panel located nearby in the public domain or on the adjacent bank. This can be used simply yet effectively to illustrate the history and former function of the section of track in the context of the Brooklands Circuit, as well as providing relevant information about its construction and historic use.

Environmental

5.5.10 Any future thinning or clearance of the vegetation from the built-up banking to the south-west edge of the area, may reveal previously obscured features related to the use of the bank by motor racing spectators. Care should therefore be taken when such clearance may accidentally involve the removal of localised areas of built-up ground. Preferably use of mechanical excavators should be avoided unless absolutely necessary and with some form of Archaeological Watching Brief and professional guidance.

5.5.11 Furthermore, this area is likely to contain potential habitats for the local flora and fauna, so care must be taken to ensure no protected species or nesting birds are affected by any clearance works.

5.6 The Heights (reference 5670/CAS2)

Built Heritage – Condition and Repair

5.6.1 Located on the east side of Brooklands, this area is now occupied by a number of commercial office buildings and associated car parking. Originally, the Finishing Straight and part of the Campbell Circuit would have run through the site. Following the closure of the aircraft factory in this location in 1988, all related buildings, as well as significant sections/features of the race track which may possibly have survived, were cleared away as part of the redevelopment for commercial office use. All that remains today to remind us of the site's original use are a length of the former Aerodrome Road (near the west boundary of the area), part of the former Campbell Circuit Pits (centre of the area) and the east end of the former Campbell Circuit Bridge, which spans the River Wey and leads to the south-west edge of the area – all of which are part of the designated Scheduled Monument. As the bridge relates to an extant section of the Campbell Circuit contained within the Mercedes-Benz World Area, this asset has already been referred to in section 5.4 above.

Fig 5.56 – Panoramic view across The Heights looking east with the Museum site and the heavily wooded Members' Hill to the left.

(Radley House Partnership)

AerodromeRoad

5.6.2 Originally constructed in 1912 to link the Motoring and Flying Villages, this consisted of a 'macadam' surface laid over natural clay, without any form of kerb edging, areas of which have inevitably been resurfaced over the following decades but with tar and grit. A tarmacadam surface is evident today, but much of what remains is now obscured by grass, moss and riverside vegetation which is slowly but surely encroaching across the surface. It is only through awareness of the asset and appreciation of a change in ground level along its eastern edge that this feature can be readily distinguished.

5.6.3 The southern section of this portion of Aerodrome Road was unfortunately lost in 2001/02 as a consequence of facilitating the new office development – for which four buildings were built in parallel with the road alignment. An apparent lack of understanding and appropriate routine maintenance of the landscaping associated with the development and more recent extensions to the office buildings on the west side of The Heights, has resulted in the condition and survival of the extant section being under threat.

5.6.4 The apparent lack of understanding and consequent fear of damaging the surface of Aerodrome Road appear to have been a significant contributory factor in the minimal ground clearance and maintenance. This has unfortunately meant that an increasing area of the surface has become obscured – so much so that users of the neighbouring offices are unlikely to know it exists, let alone what significance it has to the rest of Brooklands. Landscaping works following the early development of the site, have led to a series of trees (including silver birches) being planted between the office buildings and the road. The justification for their planting is unclear, as privacy is not an issue and it was not a planning requirement. There is now the potential risk that as they mature and their root systems develop, they may damage the road. More recently, at the time of writing, works were being implemented for the extension of the northern of the four office buildings at its north-west corner, right up to the 'assumed' edge of the Road, following the granting of necessary permissions.

Fig 5.57 – The remains of the former Campbell Circuit Bridge spanning the River Wey. A section of concrete surface to the east side was removed and temporary fencing erected c.2011.

(Radley House Partnership)

Fig 5.58 – Location of the southern section of Aerodrome Road, removed 2001/02 as part of the redevelopment of the site.

(Radley House Partnership)

5.6.5 An informed understanding of this asset along with an appropriate approved programme and method of grounds maintenance, which this Plan and its associated documents will help to provide, will allow this important extant section of Aerodrome Road not only to be appropriately revealed but also protected and maintained.

Fig 5.59 – Section of Aerodrome Road visible through the encroaching river-bank vegetation and moss/grass. Root growth from trees planted along the edge of the road, have the potential to damage both hidden and visible remains.

(Radley House Partnership)

Fig 5.60 – Further sections of the road surface visible through the vegetation. Changes in levels in the grassed areas are also distinguishable, suggesting the possible edge of the roadway. As well as the trees along its eastern edge, timber planters have been laid across its western edge.

(Radley House Partnership)

Campbell Circuit Pits

5.6.6 This now stands somewhat isolated within 'The Heights' development, alongside the principal access route into the site. Significantly shorter than the original in-situ concrete structure, which survived until 1989, only 3½ 'bays' of the original structure now remain. Furthermore, external ground levels have been raised; concrete blockwork has been used to infill former openings and construct a central spine wall to create a storage space which runs the full length of the 'building'. At the time of writing the Plan, the structure is being used by the grounds maintenance team for The Heights as a chemical and tool store.

Fig 5.61 – The remains of the Campbell Circuit Pits, viewed from the north-east.

(Radley House Partnership)

Fig 5.62 – 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)

5.6.7 Plaques identifying the names of former drivers and race course personnel have been added above the 'pit frontage', along with a series of painted murals stylistically depicting 1930s motor racing, with the intention of helping to illustrate the building's former use. As the structure is now without context, visitors and passers-by may be unaware of its original use and will be unable to make any clear connection with the Campbell Circuit, or indeed Brooklands itself. Clearly there is also confusion over the Pits' historic value and worth due to the use of later blockwork, but, a brief explanation identifying these elements as later alterations to the original in-situ cast concrete structure would simply address any misunderstanding – at the time of writing this Plan, it is believed that some of the blockwork was added post-war by Vickers/BAC with later elements potentially added in the early 1990s. The condition of the Pits is reasonable; being located at the heart of the site and through its regular use, there is clearly a regular maintenance regime – although at the time of the initial survey (August 2013) it was apparent that there had been an attempt to remove the lead capping from the top of the flank walls. This risk of theft should be monitored with any prevention measures considered in the context of the heritage value and significance of the structure.

Fig 5.63 – Internal space now being used for storage. Original in-situ cast concrete wall (left hand side) and ceiling clearly evident, with later 'modern' blockwork in-fill wall on right hand side.
(Radley House Partnership)

Fig 5.64 – Lead coping to north parapet appears to have been tampered with.
(Radley House Partnership)

5.6.8 In addition to the designated heritage assets discussed above, there is also an important feature of note located at the east end of Wellington Way, on the north-west side of the roundabout junction with Brooklands Road. This is one of a matching pair of terracotta 'gate statements', the other being located at the south end of Sopwith Drive. Erected in the early 1990s following a commission by Trafalgar Brookmount Ltd (the then site owners and developers), these are modern 'monuments' recognising the pre-war history of the area through their depiction of the famous Napier-Railton, a Vickers Vimy and the former Aero Clubhouse. Again without any further context or explanation it may be difficult for the visitor to relate the significance of this design to the area.

Ownership and Responsibilities

5.6.9 Ownership for the extant sections of the former Aerodrome Road and Campbell Circuit Pits, are understood to be with Prudential, while a management company deal with the day-to-day operational matters of the site, car parking and associated external areas. This also applies to the four office buildings on the west side of the area, while the remaining buildings to the east are under the control of their respective owners/occupiers.

5.6.10 As elsewhere, there is a risk that a lack of understanding by the owners may lead to well-intended but inappropriate works and repairs to and around any of the heritage assets. However, in the case of The Heights it is of benefit that the heritage assets are under the same ownership. Furthermore there is perhaps some understanding of their value and significance through the concern in not carrying out particular maintenance works through fear of causing damage.

Access and Amenity

5.6.11 Accessed from the private road Wellington Way, the extant features from the early history of Brooklands are no longer within or readily visible from the public domain. The extant sections of Aerodrome Road are hidden by both the new office buildings and the riverside vegetation and even though the former Campbell Circuit Pits structure is located on the main road into The Heights, visitors and users of the site are more likely to drive past on their way to or from work without properly acknowledging the building.

5.6.12 In the context of Brooklands' heritage, as with some of the other characterisation areas, the amenity of 'The Heights' is limited. When physically moving about the area this is difficult to

interpret without prior knowledge – even for the former Campbell Circuit Pits. As discussed below, for the residential area, it is only through aerial assessments combined with knowledge of the planning considerations for the redevelopment, that it becomes apparent why the central car parking has been laid out with a series of raised kerbed islands and associated Thuja trees and lamp standards. Running north-south through the area, these have been deliberately aligned with the edges of the former Finishing Straight, with no buildings being permitted to encroach onto this area.

Fig 5.65 – The remains of the former Campbell Pits isolated within the modern landscaping and access road for The Heights.

(Radley House Partnership)

Fig 5.66 – Central car parking area aligned with the former race track Finishing Straight. Without context or interpretation panels this is not readily apparent.

(Radley House Partnership)

5.6.13 The amenity of this area could be greatly improved with the addition of (properly considered and designed) interpretation panels located at the site entry point, particular vantage points around the site, and adjacent to the extant heritage assets themselves. These can then be used to simply yet effectively illustrate the history and importance of the features in the context of motor racing as well as evolution of the site with the aviation industry. Furthermore, consideration could be given to giving a greater visual emphasis to areas which are aligned with sections of the former racing track – either by a change of colour in tarmacadam to the affected areas or metal studs inserted into the surfaces to distinguish the track edges (with interpretation panels again used to identify and explain their significance and context).

Environmental

5.6.14 The River Wey forms the west boundary to this area. The ground surface levels associated with the current office development generally appear to be above those of the former race track. There are no known specific flood mitigation measures within The Heights and yet flooding incidents have occurred. It is noted that there are two ponds located on the east side of the access road, which are part of the landscaping of the Sony and Proctor & Gamble areas of the site. As with the other characterisation areas along the east side of the River Wey, the known flood mitigation measures are located on the western bank – within both the Community Park and areas of Mercedes-Benz World, presumably reducing the potential environmental risk to The Heights area.

Fig 5.67 – One of the larger ponds which enhances the natural environment within The Heights development.
(Radley House Partnership)

Fig 5.68 – The river bank to the River Wey, densely vegetated providing various potential habitats for the local wildlife.
(Radley House Partnership)

5.6.15 The landscaped areas, associated trees and river bank vegetation throughout the site all provide potential habitats for local wildlife and fauna so make a positive contribution to the site as a whole.

5.7 Residential (reference 5670/CAS5)

Built Heritage – Condition and Repair

5.7.1 As identified with the area of The Heights, following the final closure of the aircraft factory in this location by 1989, all industrial and related buildings, as well as sections of track which may have remained, were completely cleared to facilitate the redevelopment of 25 acres of land to a residential use. The only remaining built heritage is the northern abutments of the Aerodrome Road Bridge and Cobham Bridge, which both span the River Wey and encroach into the south-west edge of the residential area. For clarity these are referred to only in 5.8 below, being principally related to the extant road and track sections within the Brooklands Community Park.

5.7.2 Based on the lack of built heritage in this area, no risks are associated so no further comment is required.

Ownership and Responsibilities

5.7.3 By its very nature, the ownership and responsibilities for this area are wide-ranging and numerous. Residential plots have individual ownership and responsibilities while the public adopted roads the responsibility of the local highways authority.

5.7.4 Again, as there are no built heritage assets, then no risks are associated with the management of ownership of this area.

Access and Amenity

5.7.5 Although there are no through roads in the residential development, there is public access via the principal highway and pavement routes. Only the south-east end of Staniland Drive, where it becomes Connaught Drive, has restrictions with a gate positioned across the road giving privacy to the 22 homes beyond.

5.7.6 In the context of Brooklands, the amenity of this area is limited and, as with The Heights when physically moving around the area it is difficult to interpret without any prior knowledge. Only aerial assessments combined with knowledge of the planning considerations for its redevelopment, make it apparent that Staniland Drive is loosely aligned with the former Finishing Straight and the

south side of 'The Fork'. The original location of 'The Fork' section of the former race track, which is now completely lost, can be loosely related with the roundabout junction on Wellington Way.

5.7.7 The amenity of this area could be greatly improved with the addition of (properly considered and designed) interpretation panels located at either end of Staniland Drive. These could be used to simply yet effectively illustrate the alignment of the current road in the context of the Brooklands Circuit as well as providing historical information to how this area evolved with the aviation industry. Furthermore, as suggested elsewhere, consideration could be given to giving a visual emphasis to areas which are aligned to sections of the former race track – either by a change of colour in tarmacadam to the affected areas or metal studs inserted into the surfaces to distinguish the track edges (with interpretation panels again used to identify and explain their significance and context of the track).

Fig 5.69 – Staniland Drive, looking north, which is loosely aligned along the former Finishing Straight of the Outer Circuit. However, without context or interpretation panels this is not apparent.
(Radley House Partnership)

Environmental

5.7.8 Although the River Wey forms the south-west boundary to this area, flood mitigation measures have been accommodated since 2006 on its west bank, both within the Community Park and within areas of Mercedes-Benz World – reducing the potential environmental risk to the residential area. In 2002 the Environment Agency installed a monitoring station at the southern end of the area on the river bank opposite the remains of the Cobham Bridge, to locally record and monitor water levels (Site I.D. 3089 – NG Reference TQ07006190).

5.7.9 The garden areas, associated trees and river bank all provide potential habitats for local wildlife and fauna so make a positive, though limited, contribution to the site as a whole.

5.8 Brooklands Community Park (reference 5670/CAS5)

Built Heritage – Condition and Repair

5.8.1 Located at the south-east corner of the Brooklands site, this characterisation zone occupies one of the larger areas and is the only one fully open and accessible to the public. This is actively encouraged by Elmbridge Borough Council who own and manage much of the area as the 'Brooklands Community Park'. The physical connections with both motor racing and aviation industry are still clear to see with the built heritage that remains on the site, principally a section of the former race track's Byfleet Banking, Aerodrome Road and the southern end of the post-war Vickers runway. At its northern end, spanning the River Wey, the extant section of race track also includes the rebuilt Cobham Bridge (1933) while Aerodrome Road includes its 1931 ferro-concrete bridge. The importance of both the Byfleet Banking and Aerodrome Road is recognised through their inclusion as part of the Brooklands Scheduled Monument.

Fig 5.70 - Panoramic view across the Community Park from the vehicular point of entry in the south-west corner.

