

Case Name: Columbine Hangar, former Columbine Works, East Cowes

Case Number: 1431769

Background

Historic England has been asked to consider this building for listing.

Asset(s) under Assessment

Facts about the asset(s) can be found in the Annex(es) to this report.

Annex	List Entry Number	Name	Heritage Category	HE Recommendation
1	1433372	Columbine Hangar at the former Columbine Works	Listing	Do not add to List

Visits

None: Data from other sources.

Context

The applicant has raised concerns that the Columbine hangar is to be demolished as part of Red Funnel Ferries proposals for a new ferry terminal. While there is an extant outline planning permission for the building's demolition (reference P/00027/06) this is not connected with the Red Funnel proposals: we have confirmed that the hangar is outside of that proposed development area. The owner's agent has also confirmed that there are currently no plans for its demolition, and the building remains in active use.

Since we began our listing assessment a further planning application has been submitted to the Isle of Wight Council (reference P/00941/16) which proposes alterations and change of use of parts of the hangar and neighbouring buildings including the Promenade Building to provide marina and hotel facilities. This application is due for determination in October 2016 and therefore an early listing decision would be helpful. We are in receipt of a detailed report, prepared by Montagu Evans on behalf of the owner, which concludes that the building is not listable.

The hangar was added the Isle of Wight Local List of Buildings, Structures, Parks and Gardens of Special Local Archaeological or Historic Interest on the 22 April 2007.

PREVIOUS LISTING ADVICE

The hangar was first assessed for listing in 2002 (when we recommended, and the Department for Culture, Media and Sport agreed, that it was not listable). Our 2002 advice was very brief, as was the form at that time. It is clear that we were aware of the historic ownership of the factory, the construction of flying boats here during the war, and the subsequent development and manufacture of the SRN1. The lack of any modifications to the fabric of the building for the hovercraft was noted, and alterations to the building from its original form were also recorded. The advice concluded 'The recommendation [not to list] has been made in the light of the relatively limited evidence available, which is that the historic interest is insufficiently related to the surviving fabric to justify listing.'

In January 2003 a further application was considered but it was felt that no new information to warrant a re-assessment had been supplied. The same points as previously - the alterations from the original form and that the 'building's historic interest is insufficiently related to the surviving fabric to justify listing' - were again stressed.

However, following the closure of the site and the local concern that resulted, a full assessment of the building was undertaken in July 2003 and on this occasion a site visit and more fulsome report were

produced. This report opined that the architectural interest was confined to one elevation (the west one) and further expanded on the degree of alteration the building had experienced. It concluded that 'the historical case is quite strong, the architectural case less so.' Our advice continued that 'nationally, very few aircraft factories are presently designated. Those that are listed tend, in the main, to be very early, of the First World War epoch or before' (citing Iron Yard, Cowes of 1912-13). The scarcity of inter-war seaplane sites was stressed. A further 'not listable' outcome resulted.

Assessment

CONSULTATION

Our consultation report was sent to the owner's agent, the applicant, the local planning authority, the Isle of Wight Historic Environment Record (HER) and various interested parties.

The owner's agent - Montagu Evans - had already submitted a report on the building at the start of the listing assessment process. Montagu Evans sent a further letter and supporting information at consultation stage. This suggested some minor alterations to the consultation report, in particular providing information which clarified the date of internal cranes and lighting. The History and Details have been amended where appropriate.

The applicant provided some detailed comments and additional supporting information in the form of additional photographs and a site plan. These are all attached to the case. Further evidence for the historic significance of the site in the context of marine aviation was provided. Comment was made on: the rarity of purpose-built waterside factories for the manufacture and launch of marine aircraft, including reference to comparators; the significance of Boulton and Paul as an aircraft manufacturer was also stated [this fact was already included in our consultation report]; photographic evidence included the SRN1 in the course of assembly and the significance of this vessel was stressed, and the scale of the building was stressed relative to what was manufactured here. In addition the applicant felt that the architectural treatment of the west front had been played down in our consultation report.