(Radley House Partnership)

ByfleetBanking

5.8.2 This section of the concrete race track, which formed the south-east quadrant of the former Byfleet Banking curves through the eastern side of the site. Following a reduction in gradient, it terminates at its north end with the Cobham Bridge whereas the southern end retains its steep gradient and has been terminated as a result of the construction of the Vickers runway (discussed further below). Along its outer boundary (east side) much of the original 'Bayliss' iron railings remain along the bottom edge of the earth banking. Its post-1939 can be seen with the scars left on the surface of the track by former buildings and structures mostly of war-time origin. The most noticeable towards its northern end where the raised rectilinear base of a former Incinerator (VA reference T371) can still clearly be seen, as well as the remains of metal columns cast into the surface of the track.

5.8.3 The long curving section of track clearly shows how the sectional concrete track surface was originally laid with its regular arrangement of bays, typically measuring 10' wide (3m). The exposed and damaged sections of the concrete along its top edge as well as at its southern termination (where areas of the track are no longer supported by the earth banking), further illustrate the overall thickness of the track (14"/350mm) and in some cases they also demonstrate methods of early repair which appear to have included a form of reinforcement with metal bars. The original construction of the whole track was not reinforced, with the only early reinforced sections being that of the Hennebique Bridge at the north end of the race track, c.1906/7.

Fig 5.71 - Cobham Bridge (1933) spanning the River Wey.
(Radley House Partnership)

Fig 5.72 - Race track surface laid over the Cobham Bridge.
(Radley House Partnership)

Fig 5.73 - Curving section of Byfleet Banking with the concrete bays clearly identifiable.
(Radley House Partnership)

Fig 5.74 - Evidence of bar reinforcement to the now unsupported top of the banked track (southern end).
(Radley House Partnership)

5.8.4 A consequence of the concrete being laid in bays, which itself is a significant factor in the character of the track, is the large number of resultant joints, which have opened up over time and become obscured by a number of grasses, plants, mosses and weeds – the most prolific on this section of track being Evening Primrose (oenothera). The ongoing growth of the vegetation inevitably leads to localised decay to the perimeter of each concrete bay which consequently provides greater opportunity for more harmful vegetation to become established.

5.8.5 It is not just the surface of the race track which is at risk from and already being physically damaged by vegetation, but also the track edges and support banking. Although the local flora and trees contribute significantly to the character and atmosphere of the Community Park, they now abut and encroach over the track at both its inner and outer edges leading to the loss of historic features. For example, in a number of locations the previously unmanaged growth of the trees in the support banking has led to upper track edges heaving and cracking – with the worst case scenario being localised collapse and/or loss of the track edge. Along the inner edge of the track, the trees, shrubs and plants that are now well established have encroached over the concrete causing the complete loss of the surface in this area and consequently it is now difficult to establish the line of the inner edge – which may originally have had a gully/kerb detail as found elsewhere on other extant sections of race track.

Fig 5.75 - Grasses and Evening Primrose growing through open joints of the track bays. Lichens and mosses cover the track surface. (Radley House Partnership)

Fig 5.76 - Tree growth adjacent to the upper track edge has damaged the track surface, with localised concrete repairs clearly evident. (Radley House Partnership)

5.8.6 Undoubtedly, regular vehicle movements and use of the track during the historic period of motor racing, combined with associated ongoing routine maintenance would have originally addressed any such issue at an early stage. By contrast, dealing with this issue today with the unused track requires a conscious intervention – ideally through the implementation of a well-managed and resourced maintenance regime. As well as addressing potential risks as they arise, through the active removal of inappropriate vegetation, maintenance should also include cyclical preventative measures through the application of appropriate herbicides.

5.8.7 Where upper areas of track are no longer properly supported as joints between bays have significantly eroded and the support banking has been washed away beneath or eroded, further consideration will be required as to the best method of ground consolidation and making good the joints. This Plan will help assist with understanding these assets and guide the specialist consultants who, in consultation with Historic England, will be able to identify the most appropriate methods of repair and structural support to ensure that the necessary permissions are also in place when carrying out any remedial works.

5.8.8 Finally, one of the more obscured elements of this section of the Byfleet Banking, which has been briefly referred to above, is that of the 'Bayliss' iron railings which run outside the track along the complete lower perimeter of the support banking – originally demarcating the site boundary of the race track. Based on the site appraisal carried out for this Plan, it would appear that this section of railings is the most complete original section which still remains today, as elsewhere only shorter disparate sections were found. Now hidden away within the 'secondary woodland' area of the Community Park, these railings have suffered through neglect and damage with corrosion and movement to their components clearly evident. Localised changes in ground levels and the growth of the trees and shrubs on the support banking has led to the base of the railings becoming buried in some locations and the deflection/failure of other sections – so much so that some trees have even grown through and around the railings consuming elements within their trunks. Also of concern is the relatively recent damage to the railings through the unauthorised removal of the heads of the railings, through Health & Safety concerns. Not only has this led to the loss of original historic fabric, but it has also damaged the remaining metal work through exposure of unprotected cut metal (which is now corroding), scarring and damage to the upper bars as a result of the fundamentally wrong use of an angle-grinder, which in the worst cases has also led to some railings springing open due to the loss of their integrity.

Fig 5.77 - Unsupported upper section of Byfleet Banking (southern end) following the erosion and washing away of the support banking below.
(Radley House Partnership)

Fig 5.78 - Remains of 'Bayliss' iron railings along the lower perimeter of the support banking.

(Radley House Partnership)

Fig 5.79 - Tops of railings removed as the result of Health & Safety concerns, exacerbating further corrosion and causing scarring to the top rail.
(Radley House Partnership)

Fig 5.80 - Sections of railings being consumed by the growth of the trees along the support banking.

(Radley House Partnership)

AerodromeRoad

5.8.9 The second asset of note within the Community Park is what remains of the former Aerodrome Road. Running in parallel with the inner edge of the Byfleet Banking, separated only by a deep open drainage gully, this section of road originally continued up to the Motoring Village to the north (where Brooklands Museum is now located) and round to the south-west where the former Flying Village was located (now Marks & Spencer and Tesco). Constructed in 1911/12, as discussed in section 5.6 above, this road had a 'macadam' surface which in this area appears to be laid over a compacted hardcore base. At its northern end, where it spans the River Wey, it was originally supported by a timber bridge until this was replaced by Surrey County Council in early 1931 with the bridge we see today, constructed from ferro-concrete – coincidentally at which time the entire road was also completely repaired and re-tarred.

5.8.10 Compared with the predominantly obscured extant section of Aerodrome Road located in The Heights, this section in the Community Park is in better condition being more readily visible, fully accessible and therefore somewhat easier for the informed visitor to understand in the context of Brooklands – although the signage currently positioned around the site makes no reference to it and merely refers to it as a footpath or pedestrian route. Its width has clearly become reduced over time as the result of the encroaching vegetation which runs along both edges – to the point that it is only wide enough for pedestrians not vehicles. Also in some areas, the macadam top coat has eroded away exposing the hardcore base which in turn is becoming obscured by weed and moss growth.

Fig 5.81 - Former Aerodrome Road Bridge crossing the River Wey.
(Radley House Partnership)

Fig 5.82 - Northern end of the Aerodrome Road with its worn tarmac surface.
(Radley House Partnership)

5.8.11 As with the Byfleet Banking, conscious intervention is now required through the implementation of a well-managed and resourced maintenance regime. Localised clearance of vegetation is required to protect what remains of the track edges, as well as treatment of moss/grass growth to the macadam surface and localise repairs to the macadam surface – through discussion and agreement with Historic England.

Fig 5.83 - Areas of wear and surface degradation to the tarmac finish, exposing the aggregate to the hardcore base below.

(Radley House Partnership)

Fig 5.84 - Encroaching vegetation along the sides of the Aerodrome Road, leading to the loss of the edges and making its alignment difficult to distinguish.

(Radley House Partnership)

VickersRunway

5.8.12 The third significant asset of note was constructed in 1951 and comprises the remains of the former Vickers Runway running north/south through the site and the associated aircraft taxiway at its northern end, which connects with the race track adjacent to the Cobham Bridge (used as the main access route for aircraft between the factory and airfield). Prior to this date, the airfield had a large grassed landing area similar to many others airfields with pre-WW2 origins. As aviation evolved at Brooklands, the type and size of post-war aircraft increased to the point it was necessary to add a hard concrete runway. This also meant that part of the southern section of the Byfleet Banking had to be removed to ensure that there was an unhindered flight path for the Vickers Valiant V-bomber. The main runway and taxiway are clearly defined with a relatively modern macadam surface.

Fig 5.85 - The former Vickers Runway, carrying on into the distance (north). Now partly resurfaced and sometimes used for visitor car parking.

(Radley House Partnership)

Fig 5.86 - Sections of the runway surface remain exposed in the locations of a former go-kart track.

(Radley House Partnership)

5.8.13 What remains of the runway now forms part of the car parking as well as part of the larger expanse of open space to the Community Park, with various play features built on top – including a children's playground, skate park and basketball court. Previous uses on the site, after closure of the British Aerospace site in the late 1980s include a go-kart racing business who laid out a circuit (apparently without planning permission) across part of the runway and the adjoining grass – leaving significant areas of the previous runway tarmac surface exposed in the inner sections of the circuit. While the later modern top coats of macadam are generally sound, the earlier tarmac runway surface is patchy with some areas beginning to break up, evidence of previous patch repairs and areas of grass and weed growth becoming established in cracks and open perimeter joints with the go-kart track.

Fig 5.87 - Sections of the runway surface remain exposed, with the more recent re-surfacing outlining the former go-kart track. (Radley House Partnership)

Fig 5.88 - The former taxiway at the north end of the extant section of runway – leading to the Outer Circuit in the distance. (Radley House Partnership)

5.8.14 Although the Vickers Runway does not have the same degree of statutory protection the early motoring and aviation elements, there is significance to the 'historic' runway surface through its record of the site's evolution so, as with the other historic hard surfaces, consideration should be given to a maintenance regime for the exposed surface and edges in terms of localised consolidation of the latter in addition to the clearance and treatment of vegetation including cyclical preventative measures through the application of appropriate herbicides.

5.8.15 In addition to the designated heritage assets discussed above, there are two other important features of note. The first is an etched acrylic memorial dedicated to the aircraft design and manufacturing heritage at Brooklands. Designed and erected by British Aerospace in the late 1980s, it is located at the southern end of the Vickers Runway alongside the entrance to a children's nursery. Tucked away almost out of sight, its potential impact and appreciation has been reduced. Positioned tight up against shrubs/vegetation may also lead to it becoming further obscured without regular pruning and maintenance. Again without any further context or explanation it may be difficult for the visitors to relate the significance of this asset to the area.

5.8.16 The second feature is located at the south end of Sopwith Drive and is one of the matching pair of terracotta 'gate statements' as referred to above in 5.6. Although located outside of the demise of the Brooklands Conservation Area, its value to the Brooklands context is still worth recording and strengthening through inclusion in this Plan. Unfortunately, unlike its twin on Wellington Way, this memorial is poorly located closely surrounded by trees, shrubs and vegetation which largely obscure it and also lead to it becoming covered with algae. Only through the clearance and pruning of vegetation, by those responsible for its maintenance, will allow this 'memorial' to remain on view and prevent it from appearing as a rather neglected asset.

Fig 5.89 - British Aerospace memorial (acrylic) dedicated to the aircraft design and manufacturing heritage of Brooklands
(Radley House Partnership)

Fig 5.90 – Neglected and poorly located terracotta 'gate statement' located at the south end of Sopwith Drive.

(Radley House Partnership)

Ownership and Responsibilities

5.8.17 Ownership for the extant sections of Byfleet Banking (i.e. the areas within the Scheduled Monument) are understood to lie with Mercedes- Benz. The remainder of the Community Park site, including the section of Aerodrome Road, being owned and managed by Elmbridge Borough Council. It is further understood that the consequent maintenance liabilities for each of these areas also lies with their respective owners.

5.8.18 Occasionally having separate owners across an area can lead to a disjointed approach to its long-term future, maintenance and upkeep – which is clearly evident on the western section of the Byfleet Banking (see 5.9 below).

Access and Amenity

5.8.19 Unlike much of the remainder of the Brooklands site, the Community Park area has the benefit of being publicly accessible with all of the heritage assets being evident to all. Although the understanding of each of these may be limited as only the section of Byfleet Banking can be readily understood and appreciated even with the effort that has clearly been made with the addition of a number of interpretation boards around the area.

5.8.20 The increased visitor impact can become counter-productive as it raises the risk of potential damage from wear and tear. However, as vehicle access is restricted to the southern end of the runway and the remainder of the site is only accessed on foot or bicycle, then impact of this risk can be mitigated and significantly reduced through management. Consideration could be given to further improving access to the Aerodrome Road, through removal of encroaching vegetation away from the road surface in conjunction with ongoing maintenance to keep the route clear.

5.8.21 As noted elsewhere, the amenity of this area could be further improved with the inclusion of extra interpretation panels which provide specific information for the particular assets, i.e. the Byfleet Banking, Aerodrome Road, Vickers Runway and the two 'memorials' so that each of these features may be better understood and appreciated by visitors.

Environmental

5.8.22 The Community Park has a wide variety of wildlife habitats and is a designated Site of Nature Conservation Interest, as a consequence of the former airfield area being formed by a large area of dry acid grassland on alluvial sand. Much of the landscape is natural or evolved through its early farming history although the series of bunds along the western boundary are late 1980s landscaping additions to conceal and prevent unauthorised access to the former runway.

5.8.23 This open grassland area is noted to be home to a wealth of unusual and rare plants and animals – with some 142 species having been recorded including 'Nationally Notable' species due to the rarity of the habitat. The river itself is noted as having good water quality containing a wide variety of invertebrates and fish, with bats often seen flying across at dusk foraging for insects.

Fig 5.91 - Acid grasslands and modern landscape features along the western boundary to the characterisation area.

(Radley House Partnership)

Fig 5.92 - Bunds and tree planting along the western edge of the characterisation area, preventing unauthorised vehicular access from Sopwith Drive.

(Radley House Partnership)

5.8.24 As previously referred to in the sections above, important environmental features now located within the Community Park are some of the flood alleviations measures which have been designed to address the impact of high water levels in the River Wey at the southern end of the Brooklands site. These features include two deep open original drainage gullies which run alongside both sides of the Aerodrome Road for its complete length and a wetland/pond area constructed within the open grassland to the south of the aircraft taxiway – all of which are designed to accommodate an amount of excess water when the river is in flood.

5.8.25 It is well known and recorded that Brooklands was built on soft ground, liable to flooding, which had low-value in terms of farming and development at the beginning of the 20th century – therefore flooding has long been an issue that has required a degree of management (indeed it is believed that the banks of the river were strengthened several times during 1907-39). One consequence of the race track's development through the expansion of the Motoring Village to the south, was the shortening of the River Wey through the removal of two small oxbows which had previously evolved in that location. Subsequent developments by the aviation industry and then the late 20th and early 21st century redevelopment works further reduced these areas of soft ground that had once been suitable for flooding.

Fig 5.93 - Acid grasslands and wide drainage channels (part of the flood alleviation measures incorporated within the area).
(Radley House Partnership)

Fig 5.94 - Wetland/pond area, south of the taxiway, a key part of the flood alleviation measures for the area.
(Radley House Partnership)

5.8.26 The different flood alleviation measures have been tested over the years when the River Wey has been in flood – refer to the Timeline Documents appended to the separate Gazetteer document. The most recent being at the time of the compilation of this Plan document, when high rainfall levels caused the River Wey to flood during late December 2013. Although it is understood that the flood alleviation measures were fully functioning within the Community Park, the volume of water still led to areas of Brooklands being seriously flooded - the low-lying areas of the Museum site including the motoring sheds and the Clubhouse, as well as parts of Barnes Wallis Drive and the low-lying car park to the south of the Tesco and M&S superstores.

5.8.27 Although flood alleviation measures have been incorporated into the Community Park, the owners should continue to work with the Environment Agency not only to monitor river levels, but also to ensure that the current alleviation measures are properly maintained and cleared so that they are fully functioning whenever they are required. Thought should also be given to the incorporation of additional measures when the frequency of high rainfall levels appears to be on the increase – yet any such additional works must fully and properly consider any potential impact on the heritage assets as well as the protected natural habitat within the Community Park area.

5.9 Light Industrial & Retail Units (reference 5670/CAS4)

Built Heritage – Condition and Repair

5.9.1 Situated at the south-west corner of the Brooklands site, this is the last of the three larger characterisation areas and it is now dominated by the various light industrial, commercial and retail uses contained within it. Again the physical associations with both the motoring and aviation phases of Brooklands earlier development are clear to see, although their context and setting is compromised and unlike with the Museum and Community Park sites, public access to or across these features is significantly limited. These surviving features comprise the remains of three sections of the former race track's Byfleet Banking, which form much of the south, south-west and west boundary to the area, and the former Brooklands Aero Clubhouse which is located more centrally towards the eastern boundary. Each of these three elements are described separately below for ease and clarity due to their differences in ownership, their scale and respective conditions. Again, as elsewhere, the importance of the Byfleet Banking is recognised through its inclusion as part of the Brooklands Scheduled Monument, while the former Aero Clubhouse is designated as a grade II listed building.

ByfleetBanking (southern section)

5.9.2 Originally forming part of the long southern banked section of the concrete race track, as a consequence of the extension of the Vickers Runway in 1951 (on its east side) and then the construction of Barnes Wallis Drive in 1990 (to the west), this now smaller section of former race track has become a somewhat isolated feature losing a degree of its context. Along its outer boundary (southern side) a limited length of the original 'Bayliss' iron railings remain along the bottom edge of the earth support banking. As noted with the other sections of race track discussed above, the regular arrangement of 10' wide bays forming the original surface are again clearly evident.

Fig 5.95 - Regular arrangement of concrete bays, forming the original surface of the race track.
(Radley House Partnership)

Fig 5.96 - 'Bayliss' railings at the base of the support banking to the south of the Byfleet Banking.
(Radley House Partnership)

5.9.3 Towards the western end of this section of the Banking, partly obscured by vegetation, a series of seven concrete bases and a single vertical railway sleeper are located alongside an area of removed track edge. The vertical railway sleeper is likely to have formed part of track barrier, based on finds elsewhere (see 5.9.9 below) but the intended use of the concrete bases remains unclear, although based on historic photographs for other sections of the race track, possibly these may be the remains of supports to either previous or modern (1990s) advertising hoardings – or may relate to World War Two defences. Other war-time features are more clearly apparent along the top edge to the central section, with concrete bases and structures likely to have been gun emplacements and a related shelter structure, with another former air raid shelter built within the lower section of western banking alongside Oyster Lane.

5.9.4 Again, as with the section of remaining banking in the Community Park, the war-time and later Vickers-Armstrongs/BAC occupation of the site can clearly be seen with the scars and repairs to the surface of the track. This is most noticeable opposite the entrance to the two retail superstores, where the former 'No.7 Gate' (later known as the 'Oyster Lane Gate') entrance to the factory site was cut through the banking at some point between 1956 and 1962. This was subsequently removed and filled in as mitigation for the construction of Barnes Wallis Drive in 1990, with its later concrete finish still clearly distinguishable from the adjoining historic sections.

Fig 5.97 - Remains of a railway sleeper alongside the top edge of the race track, possibly associated with advertising hoardings for the motor racing era.

(Radley House Partnership)

Fig 5.98 - Concrete base, associated with World War 2 defence measures, cast through the top edge of the race track.

(Radley House Partnership)

5.9.5 Further late 20th century features scar and obscure the inside and western edges of the track. These include 'modern' (early 1990s) post and tubular rail barriers (preventing vehicle access onto the track), a concrete retaining wall/plinth and gully as well as utility services with raised access covers and unsympathetic methods of associated track repair – which all now make it difficult to identify the original extent of the race track along its lower northern edge. The 1990 infill repairs to the western edge, abutting the retaining wall associated with the construction of Barnes Wallis Drive, are also showing evidence of failure and movement with the higher sections slipping down. Utility companies should be encouraged to avoid routing services through sections of track and, if unavoidable, then to make good. All such works should be sympathetic to and appropriate to the adjoining surfaces and materials.

5.9.6 As well as mosses establishing themselves across the north-facing surface of the race track and shrub growth to the western end, a recurring consequence of the way the concrete surface was formed in bays, is the ongoing decay to the bay edges as a result of the joints opening up and becoming obstructed by invasive vegetation. In addition to various grasses, Mare's Tail (equiseturn arvense) is the more prevalent weed across this section of track. It is acknowledged that there is a maintenance regime in place for the clearance of vegetation. from the track surface, although there have been difficulties in finding the most appropriate methods and treatments to manage the prevalent Mare's Tail.

Fig 5.99 - Modern post and tubular rail barriers alongside the inside edge of the banking, with the scars of inappropriate interventions by utility companies to the lower sections of the race track.
(Radley House Partnership)

Fig 5.100 - Encroaching vegetation to the lower and top edges of the rack track, and further scars of inappropriate interventions by utility companies along the lower edge.
(Radley House Partnership)

5.9.7 As identified with the Community Park section of the Byfleet Banking, the top edge of the race track and associated support banking is also under threat and being damaged. In this case it is not only encroaching vegetation and trees that are causing this damage but burrowing animals (urban foxes, badgers and rabbits) are digging out below the concrete to form their dens and warrens which is gradually undermining long sections of race track with sections up to 1.5m deep having no support beneath. In the worst cases, this has already led to areas of slippage and partial loss of the track's edges, as well as an area of bulging in the surface towards the 1990 infill works. It would appear that the undermining of the track is a long-standing issue, with previous attempts to address this through the use of iron angles driven into the banking under the exposed track edges being visible at the eastern end of the banking. Structural movement and de-stabilisation of the track surface should be monitored and consideration given to implementing appropriate methods of stabilisation – specialist consultants should liaise with Historic England to agree methodologies and materials.

Fig 5.101 - Significant areas of undermining to the top edge of the race track as a result of burrowing animals.
(Radley House Partnership)

Fig 5.102 - Previous attempts to provide support to the undermined sections of banking, using metal posts.
(Radley House Partnership)

ByfleetBanking (south-western section)

5.9.8 Separated from the southern section of the race track following the construction of Barnes Wallis Drive in 1990 (see above) and the western section by the insertion of the concrete steps which lead up over the track from Avro Way to Wintersells Road (and Byfleet and New Haw Railway Station beyond), this segment of the Byfleet Banking forms much of the western boundary of Brooklands. As elsewhere, the regular arrangement of 10' wide concrete bays forming the racing surface are again evident across this section of track.

5.9.9 A unique and notable survival of Brooklands' motor racing era can now only be found on this section of track, along the top edge towards the southern end of the banking – the original 'track kerbing' and early form of 'crash barrier'. This comprised vertical timber railway sleepers driven into the earth banking behind the concrete track, two layers of horizontal railway sleepers were then laid across the back edge of the top of the track, fixed through to the vertical members behind before being faced with flat sheets of metal. The surviving section is now partially obscured by encroaching vegetation and understandably suffering from timber decay and metal corrosion. These unique extant sections of track detailing are a historically important feature and therefore deserve to be carefully cleared of vegetation and fully recorded then, should funds permit, consideration could be given to their conservation in-situ to help prolong their future.

Fig 5.103 - Unique survival along the top edge of the race track, in the form of the remains of the former 'track kerbing'.
(Radley House Partnership)

Fig 5.104 - Further remains of the 'track kerbing' with the metal sheet facing corroding and coming away from the timber sleepers.
(Radley House Partnership)

5.9.10 Compared to other sections of the race track, any remains associated with World War Two period and use are not evident with this section of banking. However, the post-war Vickers-Armstrongs/BAC occupation of the site can again clearly be seen with the scars and repairs to the surface of the track. As with the southern section, this is most noticeable as the result of the c.1990 infilling through the banking of the former 'No.8 Gate' (also known as the 'Hawkers Gate') entrance to the site. As elsewhere, elements of this later concrete finish are still distinguishable against the adjoining historic sections.

5.9.11 More recent unsympathetic and possibly unauthorised works include the application of modern tarmac with concrete kerbing, bollards and security gates to form an access road surface along its inner eastern edge (at the northern end of the track) as well as the installation of utility service routes and drainage which have inevitably destroyed and obscured the alignment of the original inner edge of the race track. As with the southern section of the Banking, the section of track abutting the retaining wall to Barnes Wallis Drive, is also showing evidence of ground movement with sections of the track surface dropping – this is clearly evident displayed with the failure of a mastic type sealant which has been applied across the wall/track junction. As part of the construction of this retaining wall c.1990, a reveal was also deliberately formed at low level to allow members of the public to view a section through the race track – however well-intentioned this may have been, the lack of maintenance and effort to clear this sections in combination with a lack of explanatory information means this is now obscured by litter and vegetation.

Fig 5.105 - Modern tarmac surfacing laid along the inside edge of the race track, with restrictive access gateway and bollards in the distance. Mare's Tail and other scrub vegetation obscures the track surface.
(Radley House Partnership)

Fig 5.106 - Failed mastic type sealant at the abutment of the former track edge and the retaining wall to Barnes Wallis Drive, clear evidence of movement in the track surface.
(Radley House Partnership)

5.9.12 As commonly noted elsewhere mosses, grasses and various weeds are already well established across the track surface and in the joints between the bays of concrete, with Mare's Tail (equiseturn arvense) again being the more prevalent weed across the northern end of the track. However, this section of the race track has a greater amount of cover from the denser weed growth and brambles throughout, but of greater concern is the quantity of tree saplings and young trees (including Sycamore and Silver Birch) which are increasingly established towards the southern end. The density of the tree and shrub growth in this area prevented access to fully assess the condition and extent of the remaining concrete track surface – and considering how dominant this growth has become, there is a high risk that the concrete surface is already badly broken up, potentially beyond recognition. As a priority, dense woody growth and vegetation should therefore be carefully cut back and cleared to allow closer inspection of the track to determine what, if anything, still remains in these areas. A more pro-active approach should then be adopted with the removal of inappropriate vegetation and implementation of cyclical preventative measures through the application of appropriate herbicides. This section of race track is also regularly used as a short cut between Wintersells Road (to the north-west) and Barnes Wallis Drive (to the south), which leads to increased litter problems and on occasion small scale fly-tipping at its southern end.

Fig 5.107 - Dense vegetation and tree growth established across the track surface. Condition and extent of any further historic remains within this area are unknown.
(Radley House Partnership)

Fig 5.108 - Tree saplings, brambles and weed growth dominate the Byfleet Banking's south-western section.

(Radley House Partnership)

5.9.13 As discussed elsewhere with the southern section of the Byfleet Banking, the top edge of the race track and associated support banking are also susceptible to being damaged as a result of animal activity as well as encroaching vegetation and trees. Shrub and tree growth is evident along the top of the track, as are mature trees on the banking beyond. The density of the shrub growth and a 'modern' chain-link fence positioned very close to the track edge, made it difficult to fully inspect the top edge at the northern end of the track yet it was clear that there was some localised damage and loss to the surface as a result of uncontrolled tree growth. To the south, while vegetation was lighter, modern inappropriate temporary metal panels have been positioned along the top of the bank and modern timber boarded fence panels have been constructed in the bank at high level very close to the track edge. Limited access to the private land beyond also meant that the support banking to this section of the track could not be properly assessed. Dense vegetation and tree growth obscures the northern end, with only glances of the banking to the south being possible between the new residential properties on Oyster Lane. It was noted here that the now cleared earth support banking appeared to be steeper than found elsewhere, although without a point of reference, it is difficult to determine whether any of the support banking has been removed to form a larger garden for the new residential properties and so potentially undermining the race track beyond. Further assessment is necessary to properly assess what, if any, undermining to the top of the track may have occurred and whether the current degree of incline to the banking has been increased to facilitate improved private garden areas to the new residential properties, potentially further compromising the stability of the banking in the long-term.

Fig 5.109 - Inappropriate temporary metal hoardings erected along the track edge behind new residential properties along Oyster Lane.

(Radley House Partnership)

Fig 5.110 - Exposed support banking behind residential properties and modern timber panel fencing erected near to the track edge (viewed from Oyster Lane).

(Radley House Partnership)

ByfleetBanking (western section)

5.9.14 Originally linking up with the flat Railway Straight to the north, this segment of track begins to rise up along its outer edge to form the beginning of the Byfleet Banking leading around the southern end of the Brooklands race track. Now enclosed within the Trade City development at the northern end of the light industrial area, the surviving remains of the race track here are the least intact compared to other parts of Brooklands – as a result of war-time and post-war aviation related activities and redevelopment of the area after the closures of the BAC West Works in 1975. The regular arrangement of 10' wide bays forming the racing surface are again evident across the track surface, although later fracturing and displacement of the surfaces makes this harder to appreciate.