HE RESPONSE: the consultation report is a factual description of the building and a summary history only. Historic England's assessment of the architectural qualities of a building are covered in the Discussion section (see below).

The applicant also felt that the role and significance of this building has been underplayed in the assessment and required further investigation, and also raised the question as to whether other buildings on the site should also be investigated.

HE RESPONSE: again we would respond that we do not assess a building in the Consultation Report but rather set out the facts of the case. Any assessment comes in the Discussion part of our advice. In terms of the scope of our assessment we were specifically asked to consider the Columbine hangar for listing and this is the focus of our assessment. We did undertake a rapid review of other buildings on the site at an early stage and at that time had no evidence to suggest that they might merit assessment also. The applicant, or indeed any member of the public, is of course at liberty to apply for any buildings to be listed and any such applications would be assessed on their own merits.

The Council for British Archaeology wrote in support of listing the building citing that: it was one of few extant inter-war manufactories; that it is a good, large example of a Boulton & Paul hangar of which few survive; that it is a rare survival of a seaplane and hovercraft manufacturing site with its waterfront context; its physical form reflecting its function; aesthetic value with an architect's input and deliberate Art Deco elements - designed to be a feature of the Solent - and more latterly the addition of the Union Jack Flag, and its very high historic associative value as the site of the manufacture of the world's first hovercraft. The CBA also provided a copy of an additional article about the hangar in 'Flight' magazine of 7 May 1936. We had already referenced an article in the same magazine from August 1936 and the additional article has been helpful in further confirming the original form and appearance of the hangar; minor amendments have therefore been made to the History and Details where appropriate.

The HER officer thanked us for consulting them and confirmed that they did not hold much information on this building but provided a copy of the HER report. The Principal Conservation Officer for the local planning authority also responded with thanks and made reference to the previous decision not to list and therefore, on the assumption that pertinent facts had been previously considered, presumed that the same outcome was likely. He stated that 'the building is cherished locally because of the presence of the Union Jack doors which have become iconic but I understand that this itself is unlikely to present a realistic reason to include on the statutory list.'

An interested party wrote to express concern about proposals for change in this area of Cowes and stated her support for the listing of the hangar.

DISCUSSION

The overarching principles for assessing whether a building merits inclusion on the List are whether it possesses special architectural and/or historic interest ('Principles of Selection for Listing Buildings', DCMS March 2010). Special architectural interest can include technological interest claims in a national context. Of particular relevance in this case is the definition of historic interest: 'To be of special historic interest a building must illustrate important aspects of the nation's social, economic, cultural, or military history and/or have close historical associations with nationally important people. There should be normally be some quality of interest in the physical fabric of the building itself to justify the statutory protection afforded by listing.' The age of a building is also a factor as for those constructed after 1840 progressively greater selection is necessary given the much larger numbers built and surviving. Further guidance can be found in Historic England's Listing Selection Guides, the most relevant in this case being Industrial Structures (April 2011). This gives examples of listed buildings which are associated with aircraft manufacture but also makes it clear that 'Often, however, remarkable vehicles have been produced in unremarkable premises and the listing of the latter is not likely to be warranted.' Buildings associated with flight are also referenced in the Transport and Military Selection Guides. An additional consideration in this case is that the Columbine hangar has been considered for listing before and that a decision has been taken that it is not listable. In order for a contrary view to be reached there must be new evidence available that was not considered as part of the assessment in 2002 and 2003.