5.9.15 The inner edge of the track appears to have been lost completely along this section, with 'modern' concrete retaining walls and kerbing built into the line of the track (most noticeably at its northern end although this was largely done by BAC when constructing two vast VC10 Flight Sheds in the early 1960s), to allow the buildings and parking to be built along with the access road to pass through. More recently with the Trade City development, gravel has been laid over a geotextile membrane where the inner concrete track bays have been lost. At the southern end, it would appear that a series of the former concrete bays have been completely removed or degraded with only gravel and vegetation now evident. Also at this end, a series of bays along the top of the track also appear to have been removed – it is unclear whether this was due to collapse or if it was intentional and associated with the World War Two gun emplacement that was built in this area across and through the race track.

Fig 5.111 - Inner edge of the track, lost when BAC built new industrial facilities here in the early 1960s. Concrete bases supported services to this area of the aircraft factory.
(Radley House Partnership)

Fig 5.112 - Gravel has been laid over a geotextile membrane in the location of the lost inner edge to the track.
(Radley House Partnership)

5.9.16 Once again the evidence of the post-war industrial occupation of the site can clearly be seen with the scars and features left on the track. This is most obvious towards the northern end where a series of twenty-one concrete bases have been cast through the surface – these would originally have supported heating pipework which ran between the different aircraft factory buildings and facilities on the site. Further to the south a concrete channel has been cast through a series of track bays along the width of the track, with a series of associated post holes also clearly visible, most likely to have been associated with some form of boundary fencing.

5.9.17 A modern chain-link fence with concrete posts has been built close to the top edge of the track, with shrub, tree and brambles evident along this area and the support banking beyond. Again the density of the plant growth made it difficult to fully inspect the top edge of the track in some locations but it was clear that there is some localised damage in terms of fracturing and partial collapse to the top edges of the race track. Limited access to the land beyond also meant that the support banking to this section of the track could not be fully assessed – although at its southern end, terracing and earth ramps have been constructed around the area of a related former war-time gun emplacement. Clearance of vegetation and further assessment would be is necessary to properly assess the extent, if any, of undermining to the top of the track that may have occurred. Consideration can then be given to implementing appropriate methods of stabilisation – for which specialist consultants should liaise with Historic England to agree methodologies and materials.

Fig 5.113 – Ivy covered World War 2 gun emplacement cut through the track with top edge beyond also removed.

(Radley House Partnership)

Fig 5.114 - Scar running though track, indicative of a former fence line with post holes to the left of the main groove cast through the surface.

(Radley House Partnership)

Fig 5.115 - Areas of collapse and undermining to the top edge of the banked track.

(Radley House Partnership)

Fig 5.116 - Unmanaged vegetation, weed growth and mosses established around and across the surface of track.

(Radley House Partnership)

5.9.18 As well as mosses becoming well established across much of the surface of remaining race track in this area, the weed growth along track joints is less of a problem here compared to elsewhere. However, any collapsed and missing sections of track are becoming overrun with various weeds, grasses and brambles. A pro-active approach should be adopted with the removal of inappropriate vegetation and implementation of cyclical preventative measures through the application of appropriate herbicides.

Former BrooklandsAeroClubhouse

5.9.19 Set back from one of the main roads through Brooklands, Sopwith Drive, and now sandwiched between modern retail units and a commercial office building, the former Aero Clubhouse is now hidden to a certain extent and has lost its setting and context. However, Graham Dawbarn's

original design in the 'International Modern' style is still plain to see, with the external envelope of the building remaining relatively unaltered. The open space to the 'front' of the building (east side), is reminiscent of it once facing the open expanse of the original grass aerodrome beyond.

5.9.20 Following the departure of the aircraft industry from Brooklands, during which time the building had been a Vickers-Armstrongs/BAC 'Aircraft Servicing School', after a period of disuse and neglect the former Clubhouse was eventually restored 1987-88 and sympathetically converted to a series of lettable offices with much of its internal arrangement and detailing remaining unaltered from its original use.

Fig 5.117 - Front (east) view of the former Aero Clubhouse, now converted to offices.

(Radley House Partnership)

Fig 5.118 - Rear (west) view of the former Aero Clubhouse, office tenant car parking in the foreground.

(Radley House Partnership)

5.9.21 The building is in a good condition and well maintained – it clearly benefits from having a tenant who not only partly occupies the building, but also shares an interest in the history of Brooklands and the former Aero Clubhouse itself.

Ownership and Responsibilities

5.9.22 Ownership of the southern section of the Byfleet Banking lies with the two large retail superstores to the north, with 'Hartnell Taylor Cook' handling the day-to-day management and maintenance issues (i.e. weed control etc.). The southern section of the western Byfleet Banking is divided between numerous ownerships – generally corresponding with the individual commercial/light industrial units to the east, although it is understood that DaimlerChrysler UK own a large section to the south side of the access road off Avro Way. The remaining section of the western Byfleet Banking, contained within the 'Trade City Business Park' is owned by Kier Property, with Vail Williams dealing with the day-to-day management of the site. Finally, the former Brooklands Aero Clubhouse and its associated grounds are under private ownership – the owners, who have an interest in the history of Brooklands, let the office space to various businesses (typically drawn to Brooklands due to its motoring and aviation histories).

5.9.23 The array of owners and their differing approaches to the care and upkeep of their respective parts of Brooklands history is clearly evident, especially with the race track and the varying degrees (or lack) of maintenance that has been carried out to certain sections. In some cases it is understood that is partly related to a lack of understanding and concern about doing more harm than good, as well as a lack of available funds necessary to carry out the regular regime of weed clearance and control, but in the worst case(s) it would appear that there is a complete ignorance and therefore no maintenance is currently organised at all.

Access and Amenity

5.9.24 There is no general public access to any of the heritage assets discussed above. The southern section of Byfleet Banking is restricted with 'No Access' signs posted around its perimeter, although at the time of carrying out the site survey work, local residents were seen to come across the track from the south to access the retail superstores opposite – its eastern end is also used for staff parking during the busy Christmas period with access gained via a gate and trackway off Barnes Wallis Drive. Limited pedestrian access to the south-western section is permitted during the day for staff to access the various industrial units and the Royal Mail sorting office – although this would also appear to have become an unofficial route through for local people as well when it is open. The western section of the race track and the former Aero Clubhouse are again in private ownership and only readily accessed by those working or visiting the sites.

5.9.25 Although some of these assets are visible from their boundaries, their full amenity is restricted and not necessarily fully understood by the casual visitor, especially in the context of the Brooklands site as a whole. As elsewhere, the amenity of all of these areas could be greatly improved through the addition of interpretation panels located at site entry points, particular vantage points around the assets and near to the heritage assets themselves. These can then again be used to simply yet effectively illustrate the history and importance of the features in the context of the motoring and aviation history of the site. Furthermore, consideration could be given to opening up the restricted sections of the track to allow visitors to gain a closer appreciation of these assets – although it is acknowledged personal safety, security and management will be important considerations for each of the respective owners – especially when opening up the steeper sections of the banking to the general public.

Environmental

5.9.26 Although the majority of the Brooklands site is technically liable to flood, this area of the site has a very low probability of flooding with the principal River Wey flood protection measures focussed to the north-west and south-east of the site within the Mercedes-Benz World and Community Park Areas respectively. However, during the 2013 Christmas period the car parks to the south of the two retail superstores flooded leading to temporary closure of the stores – although none of the historic assets were understood to have been directly affected. It is believed that this recent incident was a result of the combination of blocked surface water drains and the extreme rainfall levels experienced at the time.

5.9.27 The wooded and overgrown areas to the race track and support banking to the rear of the sections of the Byfleet Banking provide potential habitats for the local flora and fauna – especially the southern section of race track where badgers, urban foxes and rabbits are known to be present through their damage to sections of the track surface. Whilst any potential tree growth breaking through the surface of the track (see 5.9.12 above), those in the banking and adjoining landscaped areas should all be regularly monitored to ensure that they do not lead to damage of the track edge along the top of the banking, or that they do not destabilise the supporting earthwork.

5.10 Summary

5.10.1 Following the assessment of each of the characterisation zones and their heritage assets contained within, the two tables on the following pages briefly summarise the generic risks that have been identified and consequent opportunities that may be considered for Brooklands as an entity in the future.

5.10.2 Risks

Race Track & Roads (Outer Circuit, Campbell Circuit and Aerodrome Road)	• Surface degradation and loss of edge features through use and/or as the result of moss/weed/tree growth • Damage and structural collapse to the track surface and edges as a result of undermining of the earth support banking through either natural erosion or animal activity • Potential de-stabilisation of the support banking through its partial removal as a result of new development alongside or tree removal • Loss of historic features (boundary treatments etc.) as a result of a lack of understanding of health and safety concerns • Inappropriate 'modern' boundary treatments added to the track edges without permission or proper consideration • Damage to surfaces and loss of historic fabric through poorly considered routing of utility services and subsequent access/repair works • Loss of historic road surfaces and edges through uninformed/irregular management of surrounding landscapes and development works (including modern tree planting)
Buildings	• Loss of context through development to adjacent sites/areas • Damage to historic fabric and/or loss of features as a result of inappropriate repair works or lack of maintenance
Environmental	• Damage to natural surfaces and soil erosion as a result of visitor footfall and unmanaged access • Loss of historic features through a lack of monitoring and management of trees and vegetation on and around heritage assets • Loss of wildlife habitats through poor management of open areas of landscape and riverbanks • Excessive flooding and related damage as a result of poorly maintained flood alleviation measures and drains through the site
Generally	• Lack of understanding, legibility and interpretation of the heritage assets in and around the site with respect to their overall context to Brooklands' unique motoring and aviation history • Restricted public visitor access (by foot) to extant sections of the race track where hidden from the public domain

5.10.3 Opportunities

Race Track & Roads (Outer Circuit, Campbell Circuit and Aerodrome Road)	Implementation of cyclical and appropriate maintenance regimes to monitor and treat weeds and moss growth across extant surfaces of the race track and historic road surfaces Any works should be informed by the Owners Guide Regular monitoring and implementation of a management regime for the areas of dense woodland and tree planting, to reduce risk of damage to track surfaces Properly consider any new boundary treatments in the context of the track and ensure that the appropriate permissions are in place Make utility companies aware of the value and importance of the heritage assets at Brooklands
Buildings	Ensure future maintenance and repair works are properly guided and considered in the context of the particular heritage asset and the content of this Plan
Environmental	Monitor potential damage to natural surfaces as a result of visitor footfall – manage the degree and extent of access, and consider the use of alternative routes that can be used on a rotational basis to allow for regrowth and recovery to the affected areas Regular monitoring and implementation of a management regime for the areas of dense woodland and tree planting, to reduce risk of damage to track surfaces Monitor and manage the riverbanks to maintain existing wildlife habitats and potentially encourage new habitats
Generally	Add a series of interpretation panels, positioned at key locations around the site to allow visitors to gain a better understanding of the context of Brooklands overall as well as its individual heritage assets. Close liaison between key stakeholders and landowners should be maintained through the design process to ensure that they are properly researched and coherently themed across the site. Increase public access (by foot) at agreed times, through and across extant sections of the former race track so that an improved appreciation and understanding can be gained of its complete form Enhance modern surface treatments, where sections of race track have been lost, so that the former alignment and route of the race track may be understood Updating the scheduling and listing designations to fully reflect the scale and content of the extant remains and update the location description for those elements which have been relocated as a result of later development, e.g. the Brooklands Memorial and the former Flight Ticket Office.

6.0 RECOMMENDATIONS

6.1 Introduction

6.1.1 This section brings together the findings of the Plan to establish a framework of guidance which can be considered when dealing with works relating to the site as a whole, as well as its constituent elements, so that the varying degrees of heritage significance and value are understood and appropriately protected.

6.1.2 The following recommendations and guidance specific to the remit of the Plan have been developed to build on the draft 2003 Conservation Plan for Mercedes-Benz and to co-ordinate with:

- Current national and local policy guidance;
- Brooklands Museum's established Conservation Management Policy – Guidelines and Principles to Conservation and Preservation of Historic Buildings, Exhibits and Collections dated 26 November 2007.

6.1.3 When considering works or future schemes within the Brooklands Conservation Area, the following national and local policies and guidance must be taken into account and take precedent:

National Planning Policy Framework (NPPF) (March 2012)
National Planning Practice Guidance (NPPG) (March 2014)
Scheduled Monuments & nationally important but non-scheduled monuments (October 2013)
Elmbridge Borough Council Core Strategy (July 2011)
Elmbridge Borough Council Development Management Plan (April 2015)
Woking Borough Core Strategy (October 2012)
Woking Borough Council Local Plan 1999 Saved Policies
Brooklands Motor Racing Circuit and Aerodrome Road – An Owners Guide

6.1.4 The general recommendations [G*] will apply to any future project and management of the heritage assets within the Brooklands Conservation Area, while the more detailed guidance/recommendations relating to specific areas are noted under the following headings:

- Conservation of Heritage Assets [C*]
- Maintenance of Heritage Assets [M*]
- Nature Conservation [NC*]
- Operation and Management [OM*]

6.2 General Recommendations

6.2.1 The following general recommendations should be considered in the context of the conservation and enhancement of Brooklands as well as its future management and maintenance:

General

G1 It is recommended that the Conservation Management Plan is endorsed by the Brooklands Museum Trust, Elmbridge Borough Council, Historic England and Surrey County Council with the support of other landowners and stakeholders to inform the future protection, conservation, maintenance and management of the heritage assets within the Brooklands Conservation Area.

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G2 It is recommended that works of conservation enhancement or alteration and subsequent management of the site and its heritage assets will be informed by the assessments of significance within the Conservation Management Plan and a thorough understanding of the history of the built heritage.

G3 It is recommended that all major elements of conservation, enhancement or alteration to heritage assets within the public realm are preceded and informed by consultation with stakeholders, the local community, user groups and statutory bodies.

G4 It is recommended that Historic England is consulted from inception and during the planning stages of any works in connection with the Scheduled Monument or within its setting to ensure best practice and assist in the later consideration of any application for consent. This may extend to assessment of impact with respect to development proposals in close proximity.

G5 Where listed buildings or their settings are likely to be affected, or development proposed, it is recommended that projects are informed by pre-application consultation with officers from Elmbridge Borough Council or Woking Borough Council as applicable.

G6 An up-to-date digital measured survey of the extant sections of track and their associated boundaries, including the support banking and perimeter fencing (at the time of writing this Plan such information exists for most of the northern areas occupied by the Museum site and Mercedes-Benz World).

G7 A rectified photographic survey of all track surfaces, to fully and properly record the condition of the Scheduled Monument and allow a proper and reliable cyclical monitoring programme to be carried out in the future should funds permit (at the time of writing this Plan such information exists for the Railway Straight).