HISTORIC INTEREST

As our History summarises, the Columbine hangar has seen major advances in plane, hovercraft and rocket design and manufacture under Saunders-Roe Ltd and the significance of this company is not in dispute. These included the 1947 SRA1 (the first jet-propelled seaplane) and the Princess (the world's largest metal flying boat; a transatlantic passenger plane which had its maiden flight in 1952). This was a massive plane with a hull 150 feet long and the scale of the Columbine hangar was able to accommodate the manufacture of three such hulls at the same time. The 1950s also saw the design and manufacture of experimental jet fighters; the Black Night rocket (a rocket to test the re-entry heads of missiles - such as for the Blue Streak missile programme - into the earth's atmosphere) which was test-fired at the firm's facility at High Down at The Needles, Isle of Wight (a scheduled monument). Perhaps most significantly of all the world's first hovercraft (the SRN1 or Saunders-Roe Nautical 1; of 1959) was designed and built here. These are major and significant developments in marine, aeronautical and aerospace designs in a national context: the innovatory research and development that has taken place in this building is not in dispute, however, to merit listing this historic interest must be manifest in the fabric and there is no evidence to suggest that this is the case. The hangar was built for Saunders-Roe in the 1930s and not purpose-built for any of these nationally and internationally significant craft. While we now have more fulsome information as to what was built here, the primary planes/vessels were all known about at the time of the previous listing assessment. There is no physical manifestation of this research, development and manufacturing work within the fabric of the building other than the large span required to accommodate large craft. Space however is a common factor in hangar design and this alone is an insufficient claim to special historic interest in a national context.

ARCHITECTURAL INTEREST & INTACTNESS

We must therefore turn to the building's architectural interest claims. It is acknowledged that the hangar is unusual in having some decoration to its showcase facade but this information was again known at the time of the previous listing assessment. As part of the current assessment Historic England commissioned some supporting research from a specialist in steel construction and from this we have confirmed that the steel frame and roof span, while impressive in its scale, is not technologically innovative. The hangar has been subject to a further inspection (described in our Details section) and it is clear that the building has been subject to alteration. This is most marked on the principal facade where the pattern of fenestration and doorways either side of the large sliding doors has been changed from the original. There is again no disputing the presence that this hangar has in terms of its riverside position and when on the approach to the Isle of Wight on the ferry. This is enhanced by the Union Jack doors which are understood to have been painted in this manner for the Silver Jubilee and then refreshed for the 2012 Olympics. However, a building's visibility and local appreciation do not equate to special architectural interest in a national context. Internally we have long known that the galleries to the north and south were once open to the erecting shop but have more recently been walled up. Further modernisation of some of the 'back room' spaces to create offices (particularly to the north and east of the erecting shop) have further eroded its original character. However, despite these alterations the building remains legible in terms of its original form and function and derives added interest from the retention of its riverside apron which was always an important additional working and

erecting area for the factory. We consider this to be of strong local, rather than national interest however, given the lack of innovation and degree of alteration which the building has undergone.

COMPARATORS

The Columbine hangar is a factory hangar and specifically a seaplane factory hangar. Our previous listing advice considered a number of other near contemporary hangars as part of the assessment. One such comparison - with the showcase airport hangars with Deco detailing at Speke airport, Liverpool - is not a fair one as a commercial airport is a very different site-type to a factory; the only similarity being that there is some deliberate decoration in both instances. There is a clear Solent-area flying boat history which is manifest in sites such as the First World War seaplane sheds at HMS Daedalus, Lee-on-Solent (circa 1917-18; Grade II; an RNAS and then RAF training base) and the group of pre-First World War and First World War seaplane hangars at Calshot (all Grade II*; Calshot Naval Air Station was opened by the Royal Flying Corps in March 1913 and was initially an experimental station before becoming a training and operational station (protecting shipping) during the First World War). These are of course significantly earlier than the Columbine example and were not factory hangars despite some limited research and development work at Calshot.

There is no comparable site in the UK possessing such a rich association with the development and manufacture of flying boats and survival rates are very low: the Shorts factory in Rochester, Kent, for example, is long gone, as is the Supermarine Works at Woolston, Southampton which was destroyed by enemy bombing during the Second World War. The aforementioned Iron Yard, Cowes (circa 1912-13, Grade II) is included on the List as a very early seaplane factory, as is the Hythe hangar, Hythe and Dibden, Hampshire (1917-18; Grade II), built for the construction of RNAS flying boats during the First World War. It was listed for its design and structural interest (an important development in hangar design attributable to the notable architect Sir Frank Baines) and for its historic interest in the production of flying boats such as Southamptons, Supermarine Seagulls and Walruses. There are no inter-war seaplane factories currently on the List.

There are of course other civilian hangars that have been used for the manufacture of aircraft on the List and our previous advice cites some of these. They include: the former Sopwith/Hawker factory in Kingston-upon-Thames, Surrey (1913 onwards; Grade II) which is probably the oldest purpose-built aeroplane factory in the country with strong claims to historical importance for the aircraft designed and built here such as the Sopwith Camel, Hawker Fury and Hawker Hurricane; the Bellman hangar for Vickers-Armstrong at Brooklands, Surrey (1940; Grade II) built for Wellington bombers and listed as part of an outstanding aviation/motor racing ensemble, and some of the buildings of the former de Havilland works at Hatfield, Hertfordshire from 1934 (Grade II and II*) are also listed, the hangar for its structural interest and having been built for the de Havilland Comet. The fundamental differences between all of these buildings and the Columbine hangar is that their claims to architectural interest are strong in each case and at Brooklands and Hatfield the hangars were built specifically for the significant aeroplanes and for which they possess claims to special historic interest.

Aircraft production hangars are quite individualistic in their designs and few have been protected through listing. Those that have are of strong architectural/technological interest and possess clear special historic interest. While Columbine's place in national aviation history is clear, unlike listed comparators it does not have the same level of architectural interest, or strong association between the building and the key craft manufactured here to merit listing.

SUMMARY

Columbine hangar is a prominent building on the Cowes waterfront and a site of undisputed historical significance but that interest is not manifest in the fabric of the building: the hangar was not built directly for, nor significantly modified for, the manufacture of its most famous products and thus claims to special historic interest are not sustained.

It is clear that this is a rare building type nationally, however architecturally, despite some positive features, it lacks technological interest and is also altered. The hangar is clearly of very strong local interest, and is rightly included on the Isle of Wight Local List, but does not merit listing in a national context.

CONCLUSION

The Columbine hangar has been assessed for listing on previous occasions and the Department for Culture, Media and Sport has determined that it is not listable. We have reassessed this building given development pressures in this part of Cowes and latterly proposals for alteration to the hangar itself. While we have more detail in some respects than previously, there is no substantive new information which would allow a contrary view to be taken than previously. Therefore the Columbine hangar is not recommended for listing.

REASONS FOR DESIGNATION DECISION

The Columbine hangar, a seaplane erecting shop designed in May 1935 by the architect Albert Victor Heal for Saunders-Roe Ltd, is not recommended for listing for the following principal reason:

* Lack of substantive new information: no substantive new information has been provided which would lead to a contrary view to the previous recommendations and decisions not to list. The hangar does not possess special architectural or historic interest.

Countersigning comments:

Agreed
Emily Gee
27 September 2016

Annex 1

Factual Details

Name: Columbine Hangar at the former Columbine Works

Location: Columbine Works, East Cowes, Isle of Wight,

County	District	District Type	Parish
	Isle of Wight	Unitary Authority	East Cowes

History

The site which was to become the Columbine Works was acquired by Sam Saunders (formerly a boatbuilder based on the River Thames at Goring, Berkshire) in 1906. Initially working on fast boats the firm soon began to design and manufacture seaplanes occupying a number of sites on the Isle of Wight. In 1929 A V Roe purchased a majority share in the firm - which was thereafter known as Saunders-Roe Ltd – and this led to further expansion including the building in 1935 of the hangar under assessment here.