6.3 Conservation of Heritage Assets

6.3.1 The built heritage of the former Brooklands Aerodrome and Motor Racing Circuit is a unique finite resource, so it is vitally important that the heritage values are not detrimentally affected as a result of any works of repair or restoration or accidental damage through future management and maintenance. The principles of best practice in the conservation and repair of historic structure have been laid down by the International Council on Monuments and Sites [ICOMOS] and Historic England, on an international and national basis respectively.

6.3.2 All parties involved with day-to-day operations within the site, as well as those who are involved with any future conservation or repair works, should be fully aware of and understand these nationally recognised standards. It is essential that the principles of these standards, as well as the statutory policies and guidance which are specific to the heritage, are effectively communicated between all involved to ensure that the historic value and significance of the site is not damaged through inappropriate intervention or repair.

6.3.3 Areas of the site which are protected by their Scheduled Monument status will require close liaison with Historic England when any works or intervention are being considered.

6.3.4 A further key document against which this guidance has been formulated is 'Conservation Principles, Policies and Guidance – for the Sustainable Management of the Historic Environment' (2008) which provides a structure against which current Historic England policy is applied.

6.3.5 The following guidance should be considered, where any works affect any heritage asset in the Brooklands Conservation Area whether in the form of repair, restoration or routine maintenance:

Conservation of Heritage Assets

C1 It is recommended that repairs should be preceded by an appropriate level of research so that the significance of the feature in question is properly understood prior to the commencement of works which may affect historic fabric.

C2 All works of conservation, repair, alteration and maintenance should aim to maintain and enhance the qualities of the heritage asset within the available resources for the project, and should be carried out to a high standard (to respect the importance of Brooklands as a unique site).

C3 Different periods and phases of construction within a building or track feature on the site should be respected to enable understanding of its historical development.

C4 It is recommended that contractors engaged to work upon the heritage assets are suitably qualified, with proven experience of working upon similar historic buildings and structures, and guided by a specification prepared by an appointed suitably qualified consultant. For work to significant historic fabric, it would generally be preferred that consultants will be accredited in their respective professional discipline.

C5 Repairs and restoration should be based on a principle of minimum intervention with the retention of as much original fabric as practicable, only replacing when beyond economic or technical salvation.

C6 There should be the presumption that the refurbishment or repair of features should be undertaken using materials compatible with the original form of construction as closely as available techniques and/or materials allow.

C7 Harmful or poor-quality repairs might be removed and replaced as individual circumstances allow with appropriate and sympathetic repairs using the correct materials and techniques to a high standard of workmanship. Although the patina of age should be respected, conservation or maintenance work should not attempt to imitate such aging.

C8 It is recommended that examples of structures or components which have had to be replaced are offered to the Brooklands Museum archive for future reference, or recorded for the benefit of researchers.

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C9 Where affecting heritage assets of a particular period or association, there should be a presumption in favour of an accurate palette of colours of the period or for a livery which the asset displayed during its greatest period of service based on archival research, over any other modern or unsympathetic palette.

C10 It is recommended that all interventions to heritage assets are fully recorded, documented, and a photographic record compiled, being deposited with and maintained by the County Records Office and Brooklands Museum archives. Where works relate to the Scheduled Monument, copies should additionally be provided to The National Monument Record or others as directed by Historic England.

C11 It is recommended that development involving ground-breaking work within 3 metres of a heritage asset should be accompanied by an appropriate level of archaeological assessment and/or mitigation in order that the archaeological record is protected. All records and artefacts from archaeological evaluation should be conserved in accordance with national guidelines and made available for research.

C12 Former alignments of the course of the Outer Circuit which now remain as road/building alignments should be safeguarded or enhanced only. There may be no detrimental loss of any such feature.

6.4 Maintenance of Heritage Assets

6.4.1 All maintenance work should be carried out in accordance with best practice for the built heritage and in a manner which is based on a thorough understanding of the significance of the historic asset and of the potential impact of any such work.

6.4.2 In conjunction with the above recommendations, it is preferable for 'Maintenance Plans' with associated costs to be prepared for each of the heritage assets. These should identify the predictable tasks and their frequency of implementation, to ensure that appropriate funds can be sourced and secured so that the fabric of the asset is maintained in a good state of repair for the foreseeable future.

6.4.3 The following recommendations are made with regards to maintenance:

Maintenance of Heritage Assets

M1 The historic fabric of the site should be cared for through a regime of preventative maintenance, preferably informed by inspections every five years and regular on-site monitoring. Routine tasks such as the regular clearance of gutters and drains, or control of plant growth to the race track surface, should be sustained to enhance the longevity of the historic fabric and thereby mitigate the future need for repair.

M2 Any unforeseen matters of maintenance which arise that have identifiable Health & Safety implications will be acknowledged and resolved as a matter of urgency – with restrictions put on public access if required.

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M3 Repairs to the historic built fabric should be limited to what is reasonably necessary to stabilise failing elements, or to make them capable of fulfilling their intended functions, or to bring currently derelict areas back into use.

M4 Restoration should only be carried out where the work will enhance the heritage values of an element of exceptional significance, and decisively outweigh the values of the element being changed or removed. The work should be justified by compelling evidence, respect previous forms of the place, and will not be based upon conjecture.

M5 Removal of elements, where necessary to enhance an architectural aspect of significance, shall be restricted to intrusive elements or those of neutral significance. In such cases, all changes shall be fully recorded.

M6 The use of herbicides and chemical treatments on the surfaces of the former motor racing circuit should be with approval from Historic England and the Environment Agency. Note: Brooklands Museum have published their maintenance regime for their sections of the track, which has the support of Historic England, and this may be useful as an initial source for reference.

6.5 Nature Conservation

6.5.1 In May 2011, the Elmbridge Natural History Society published its findings of a wildlife survey of the Brooklands Museum site which has been carried out between October 2007 and January 2011. The survey not only recorded the wildlife habitats and species present on the site but also made particular reference to rarer species of conservation importance and those which are legally protected.

6.5.2 Elmbridge Borough Council manages the Brooklands Community Park, riverside walkway and part of Aerodrome Road for nature conservation in accordance with agreed guidelines in their own management plan. These must be adhered to in order to maintain the designated status of the Community Park as Suitable Accessible Natural Greenspace (SANG).

6.5.3 It is recommended that landowners consider the following nature conservation guidance where appropriate:

Nature Conservation

EC1 Elmbridge Borough Council manage their woodlands in accordance with the agreed Tree Risk Strategy ensuring that public safety is balanced with the requirements of nature conservation. As such adjacent landowners within the Conservation Area should have due consideration as to the importance of dead and dying wood and where possible these trees may be retained so as to allow potential habitats to be used by bats, birds, insects and other fauna. Any wood removed for safety reasons should be retained in the locality as log/brash piles with stumps preferably retained in-situ to provide habitats for invertebrates.

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EC2 Acidic grasslands should be maintained as a late summer meadow with a cut and collect regime to allow the many wild flower species to flourish and so provide cover for reptiles and nesting birds, following the guidelines within Elmbridge Borough Council's Management Plan for Brooklands Community Park.

EC3 Vegetation relating to and situated alongside water courses should be retained where possible with the adjoining areas providing a graded edge, cut no more than three times a year, so as to maintain the appropriate habitat for wildlife and reptiles.

EC4 Identification of any nationally notifiable and/or invasive species of flora, likely to cause damage to the site should be recorded by the landowner and appropriate action undertaken to control its growth and spread. Removal of any such species should be by suitably qualified contractors following best practice who must provide a method statement and risk assessment to the landowner to demonstrate competence.

6.6 Future Operation and Management

6.6.1 To provide every opportunity for the long-term future of the Brooklands Conservation Area and the survival of its heritage assets, the way in which they are operated, managed and promoted should be properly considered to reduce the risk in terms of harm and damage as well as their future viability.

6.6.2 The following suggestions are made for future management of the area:

Future Operation and Management

OM1 The initiative for the production of this CMP has been primarily from the Brooklands Heritage Partnership. It is recommended that a successor body to the Brooklands Heritage Partnership be established. Its aim would be to promote awareness of Brooklands' heritage and share good practice in the management and maintenance of the Brooklands heritage assets. Membership could include local business and community representatives. Brooklands Museum has indicated that it is willing to act as the nucleus for such an organisation.

OM2 It is recommended that a clear understanding of responsibility for boundaries is established to ensure that relevant owners are aware of these and their management and maintenance obligations.

OM3 It is recommended that further ways of strengthening links with the local community be explored and that community involvement be actively supported in the use, maintenance and long-term future of the heritage assets within the Brooklands Conservation Area.

7.0 MONITORING AND REVIEW

7.1 Summary

7.1.1 Following endorsement it is intended that the Plan will remain in place as a guidance document throughout the future of the Brooklands Aerodrome and Motor Racing Circuit.

7.1.2 Chapter 6 of this document identifies a range of recommendations and standards which should be considered when dealing with the restoration, repair, maintenance and operation of the identified heritage assets at Brooklands in the future. These can also act as a benchmark to which the work can be assessed and monitored. This will help to ensure that the procedures and methods of work are effective in the long-term protection of the heritage assets.

7.1.3 It is recommended that a formal review and revision (as necessary) of the document should be undertaken as deemed necessary by the major stakeholders, together with the related consultation procedures.

7.1.4 The additional documents produced alongside the Plan should also be reviewed and updated on a similar basis. For example, provision is made within the pages of the Gazetteer for the inclusion of additional and/or new information as and when it comes to light, to improve the understanding of the numerous heritage assets.

7.2 Availability

7.2.1 Hard copies of the completed Conservation Management Plan and associated documents will be permanently held within the Brooklands Museum Archive, Historic England's Archive and the Heritage Section of Elmbridge Borough Council.

7.2.2 Digital online copies of both the Plan and Guidance Document will also be made available to view or download from both the Elmbridge Borough Council and Brooklands Museum websites.

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LIST OF FIGURES

Fig. 5.63 Internal space now being used for storage. Original in-situ cast concrete wall (left hand side) and ceiling clearly evident, with later 'modern' blockwork in-fill wall on right hand side
Fig. 5.64 Lead coping to north parapet appears to have been tampered with
Fig. 5.65 The remains of the former Campbell Pits isolated within the modern landscaping and access road for The Heights

Fig. 5.66 Central car parking area aligned with the former race track Finishing Straight. Without context or interpretation panels this is not readily apparent
Fig. 5.67 One of the larger ponds which enhances the natural environment within The Heights development
Fig. 5.68 The river bank to the River Wey, densely vegetated providing various potential habitats for the local wildlife
Fig. 5.69 Staniland Drive, looking north, which is loosely aligned along the former Finishing Straight of the Outer Circuit. However, without context or interpretation panels this is not apparent
Fig.5.70 Panoramic view across the Community Park from the vehicular point of entry in the southwest corner
Fig. 5.71 Cobham Bridge (1933) spanning the River Wey
Fig. 5.72 Race track surface laid over the Cobham Bridge
Fig. 5.73 Curving section of Byfleet Banking with the concrete bays clearly identifiable
Fig. 5.74 Evidence of bar reinforcement to the now unsupported top of the banked track (southern end)
Fig. 5.75 Grasses and Evening Primrose growing through the open joints of the track bays Lichens and mosses cover the track surface
Fig. 5.76 Tree growth adjacent to the upper track edge having led to damage to the track surface, with localised concrete repairs to the track clearly evident
Fig. 5.77 Unsupported upper section of Byfleet Banking (southern end) following the erosion and washing away of the support banking below
Fig. 5.78 Remains of the 'Bayliss' iron railings along the lower perimeter of the support banking
Fig. 5.79 Tops of railings removed as the result of misguided Health & Safety concerns, exacerbating further erosion and causing scarring to the top rail
Fig. 5.80 Sections of railings being consumed by the growth of trees along the support banking
Fig. 5.81 Former Aerodrome Road Bridge crossing the River Wey
Fig. 5.82 Northern end of the Aerodrome Road with its worn tarmac surface
Fig. 5.83 Areas of wear and surface degradation to the tarmac finish, exposing the aggregate to the hardcore base below
Fig. 5.84 Encroaching vegetation along the sides of the Aerodrome Road, leading to the loss of the edges and making its alignment difficult to distinguish
Fig. 5.85 The former Vickers runway, carrying on into the distance (north). Now partly resurfaced and sometimes used for visitor parking
Fig. 5.86 Sections of the runway surface remains exposed in the locations of a former go-kart track
Fig. 5.87 Sections of the runway surface remains exposed in the locations of a former go-kart track
Fig. 5.88 The former taxiway at the north end of the extant section of runway – leading to the Outer Circuit in the distance
Fig. 5.89 British Aerospace memorial (acrylic) dedicated to the aircraft design and manufacturing heritage at Brooklands
Fig. 5.90 Neglected and poorly located terracotta 'gate statement' located at the south end of Sopwith Drive
Fig. 5.91 Acid grasslands and modern landscape features along the western boundary to the characterisation area
Fig. 5.92 Bunds and tree planting along the western edge of the characterisation area, preventing unauthorised vehicular access from Sopwith Drive
Fig. 5.93 Acid grasslands and wide drainage channels (part of the flood alleviation measures incorporated within the area)

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April 2014

Appendices

A1 *Conservation Area Map (separate document)*
A2 *Statutory Designations*
A3 *Plans Illustrating Chronological Development*
A4 *Characterisation Maps (separate documents)*

A1 Conservation Area Map

A1.1 At the time of writing this Plan, the designated Conservation Area boundary is as shown on the separate drawing 5670/SK1 which has been prepared with mapping data kindly supplied by Elmbridge Borough Council and Waking Borough Council.

A2 Statutory Designations

A2.1 The following statutory and non-statutory designations apply to the various heritage assets at Brooklands, they are all identified on 5670/SK1:

A2.2 Schedule Monument

Name: BROOKLANDS MOTOR RACING CIRCUIT, REMAINS OF THE PRE-WORLD WAR II AERODROME, WORLD WAR II BOFORS TOWER AND SHELTERS, AND THE BROOKLANDS MEMORIAL.
District: ELMBRIDGE
County: SURREY
Postcode:

List Entry Number: 1020137
Grade: II*
Date First Scheduled: 17/01/1975
Date of most recent amendment: 07/01/2002

Scheduling Text:

Reasons for Designation

Brooklands was the world's first purpose-built motor racing circuit, predating other equally well known sites internationally such as the Indianapolis Speedway in the USA, Monza in Italy and Montherey in France. Constructed and financed entirely on the initiative of its owner and developer, Hugh Locke-King, it was intended as a showcase for British engineering. Enclosing an area of 300 acres, when it was completed in 1907 the concrete outer circuit was deemed such a remarkable technological achievement that it was described as one of the seven wonders of the modern world. In the 32 years that it was in use the Brooklands circuit achieved both a number of firsts and was the venue for a number of successful world record attempts. In 1926 the circuit also staged Britain's first Grand Prix and up until 1933 was Britain's only permanent motor racing track. Between 1907 and 1933 it attained universal recognition as the home of British motorsport. Such was its enduring legacy and the contribution of many of the famous names associated with it to the development of the racing car and to the sport generally that Britain is still known internationally today as the home of motor racing. Brooklands and the membership of the prestigious Brooklands Automobile Racing Club also became a focus for society events, particularly during the inter-war period, so much so that the circuit enjoyed a reputation as 'the Ascot of motor racing'.