An article in 'Flight' magazine (7 May 1936) provides useful detail on the internal arrangements although the compass points are not accurate as there is no West Gallery, the W side being the main river-facing façade: 'On the ground floor under the East Gallery are assembly fitting operations, mechanical testing department equipped with modern test instruments. Under the West Gallery are Dope and Covering Shops of ample dimensions for large wing components. On the East Gallery is the sheet metal working department and liquid fuel and oil tanks, fairings [an external metal or plastic structure to increase streamlining], wing tip floats and stowage fittings in course of manufacture are in evidence. On the West Gallery are accommodated the sewing room with the latest machines, and also the metal wing assembly. The office block of three floors houses on the first floor the Aeronautical Inspection Bureau. On the ground floor there are the finished part store and the free issue or bonded store. The second floor is devoted to the mould loft, lecture and school room, and the parachute assembly department.' The plans of the proposed building in the Isle of Wight Record Office also label the apron outside of the hangar as 'erecting ground' indicating that this was also an integral part of the factory.

The history and significance of Saunders-Roe Ltd is outside the scope of this report so some significant milestones only are mentioned briefly below. The first aircraft to be manufactured at the Columbine Works was the A.27 London which was designed in response to an Air Ministry specification for a 'General Purpose Open Sea Patrol Flying Boat'. This and the contemporary Supermarine Stanraer were the last multi-engine bi-plane flying boats used by the RAF. Thirty-one A.27s were built between 1936 and 1938 and in the early years of the Second World War they were used to patrol the North Sea and Mediterranean. During the Second World War the company manufactured a number of different planes including their own Lerwick and London seaplanes but also other firm's designs such as Supermarine's Walrus. Subsequent planes and vessels built in the factory are well documented including the 1947 SRA1 (the first jet-propelled seaplane) and the Princess (the world's largest metal flying boat; a transatlantic passenger plane which had its maiden flight in 1952). The 1950s also saw: the design and manufacture of experimental jet fighters; the Black Night rocket (a rocket to test the re-entry heads of missiles such as for the Blue Streak missile programme into the earth's atmosphere) which was test-fired at the firm's facility at High Down at The Needles, Isle of Wight (a scheduled monument: National Heritage List for England 1422839), and also the world's first hovercraft (the SRN1 or Saunders-Roe Nautical 1; of 1959). Westland acquired the Columbine Works in 1959 and continued to manufacture hovercraft here and, from 1966, while still owned by Westland, it was run by the British Hovercraft Corporation. In 1994 the site was bought by GKN and for some years built high tech components for the aerospace industry (under the name GKN Westland Aerospace Ltd) until the works closed in 2003 and were sold to SEEDA. The site is currently (2016) owned by the Homes and Communities Agency and let to boat-building tenants.

A Victor Heal, the head of the architectural firm of Victor Heal & Partners, has no buildings designed wholly by him on the National Heritage List for England although in 1931-2 he completed the west end of the former Church of St Mark, now the New Peckham Mosque, which had been built by Norman Shaw in 1879-80 (Grade II).

Thomas Lacey Bonstow, the structural engineer, was both a member of English and American professional bodies.

Boulton & Paul Ltd, the firm which erected the hangar, is of interest not only as a builder of aircraft/aerodrome buildings but also as a manufacturer of some repute of both civilian and military aircraft (although it is acknowledged that the two arms of the firm operated independently).

Much of the steelwork bears the rolling mark of Dorman Long, the era's largest supplier, although some is known to have come from a different north-eastern company: Appleby-Frodingham.

The Columbine hangar is colloquially known as the 'Union Jack hangar' after the large Union Jack painted on the hangar's doors. This is understood to have been added in 1977 for the Queen's Silver Jubilee and then repainted for the 2012 Olympics.

Details

Seaplane hangar, designed in May 1935 by the architect Albert Victor Heal (1887-1975), of Victor Heal and Partners, and the structural engineer Thomas Lacey Bonstow (1877-1975) for Saunders-Roe Ltd at their Columbine Works, Isle of Wight. The building was erected by the firm Boulton & Paul Ltd.

MATERIALS: a steel-framed hangar (the principal members being high tensile steel to reduce the weight on the foundations) with brick and concrete cladding/infill which is rendered. Steel-framed hangar doors with corrugated metal sheet coverings. The foundations are pre-cast reinforced concrete piles. The floor is also of reinforced concrete.

PLAN: the hangar is almost square in plan with the erecting shop occupying much of its footprint. Its main frontage faces W onto the River Medina (where there is a substantial reinforced concrete apron - extended from its original size - and a modern slipway into the river). To the N, E and S of the erecting shop are ranges of three-storey offices, those to the N and S are flat-roofed and that to the E is hipped. The offices are entered through a canted bay at the NE corner. At the NW corner of the hangar is the Promenade Building, an attached two-storey range of offices under a pitched roof; this pre-dates the hangar and is shown on the Ordnance Survey map of 1898.

EXTERIOR: the principal elevation of the hangar is to the W. The six massive sliding doors (each weighing 5 tons) are of the vertical type which run on rails and are arranged so that separate leaves can be moved independently in a parallel plane. The doors are boldly painted with a massive Union Jack (added in 1977 and repainted in 2012). The doors are flanked by the end bays of the office ranges which have five four-paned windows to the first and second floors (one to the right has been blocked and an extractor fan inserted) and on the ground floor to the left of the hangar doors are largely small square windows (modern replacements) and three further four-paned windows and a sliding door to the right. All of the windows are modern uPVC units and the pattern of fenestration is not original either as a view of the main frontage in Flight magazine (August 1936) shows large loading bay doors to the ground floor and a single row of multi-paned windows above. White tile detailing has been applied at ground floor level, to some window cills and flanking the hangar doors, and the building terminates at the corners in Art Deco pylons (which used to support flagpoles) with curved horizontal banding: these project forward of the building line and above the segmental-arched roof profile. A modern sign for 'Venture Quays' and a temporary sign associated with the Redjet 6 catamaran has been added at the apex of the roof (originally here was 'Saunders-Roe' with their winged badge above).

The N elevation is of three storeys stepping up to the NW pylon to the right and also stepping up at the NE corner where the three-storey canted entrance bay is of greater height. The ranks of glazed windows (all the frames are modern replacements) give this office range a strongly horizontal aesthetic. The same is true of the E elevation, also of three storeys but taller than the N range where the ranks of windows are again modern replacements. At the SE corner is a pedestrian doorway with an Art Deco doorcase. The hipped roof appears newly clad. The canted bay at the NE corner forms the modernised entrance to the complex where there is a date plaque of '1935' between the ground and first floor.

The S elevation is largely hidden by the neighbouring building, which is built right up against the Columbine hangar, other than at the SE and SW corners. At the former the pattern of horizontal fenestration continues. However at the SW corner can be seen a modern replacement window at second floor level and a fire escape which links the second and ground floors with a ladder providing access from the second floor to the roof.

The attached NW office block is brick built on its S elevation other than a small area of stone at the ground floor. The upper floor is partly clad in timber board and slightly overhangs on the N elevation where it is

evident that much of the building is raised on piers. Windows and doors are all modern replacements. The pitched roof is tiled.

INTERIOR: what are now offices (the hangar was originally flanked by workshops, drawing offices, other offices etc) in the NW attached block and the N and E ranges have been part re-configured, fully modernised and contain no features of note. The former range to the S is partly unused and here the construction of the building can be more readily appreciated including the brick and concrete infill panels, the steel-frame and trusses.