Brooklands also achieved a remarkable reputation in the realm of aviation. Although early aviation pioneers achieved a number of firsts at the site it is chiefly associated with its flying schools, at which many of the most notable figures in early 20th century British aviation learned to fly. It is also associated with aircraft production, and the pre-World War II airfield was the venue for the maiden flights of some of the best known British military aircraft including the Sopwith Pup, Sopwith Camel, Hawker Hurricane and the Vickers Wellington. It is estimated that over 18,000 aircraft of nearly 250 types were built, assembled or test flown at Brooklands and the aerodrome and factories associated with it together represent one of the most important sites in the British aviation industry. In addition to the circuit and airfield, the World War II Bofors anti-aircraft tower on the Members' Hill represents an exceptionally rare survival which is of national importance.

Brooklands has a dual prominence in the fields of early 20th century motor sport and aviation. It represents a unique site of historic and cultural significance which has achieved enduring international recognition. All surviving remains of the circuit and the few significant surviving remains of the aerodrome are therefore considered to be nationally important.

History

Legacy Record - This information may be included in the List Entry Details.

Details

The monument, which falls within ten areas of protection, includes the remains of Brooklands motor racing circuit, part of the Aerodrome Road linking the Paddock to the airfield, a bridge providing access to the airfield from the World War II Vickers repair hangars, a Bofors anti-aircraft tower, a series of World War II air raid shelters and the Brooklands Memorial.

Lying between Weybridge and Byfleet, the race circuit was constructed in 1907 on 'Brooklands', the private estate of the Han Hugh Locke-King. Financed and built entirely on his own initiative, Locke-King intended the new facility to be a showcase for British motor engineering and motor sport. Enclosing an area of 300 acres, the outer circuit was constructed in just nine months by a lfiiOrkforce of 1500 men at a cost of 150,000 pounds. The lfiiOrld's first purpose built motor racing track, it employed state of the art technology and was described as one of the seven wonders of the modern world. The track was oval in plan, 1OOft in width and constructed of poured concrete on a sand base. In order to facilitate high speed cornering the northern and southern ends of the circuit were embanked, the steepest section being the so-called Home or Members' Banking on the north eastern side of the track which reached a height of 32ft. The Railway Straight forming the western side of the circuit was 880yds in length and led into the Byfleet Banking, the longest of the tlfiiO areas of banking on the circuit at 1220yds in length but only 21ft high. Continuing anti-clockwise around the circuit from the Byfleet Banking, the track crossed the river Wey via the Byfleet Banking bridge (built 1906-07 and rebuilt in ferro-concrete in 1933) and headed northwards before splitting into two at the ,Fork' to lead either on to the Finishing Straight or branching right to climb up on to the Members' Banking. The Finishing Straight was inclined at its northern end to offer additional braking to the cars as they crossed the finishing line. The total length of the outer circuit was 2 miles 1350yds and the lap record was held by John Cobb who in October 1935 completed a lap in 1 minute 9.44 seconds at an average speed of 143.44 miles per hour in the 24 litre Napier Railton. On another run on the same day Cobb also recorded the fastest ever speed on the circuit reaching 151.97 miles per hour on the Railway Straight. All surviving sections of the outer circuit including the Members' Banking, the Railway Straight, the Byfleet Banking (now separated into three parts by development) and the Byfleet Banking bridge are included in the scheduling, as is the northern end of the Finishing Straight.

The principal access to the circuit was via tlfiiO tunnels running beneath the Members' Banking and a footbridge. The western tunnel was primarily for competitors and led via a road to the Paddock area, with a return road half way along its length linking it to the circuit. The eastern tunnel, the main entrance, had three lanes, tlfiiO for vehicular traffic and the third for pedestrians and led up on to the so-called 'Mountain' or Members' Hill. The Members' Hill, a natural rise through which a cutting was made for the Members' Banking, was divided into four areas by railings. The Members' Enclosure at the western end contained the Members' Stand and the luncheon room, the neighbouring Reserved Lawn had the Tattersalls Stand and luncheon room, the Five Shilling Enclosure contained two stands, and the Public Enclosure on the eastern side of the hill was merely grassed over. In 1909 a narrow concrete roadway, the Test Hill, was added on the western side of the Members' Hill. A total of 352ft in length and with an average gradient of 1 in 5, the Test Hill was intended as a standard by which automobile engineers could measure engine and gearbox capabilities and braking. The western end of the Members' Hill which contains the Test Hill, a series of footpaths and steps, the foundations for the Members' Stand, the cloakrooms, kitchens and luncheon room behind the Reserved Lawn and several original lengths of railings are all included in the scheduling.

When Brooklands was first opened in 1907 the so-called Weighing Block, a building with equipment for weighing competitors' vehicles, accommodation for the Clerk of the Course and other staff, changing rooms and a press stand were built adjacent to the Finishing Straight. Having become the clubhouse for the socially prestigious Brooklands Automobile Racing Club it was extensively remodelled and enlarged in 1930. Immediately to the south of the clubhouse was the Paddock containing a series of lfiiOrkshops and garages, petrol pagodas, tyre storage areas, a grandstand and a press hut. Amongst those with premises in this area were many of the most important names in early British motor racing including Malcolm Campbell, holder at various times of the World Land Speed record, English Racing Automobiles (ERA), LBB Motors (who were agents for ERA) and R R Jackson.

In 1937 in response to new circuits at Dennington Park and Crystal Palace a road-racing circuit designed by Sir Malcolm Campbell was opened at Brooklands. In addition to including completely new sections of track, the so-called ,Campbell Circuif utilized portions of the existing circuit and a ferro-concrete bridge over the river Wey built prior to 1934 to allow Vickers aircraft to be towed from their

were constructed alongside the section of the new circuit (the 'New Finishing Straight') running parallel with the old finishing straight. The surviving portion of these pits are included in the scheduling as are the two surviving lengths of the circuit; the section from Banking Bend to Test Hill Hairpin (popularly known as- Dunlop's Delight'), and the section including Bridge Corner, Sahara Straight and Aerodrome Curve.

In the 32 years that it was in use the Brooklands circuit achieved both a number of firsts and was the venue for a series of successful world record attempts. In 1907 S F Edge broke the 24 hour endurance record by covering a distance of 1581 miles; in 1913 Percy Lambert became the first person to drive 100 miles in one hour; and in 1909 the World Land Speed record was broken at Brooklands, the first of numerous occasions. In 1926 the circuit also provided the venue for Britain's first Grand Prix.

In addition to its importance to motor racing, the site was also notable in the realm of aviation. In 1907 both Claude Moore Brabazon and Alliott Verdon Roe attempted to fly aeroplanes of their own design at Brooklands without success. On June 8th 1908, however, another attempt by Roe was more successful and he became the first Briton ever to fly a British-designed aeroplane. Thereafter the new airfield within the circuit rapidly became the focal point for the country's burgeoning aviation industry, including aircraft production, flying training and passenger flights. In 1909 Britain's first public flying demonstration was held at the aerodrome and in 1910 Lane's Flying School opened, followed in 1911 by Vickers Flying School. In the same year the first passenger flight ticket was sold at Brooklands by Keith Prowse and Co, Mrs Hilda Hevv1ett became the first British woman to gain a pilofs licence, and the airfield was the starting and finishing point for the Daily Mail Circuit of Britain race. Initially the only access to the aerodrome was via the so called -Aerodrome Road' a concrete road which led southwards from the motor racing paddock, crossed the river Wey alongside the Byfleet Banking bridge and skirted the foot of the banking, although in later years additional access was provided by a road bridge which crossed the banking at Byfleet. The two surviving sections of the Aerodrome Road, a 300m length running east of the River Wey and a 500m length following the base of the south eastern portion of the Byfleet Banking are included in the scheduling, as is the Aerodrome Road bridge, rebuilt in ferro-concrete in 1931.

Motor racing ceased at Brooklands in 1939 and at the start of World War II both the airfield and circuit were requisitioned for use by the Vickers and Hawker aircraft companies, although Hawkers relocated soon afterwards. Formerly lying immediately outside the track to the east, the Vickers factory was rapidly expanded, with buildings erected across the area of the outer circuit from a point north of the Byfleet Banking bridge to the southern half of the Finishing Straight. In addition hangars were erected on the Members' Banking, the northern end of the Finishing Straight and the railway straight and the Clubhouse converted for use by the design office. On 4th September 1940, during the Battle of Britain, the Vickers workshops were badly bombed by the Luftwaffe causing severe casualties amongst the workforce. The antiaircraft guns at Brooklands were in action on 33 occasions from the time of the raid up until May 1941 and shot down two aircraft. Some time between early 1941 and the start of 1942 the defences at Brooklands were further enhanced by the construction of a reinforced concrete tower on the Members' Hill. The tower, split into two parts, mounted a 40mm Bofors gun and its predictor gear and was intended to provide a clear field of fire against low-flying raiders. Additional provision for the protection of the Vickers workforce was made with the construction of brick and concrete lined air raid shelters cut beneath the foot of Members' Hill.

In 1957 a memorial was erected on the north western side of the airfield by Vickers Armstrong to commemorate the 50th anniversary of the site and was unveiled by Lord Brabazon of Tara.

With the exception of the Bofors tower, which is included in the scheduling, all standing buildings, the replacement Members' Bridge, modern services, the surfaces of all modern paths, tracks and roads, and fittings associated with the display of the monument are excluded from the scheduling, although the ground beneath these features is included.

A2.3 Statutory Listed Buildings

Building Name: THE CLUBHOUSE, BROOKLANDS MUSEUM, BROOKLANDS ROAD
District: ELMBRIDGE
County: SURREY
Postcode:

LBS Number: 1272443
Grade: II*
Date Listed: 01/11/2002
Date Delisted:
NGR: TQ0703262839

Listing Text:
WEYBRIDGE
374/0/10090 BROOKLANDS ROAD
01-NOV-02 The Clubhouse, Brooklands Museum

GV II*

Clubhouse. 1906-7, for the Brooklands Automobile Racing Club (BARC), with later alterations and additions including those of 1930 by A.C. Stedman architect. Main block in red brick, vvith additional north block in steel frame; slate roofs, except cement tiles to rear.

PLAN: originally a double-pile block with central observation tower and weighing court and including to the south a first-floor grandstand, from where BARC members, guests and the press could view the racing. In early 1914 the building was extended to the north, with a first-floor restaurant with balcony and access stairs to east and open-sided car and motorcycle maintenance area below. Major alterations of 1929-30 included the partial enclosure of the first-floor grandstand and addition of restaurant to west. Later 1930s alterations included glazing of the first-floor 1914 restaurant (and associated enlarged vvindow to front elevation) and enclosure of the areas beneath the latter and the 1930 restaurant to create more BARC facilities.

EXTERIOR: Front (east) elevation in nee-Georgian style, vvith slightly-projecting and pedimented central bay with lunette to tympanum and gauged and rubbed flat arches over timber casements; central door with overlights; cement-rendered surround to enlarged window to first-floor right, an alteration associated with the improvement to the 1914 restaurant in the mid1930s. Hipped roof surmounted by large octagonal copper-roofed observation tower and encircling timber balustrade. Left-hand (south) elevation: brick ground floor with central recessed porch flanked by blocks with gauged and rubbed flat arches over vvindows to right, and later C20 soldier arches over later C20 5-light and 3 one-light windows to left; first-floor grandstand in 6 bays vvith timber posts and balustrade, the inserted rendered wall having timber casements. Rear elevation has central pediment as the front, now set behind hip-roofed block vvith three segmental-arched openings, those tvvo to left (and in north end) glazed in 1930s, the half-timbered first floor having small-paned timber casements; timber stairs rise to door set in south end, a plain block of 1930 vvith tile cladding (to originally roughcast first floor) being set between this and the timber stairs that rise to the first-floor gallery on the south elevation. Block to north has hipped roof, timber casements to first floor restaurant replacing original folding screens, with panelled aprons to east elevation and 3 bays to north set above dentilled eaves; timber balustrade to platform and stairs projecting to east of this block, the right-hand (north elevation having corrugated iron cladding and steel casements to ground floor).

INTERIOR: main block has panelled doors set in moulded architraves, some original chimneypieces and a dog-leg stair with stick balusters and ball finials to newels; first-floor room to right has partition inserted for Barnes Wallis's office. Exposed steel-framed roof in 1930 restaurant to rear and exposed steel frame in 1914 restaurant to right (north).

HISTORY: The Clubhouse was the principal building on the Brooklands site, completed just before it was opened in 1907 and sited adjacent to the Finishing Straight. It fulfilled both social and practical functions and presents a sequence of alterations and additions that relate to this site's period of national and international importance. The Clubhouse incorporated an area known as the Weighing Block, with equipment for weighing competitors' vehicles, accommodation for the Clerk of the Course and other staff, changing rooms and a press stand. It comprises a nee-Georgian block, pedimented to front and rear with a vievving gallery along one side and an observation tower surmounting the roof. As the clubhouse for the socially prestigious Brooklands Automobile Racing Club, for whom it was extended just before the First World War, it was extensively remodelled and enlarged in 1930 and throughout the

and garages, petrol pagodas, tyre storage areas, a grandstand and a press hut. Amongst those with premises in this area were many of the most important names in early British motor racing including Malcolm Campbell, holder at various times of the World Land Speed record, English Racing Automobiles (ERA), LBB Motors (who were agents for ERA) and R R Jackson. In January 1946 the Clubhouse vvas sold to Vickers-Armstrongs and became the offices and laboratories of the firm's post-vvar Research and Development. This vvas headed by Sir Barnes Wallis, inventor of the vvar-time Dambusters' 'bouncing bomb' and of the geodetic structural design featured in the Wellington bomber and other Vickers aircraft. After Wallis retired in 1971, the Clubhouse vvas occupied by the British Aircraft Corporation/ British Aerospace Film Unit for another decade and then vvas sold to Gallaher Ltd in 1983 and later leased to Brooklands Museum.