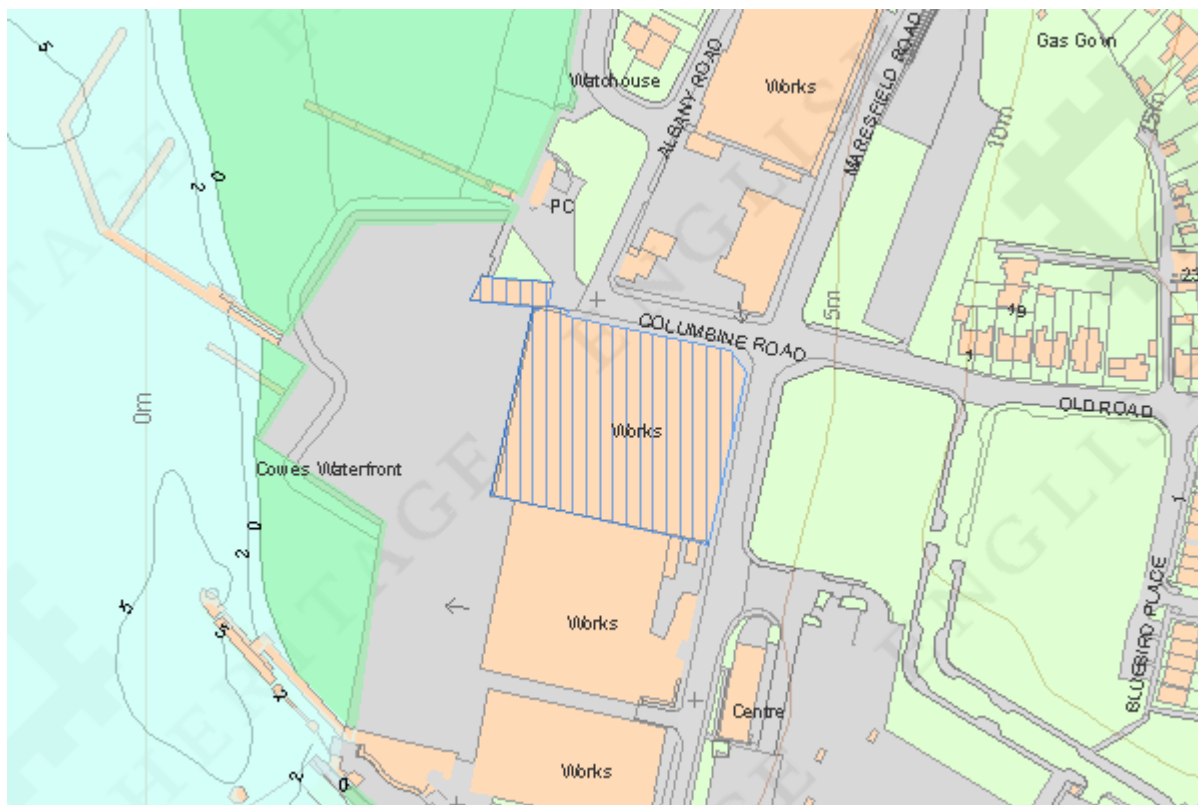
The principal space is the massive erecting shop which is 200ft x 150ft (60m x 40m). When built the roof span was approaching the upper limits for most European hangars. This said the steel roof trusses (there are 16 bays) are not innovatory; nor is their general arrangement (which comprises a series of rigid portal frames). The trusses are a hybrid of Warren and Pratt forms (which originated in North American bridge building in the mid-C19) both of which were commonly used in the C20 particularly for spanning wide spaces.

The interior of the hangar retains a number of original features but also some additions, such as the mini cranes, and the large overhead crane which is a late C20/early C21 introduction and is independent of the 1930s structure. Lighting is a mixture of what appear to be original 'Osira' electric lights (which allowed the factory to operate through the night) and more recent replacements.

Selected Sources

Books and journals

'The New Flying-boat Works of Saunders-Roe Ltd at East Cowes, Isle of Wight' in *Flight*, (7 May 1936), no page numbers

Map**National Grid Reference: SZ5023595858**

© Crown Copyright and database right 2015. All rights reserved. Ordnance Survey Licence number 100024900.

The above map is for quick reference purposes only and may not be to scale. For a copy of the full scale map, please see the attached PDF - 1433372_1.pdf