The world's first purpose- built motor racing track at Brooklands employed state of the art technology and was described as one of the seven wonders of the modern world. Lying between Weybridge and Byfleet, the race circuit was constructed in 1907 on 'Brooklands', the private estate of the Hugh Locke King. Financed and built entirely on his own initiative, Locke-King intended the new facility to be a shovvcase for British motor engineering and motor sport. Enclosing an area of 300 acres, the outer circuit was constructed in just nine months by a workforce of 1500 men at a cost of ?150,000. In 1937 in response to new circuits at Donington Park and Crystal Palace a road-racing circuit designed by Sir Malcolm Campbell was opened at Brooklands. In addition to including completely new sections of track, the so-called 'Campbell Circuit' utilized portions of the existing circuit and a ferro-concrete bridge over the river Wey built prior to 1934 to allow Vickers aircraft to be towed from their factory to the east of the circuit on to the aerodrome. A series of concrete pits were constructed alongside the section of the new circuit (the,New Finishing Straight') running parallel with the old Finishing Straight.

The great names of the inter-war British motor industry, such as Austin, Vauxhall, Norton and Triumph owed much of their success to the availability of the Brooklands track, which proved itself as a valuable testing ground for engine development, tyre safety and streamlining. In the 32 years that it vvas in use the Brooklands circuit achieved both a number of firsts and vvas the venue for a series of successful world record attempts. In 1907 S F Edge broke the 24 hour endurance record by covering a distance of 1581 miles; in 1913 Percy Lambert became the first person to drive 100 miles in one hour; and in 1909 the World Land Speed record was broken at Brooklands, the first of three occasions. In 1926 the circuit also provided the venue for Britain's first Grand Prix.

In addition to its importance to motor racing, the site was also of great importance in the realm of aviation. In 1907 both Claude Moore Brabazon and Alliott Verdon Roe attempted to fly aeroplanes of their own design at Brooklands vvithout success. On June 8th 1908, however, another attempt by Roe was more successful and he became the first Briton ever to fly a British-designed aeroplane. Thereafter the new aerodrome within the circuit rapidly became the focal point for the country's burgeoning aviation industry, including aircraft production, flying training and passenger flights. Popular enthusiasm for this new technology, and especially for private manufacturers, vvas greatly encouraged by the press (especially The Daily Mail) and found its voice in the Aero Club, the Aeronautical Society and specialist journals such as Flight (1909) and The Aeroplane (1911): all these promoted the use of flying for both military and civilian purposes. Throughout this period, air shows brought thousands of members of the public to sites throughout Europe, invariably joined by military observers. In 1909 Britain's first public flying demonstration vvas held at the aerodrome and in 1910 Lane's Flying School opened, followed in 1911 by Vickers' Flying School. In the same year the first passenger flight ticket was sold at Brooklands by Keith Prowse and Co, Mrs Hilda Hewlett became the first British woman to gain a pilot's licence, and the airfield vvas the starting and finishing point for the Daily Mail Circuit of Britain race. Initially the only access to the aerodrome was via the so-called 'Aerodrome Road' a macadam road which led southwards from the motor racing paddock, crossed the river Wey alongside the Byfleet Banking bridge and skirted the foot of the banking, although in later years additional access was provided by a footbridge which crossed the banking at Byfleet. Motor racing ceased at Brooklands in 1939 and at the start of World War II both the airfield and circuit were requisitioned for use by the Vickers and Hawker aircraft companies, most of the Hurricanes that brought victory in the Battle of Britain being built at Brooklands. Formerly lying immediately outside the track to the east, the Vickers factory was rapidly expanded, vvith buildings erected across the area of the outer circuit from a point north of the Byfleet Banking bridge to the southern half of the Finishing Straight. In addition wartime hangars were erected on the Members' Banking, the northern end of the Finishing Straight and the Railway Straight. On 4th September 1940, during the Battle of Britain, the Vickers factory vvas badly bombed by the Luftwaffe causing severe casualties amongst the workforce. The anti-aircraft guns at Brooklands were in action on 33 occasions from the time of the raid up until May 1941 and shot down two aircraft. Some time

construction of a reinforced concrete tower (Scheduled Ancient Monument) on the Members' Hill. The tower, split into *tvvo* parts, mounted a 40mm Bofors gun and its predictor gear and was intended to provide a clear field of fire against low-flying raiders. Additional provision for the protection of the Vickers vvorkforce was made with the construction of brick and concrete lined air raid shelters cut beneath the foot of Members' Hill.

Building Name: BROOKLANDS INDUSTRIAL PARK BUILDING T120 (FORMER AERO CONROL TOWER)
District: ELMBRIDGE
County: SURREY
Postcode:

LBS Number: 1272443
Grade: II
Date Listed: 17/01/1979
Date Delisted:
NGR: TQ0638261918

Listing Text:
TQ 06SE BOROUGH OF ELMBRIDGE OYSTER LANE
BYFLEET

4/332 Brooklands Industrial17.1: 79. Park: Building T120 (Former Aero Control Tower) (Formerly listed as Aero Club House/ Control Tower)

GV II

Club house and control tovver. 1932 by Graham Dawbarn, in the International Modern style. Rendered brick with flat concrete roof. Symmetrical. 3 storeyed control tower with higher stair turret, flanked by 2 storeys projections on the entrance front. Metal casement windows, 5 across the ground floor vvith central entrance. On the airfield side, single storeys wings either side have further projections. The whole building is in an unaltered condition and is included as an airfield building in the modern style and for its very important associations with the history of British Aviation at Brooklands.

Building Name: BROOKLANDS INDUSTRIAL PARK FORMER FLIGHT BOOKING OFFICE
District: ELMBRIDGE
County: SURREY
Postcode:

LBS Number: 1191645
Grade: II
Date Listed: 16/11/1984
Date Delisted:
NGR: TQ0630961846

Listing Text:
TQ 06SE BOROUGH OF ELMBRIDGE OYSTER LANE
BYFLEET

4/333 Brooklands Industrial Park: Former Flight Booking Office

GV II

Former flight booking office. c1911. Red brick with timber and glass above, plain tiled roof vvith ridge cresting. Rectangular, single storey office with planked door, divided horizontally, at one end. Reputedly the vvorld's first flight booking office and included for its important associations with the history of British Aviation at Brooklands.

Building Name: BELLMAN HANGAR BROOKLANDS MUSEUM
District: ELMBRIDGE
County: SURREY
Postcode:

LBS Number: 1379426
Grade: II
Date Listed: 04/11/1999
Date Delisted:
NGR: TQ0710662912

Listing Text:

TQ 06 SE BOROUGH OF ELMBRIDGE
WEYBRIDGE

374/4/10052 Bellman Hangar, Brooklands Museum

GV II

Bellman hangar. Built late 1940 for Vickers-Armstrong on behalf of the Ministry of Aircraft Production. Manufactured by Head Wrightson and Co. Ltd of Gateshead, Tyne and Wear. Corrugated iron cladding over steel frame of rolled sections, both walls and roof using the same standard units joined at their junction by a standard corner unit. Rectangular plan, 180 x 95 x 25 foot. Aligned N-S on the Motor Circuit's Finishing Straight, with sliding doors in the end gables. Interior has exposed steel frame. HISTORY: Construction on this hangar and 3 others on the Vickers factory site commenced on September 16th - at the height of the Battle of Britain and after the Luftwaffe's devastating raid on the Vickers factory at Brooklands - and it was completed on the 12th of December. These hangars had all been given a clear internal height of 25 feet, in order to accommodate Vickers Wellington bombers for the purpose of essential repair w:Jrk. Approximately 400 Bellman hangars were built on RAF and Ministry of Aircraft Production factory airfields, the majority of these having lower (16ft 6 inches) height which could not accommodate Wellingtons. (Archives at and information from Brooklands Museum; Paul Francis, British Military Airfield Architecture, 1996).

Building Name: THE RESTAURANT, MEMBERS' HILL, BROOKLANDS MUSEUM
District: ELMBRIDGE
County: SURREY
Postcode:

LBS Number: 1272444
Grade: II
Date Listed: 01/11/2002
Date Delisted:
NGR: TQ0719262933

Listing Text:
WEYBRIDGE

374/0/10091 BROOKLANDS ROAD 01-NOV-02 The Restaurant, Members' Hill, Brooklands Museum

GV II

Restaurant. 1907. Red brick with gabled corrugated asbestos roof. Central double doors, with narrower double doors to left. Ten 4-light timber casements beneath eaves. Similar fenestration to rear. A courtyard area to the rear is bounded by a brick and tile range that includes flanking and angled wings, with segmental arched openings.

INTERIOR: plain, with curved bracing to exposed trusses. Cast-iron range in kitchen.

HISTORY: Although a plain and functional building, the restaurant has great importance in relationship to a site of international significance in the development of motor sport and aviation in its pioneering days. It surmounts the hill (known as Members' Hill) that provided views of the world-famous motor racing track at Brooklands, and was in use by the opening of the track on June 17th 1907. The site was a favourite location for newsreel cameramen and many of the classic races were filmed from close to this spot, and in the Second World War the restaurant functioned as a billet for the anti-aircraft gunners that protected the Vickers aircraft factory below. During this period the restaurant also staged musicals and dances for local troops. It was used in the post-war period as a store.

The Members' Hill, a natural rise through which a cutting was made for the Members' Banking, was divided into four areas by railings. The Members' Enclosure at the western end contained the Members' Stand and the luncheon room, the neighbouring Reserved Lawn had the Tattersalls Stand and luncheon room, the Five Shilling Enclosure contained two stands, and the Public Enclosure on the eastern side of the hill was merely grassed over. In 1909 a narrow concrete roadway, the Test Hill, was added on the western side of the Members' Hill. A total of 352ft in length and with an average gradient of 1 in 5, the Test Hill was intended as a standard by which automobile engineers could measure engine and gearbox capabilities and braking. The western end of the Members' Hill which contains the Test Hill, a series of footpaths and steps, the foundations for the Members' Stand, the cloakrooms, kitchens and luncheon room behind the Reserved Lawn and several original lengths of railings are all included in the scheduling.

For more historical details, see entry for The Clubhouse.

A2.4 Locally Listed Buildings (Elmbridge Borough Council)

Esso pagodas (formerly Pratt's pagoda), BP pagoda, Shell pagoda, The Malcolm Campbell workshop, ERA shed, Jackson shed, Dunlop Mac tyre change building, racing lockups, press hut, pill box, 2 air raid shelters, all at Brooklands Museum	Brooklands Road, Weybridge

A2.5 All information is correct at the time of publication of this Conservation Management Plan.

A3 Plans Illustrating Chronological Development of Brooklands

A3.1 The following plans have been compiled to illustrate how Brooklands has changed since its inception in 1907 up to the present day. The background map data uses information kindly supplied by Elmbridge Borough Council and Waking Borough Council, with overlays of archive maps held by Brooklands Museum.

A3.2

5670/SK3	1907 Overlay	-1:6000@ A3
5670/SK4	1914 Overlay	-1:6000@ A3
5670/SK5	1915 Overlay	-1:6000@ A3
5670/SK6	1935 Overlay	-1:6000@ A3
5670/SK7	1939 Overlay	-1:6000@ A3
5670/SKB	1940 Overlay	-1:6000@ A3
5670/SK9	1941 Overlay	-1:6000@ A3
5670/SK10	1943 Overlay	-1:6000@ A3
5670/SK11	January 1946 Overlay	-1:6000@ A3
5670/SK12	March 1946 Overlay	-1:6000@ A3
5670/SK13	1956 Overlay	-1:6000@ A3
5670/SK14	1962 Overlay	-1:6000@ A3
5670/SK15	1964 Overlay	-1:6000@ A3
5670/SK16	1971 Overlay	-1:6000@ A3
5670/SK17	1981 Overlay (partial)	-1:6000@ A3

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Source - Brooklands Museum Archive.

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BROOKLANDS CONSERVATION AREA BOUNDARY

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BROOKLANCS AERODROME & MOTOR RACING CIRCUIT CMP

existing layout

with 1907 overlay

5670/ SK3
October 2013
1:6000 @ A3

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Source - Brooklands Museum Archive.

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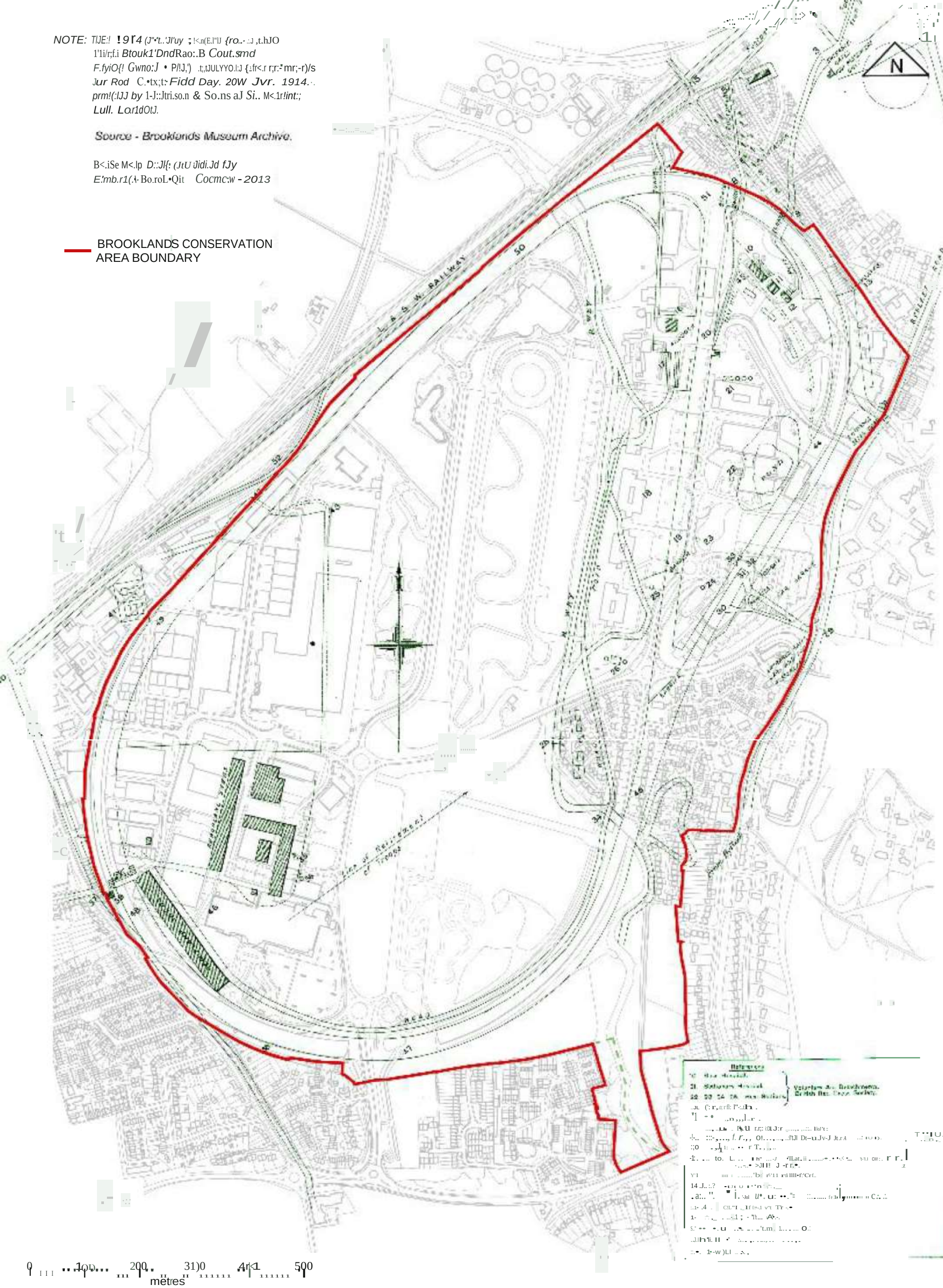
BROOKLANDS CONSERVATION AREA BOUNDARY



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BROOKLANDS AERO-DROME & MOTOR RACING CIRCUIT CMP
: sting layout with 1914 overlay

56701SK4
October 2013
1:6000 @A3

RADLEY HOUSE PARTNERSHIP

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Source - Brooklands Museum Archive.

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BROOKLANDS CONSERVATION
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Coens Hill

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BROOKLANDS MOTOR COURSE

Vickers Works

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0 100 200 300 400 500
metres

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP existing layout with 1915 overlay

56701 SK5
October 2013
1:6000 @ A3

RADLEY HOUSE PARTNERSHIP

NOTE: The 1935 overlay is taken from a plan originally drawn by A.G Stedman M.I.S.E (Architect and Surveyor) in August 1931, titled the 'Brooklands Motor Course, Weybridge, Surrey', with later updates added c.1935.

Source - Brooklands Museum Archive.

Base Map Data provided by Elmbridge Borough Council - 2013

BROOKLANDS CONSERVATION AREA BOUNDARY

N

0 100 200 300 400 500
metres

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP
Existing layout with 1935 overlay

5670/ SK6
October 2013
1:6000 @ A3

RADLEY HOUSE PARTNERSHIP

RADLEY HOUSE, 8 ST CROSS ROAD, WINCHESTER SO23 9HX
T: 01962 842226 F: 01962 842401 E: winchester@radleyhouse.co.uk W: www.radleyhouse.co.uk

NOTE: TIJ(,) ,99 v·.w'vy is u(r:;.n (tot. Gttmun
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Base Map Data provided by
Elmbridge Borough Council - 2013

BROOKLANDS CONSERVATION AREA BOUNDARY

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BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP

existing layout

with 1939 overlay

56701 SK7
October 2013
1:6000 @ A3

RADLEY
HOUSE
PARTNE
RSHIP

RADLE'f'IOO-U5E;J
STROA[lo;:!'.It E5TER
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lo.'huu.....:u.u- '-•-' " -
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BROOKLANDS CONSERVATION AREA BOUNDARY

0 200 300 500

metres

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP

existing layout

with 1940 overlay

56701 SKS
October 2013
1:6000 @ A3

RADLEY
HOUSE
PARTNE
RSHIP

RADLE'f'IOO-U5E;J
STROA[lo;:!'.lt E5TER
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Source - Brooklands Museum Archive.

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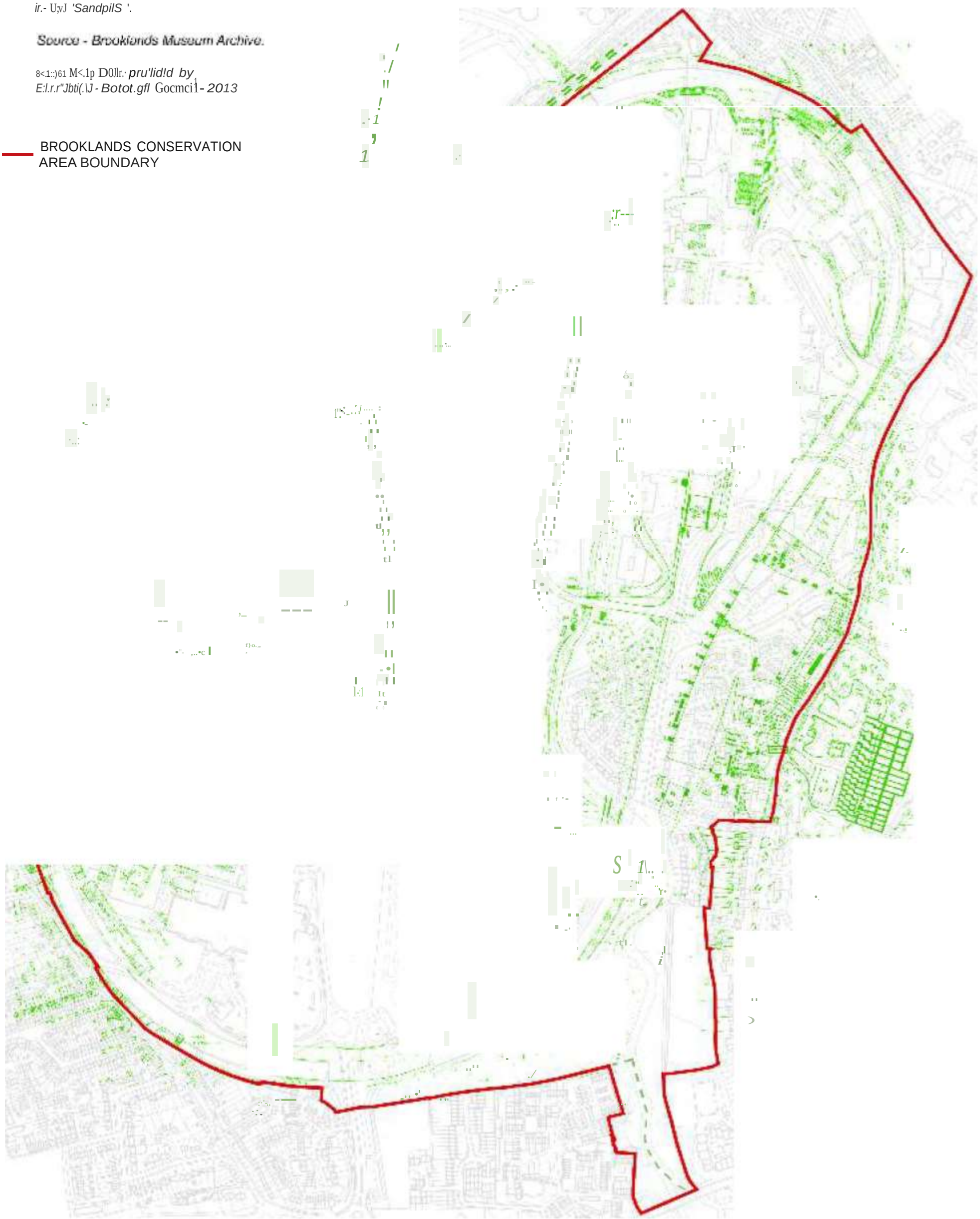
BROOKLANDS CONSERVATION AREA BOUNDARY



BROOKLANCS AERODROME &
MOTOR RACING CIRCUIT CMP
existing layout with 1941 overlay

5670/ SK9
October 2013
1:6000 @ A3

RADLEY HOUSE PARTNERSHIP

RADLE'f IOO-U5E,,J STROAtl-,'.!'.It E5TER SOOI)HJ:
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BROOKLANDS CONSERVATION AREA BOUNDARY

BROOKLANCS AERODROME &
MOTOR RACING CIRCUIT CMP
Existing layout with 1943 partial overlay

Source - Brooklands Museum Archive.

56701 SK10
October 2013
1:6000 @A1

RADLEY HOUSE PARTNERSHIP

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Source - Brooklands Museum Archive.

Bas> Map Data prolirJed by ElmiJndgF; BomugtJ Coundi - 20 t 3

BROOKL.ANDS CONSERVATION AREA BOUNDARY

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0 100 200 300 400 500
metres

BROOKLANCS AERODROME & MOTOR RACING CIRCUIT CMP
existing layout with January 1946 overlay

5670/ SK11
October 2013
1:6000 @A3

RADLEY HOUSE PARTNERSHIP

RADLE'f'IOO-U5E,,J STROAtl-';!'.It E5TER SOOI)HJ:

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Source - Brooklands Museum Archive.

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BROOKLANDS CONSERVATION AREA BOUNDARY

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metres

BROOKLANCS AERODROME &
MOTOR RACING CIRCUIT CMP
Existing layout with March 1946 overlay

56701 SK12
October 2013
1:6000 @ A3

RADLEY HOUSE PARTNERSHIP

RADLE'f'IOO-U5E;J STR0ACI-;'!'Jlt E5TER SOOt:IHJ:
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Source - Brooklands Museum Archive.

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BROOKLANOS CONSERVATION AREA BOUNDARY

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100 200 300 400 500
metres

existing layout with 1956 overlay

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP

56701 SK13
October 2013

1:6000 @A3

RADLEY
HOUSE
PARTNER
SHIP

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Source - Brooklands Museum Archive.

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Elmbtldbt(', BwOLtgf/ Gocmcil - 2013

BROOKLANOS CONSERVATION AREA BOUNDARY

N

0 100 200 300 400 500
metres

BROOKLANCS AERODROME & MOTOR RACING CIRCUIT CMP
existing layout with 1962 overlay

56701SK14
October 2013
1:6000 @A3

RADLEY HOUSE PARTNERSHIP

RADLE'f'IOO-U5E ,;J STROA[lo,':!'.It E5TER SOO0:0HJ:
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Source - Brooklands Museum Archive.

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Elmb.r'l'db(', But(n.gfl Gocmcil - 2013

BROOKLANOS CONSERVATION
— AREA BOUNDARY

N

SUPERSONIC TUNNEL
STRATOSPHERE CHAMBER
MOCK-UP HANGAR
RESEARCH & DEVELOPMENT
STRUCTURAL TEST HANGAR
SYSTEMS TEST HANGAR
WIND TUNNEL (Low & Hi
APPRENTICE TRAINING
To Weybridge Sta
MAIN LINE TO LONDON
HAMMER SHOP
JIG & TOOL DRAW
MAIN DESIGN
STAFF CANTEEN
MATERIAL TREATMENT
NON-DESTRUCTIVE TESTING
MOULD LOFT
No 1 GATE
No 2 GATE
FLIGHT SHEDS
STORES
VC 10 FUSELAGE ASSEMBLY
ELECTRICAL TEST LABORATORIES
VC 10 WING ASSY
ERECTING SHOPS
MAIN OFFICE BLOCK
RUNWAY
WING SKIN MILLING DEPT
MILLWRIGHTS
AIRCRAFT LABORATORIES
AIRCRAFT SERVICING SCHOOL
HAWKERS GATE
No 6 GATE
STAFF CANTEEN
SPARES DISPATCH
ELECTRONIC TEST
OYSTER LANE GATE
Brooklands Road
To Cobham & A3 For London
To Woking

0 100 200 300 400 500
metres

BROOKLANCS AERODROME & MOTOR RACING CIRCUIT CMP
existing layout with 1964 overlay

56701 SK15
October 2013
1:6000 @A3

RADLEY HOUSE PARTNERSHIP

RADLE'f'IOO-U5E,J STROA[lo,':!'Jlt E5TER SOOt:tHJ:
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Source - Brooklands Museum Archive.

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BROOKLANOS CONSERVATION AREA BOUNDARY

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BROOKLANCS AERODROME & MOTOR RACING CIRCUIT CMP
existing layout with 1971 overlay

56701SK16
October 2013
1:6000 @ A3

RADLEY HOUSE PARTNERSHIP

RADLE'f IOO-U5E„J STROA[J.,':!'Jlt E5TER SOOt:tHJ:
T:U1!.1Fl3 :1r!t: I':o)1'Jl t424a I!: Hoo:kJ IM<bOH Io.'huu…..:u.u- '•-' ' - - -
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Source - Brooklands Museum Archive.

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BROOKLANDS CONSERVATION AREA BOUNDARY

0 100 200 300 400 500
metres

BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP
Existing layout with 1931 partial overlay

56701 SK17
October 2013
1:6000 @AS

RADLEY HOUSE PARTNERSHIP

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A4 Characterisation Maps

A4.1 The following series of drawings (5670/CAS1-5) have been prepared to graphically illustrate the principal areas of risk and concern identified within each of the Characterisation Areas during the preparation of the Plan and should be read in conjunction with Chapter 5 – Risks and Opportunities. Drawing 5670/SK2 is bound to this document, with the remainder being separate to the Plan.

A4.2	5670/SK2	Existing Layout with Characterisation Areas	1:6000 @ A3
	5670/CAS1	Character Area Survey Sheet 1: The Dell; Brooklands Museum & JTI UK	1:1250 @ A2
	5670/CAS2	Character Area Survey Sheet 2: The Heights	1:1250 @ A2
	5670/CAS3	Character Area Survey Sheet 3: Mercedes-Benz	1:2000 @ A2
	5670/CAS4	Character Area Survey Sheet 4: Light Industrial & Retail Units	1:2000 @ A2
	5670/CAS5	Character Area Survey Sheet 5: Brooklands Community Park & Residential	1:2000 @ A2

THE DELL

BROOKLANDS MUSEUM

MERCEDEZ-BENZ WORLD

JTI UK

THE HEIGHTS

RESIDENTIAL

BROOKLANDS COMMUNITY PARK

LIGHT INDUSTRIAL AND RETAIL UNITS

BROOKLANDS CONSERVATION AREA BOUNDARY

NOTE: Base Map Data provided by Elmbridge Borough Council -2013

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BROOKLANDS AERODROME & MOTOR RACING CIRCUIT CMP
Existing layout with Characterisation Areas

5670{ SK2
October 2013
1:0000 @ AI

RADLEY HOUSE PARTNERSHIP

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