

Warblington School – Heritage Statement

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Revision P2



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On behalf of:

Hampshire County Council Children's services

P1	Listed building Application	05/01/2021
P2	Listed building Application, updated proposals	28/01/2021

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1.0 Assessment of Heritage Significance

1.1 Introduction

Warblington School was originally constructed in 1955-56 and lies in the Warblington area of Havant. The school is situated opposite Warblington railway station, toward the east of Havant.

The retained original buildings on the site suffer from overheating and poor levels of insulation and ventilation. In 2016 planning permission was granted to HCC for a major recladding project, Phases 1 and 2 of which were completed on buildings to the north of the site, including the School Hall, Kitchen and Staff Room areas. The planning permission expired on 11 July 2019.

Prior to the commencement of the planned Phases 3 onwards, the BACS constructed two storey science block and three storey classroom block, single story maths block and reception were added to The National Heritage List for England (NHLE) as a Grade II designation, primarily due to them being a rare surviving example of the BAC typology, comprising an innovative construction and façade system.

Given that the listing description places distinct emphasis on the significance of the external façade, any proposals to mitigate the environmental issues need to demonstrate either retention of that façade or provide an exceptionally high level of justification for its removal. Therefore, the recladding system that had already been commenced on the site (and across other Hampshire Schools) is not considered to be a viable option for the listed buildings at Warblington.

In order to mitigate the internal environmental problems, it is proposed to make the required improvements to the listed buildings, whilst retaining the original BAC façade. The initial phase of these proposals entails replacement of the existing single glazing with new double glazed units.

This document has been prepared by the Historic Buildings Group in Hampshire County Council Property Services to accompany a listed building application for the reglazing works. The Statement focuses on understanding the heritage significance of the building and site and considers the impact of and justification for the proposals.

1.2 Heritage Description

Warblington School is located in the Warblington area of Havant in Hampshire. The school is situated toward the East of Havant on the Hampshire and West Sussex border serving the surrounding area.

To the north runs the main railway line to Chichester with mixed housing and light business units on the opposite side of the track. To the East is residential housing along Southleigh Road and to the South is mixed size residential housing backing onto the school grounds. To the west is located The Bloor's disposal site, currently being developed for future housing.



Fig 1: Aerial Photograph of the School Site.

1.2.1 Historic England Listing

Overview

Heritage Category: Listed Building

Grade: II

List Entry Number: 1459138

Date first listed: 27-Jun-2019

Location Description: Statutory Address: Southleigh Road, Havant, Hampshire, PO9 2RR

Summary:

Secondary school, 1955-6 by Richard Sheppard and Geoffrey Robson with the assistance of the Hampshire County Architects Department.

Reasons for Designation:

Warblington School, a secondary school of 1955-6 by Richard Sheppard and Geoffrey Robson with the assistance of the Hampshire County Architects Department (comprising the 1955-6 buildings; three-storey classroom block, two-storey science block, single-storey maths unit and single-storey reception hall) is listed at Grade II for the following principal reasons:

Architectural interest: * for its use of the innovative single-storey BAC, and multi-storey BAC II aluminium systems; * as a rare survivor of a BAC-type secondary school; * for the characteristic highly-glazed elevations that express the light-weight structure and have distinctive corrugated panels. Historic Interest: * as an illustrator of the post-war drive to build new secondary schools for an uprooted and rapidly expanding population, using innovative materials and skills originally developed for military purposes.

History:

Warblington Secondary School was built in 1955-56, and was designed by Richard Sheppard and Geoffrey Robson, who were, respectively, engineers at the Bristol Aeroplane Company (Housing) LTD (BAC) and the Northern Aluminium Company (NAC), Banbury, Oxfordshire. They were assisted by the Hampshire County Council Architects Department. At the end of the Second World War, the British aircraft industry had to diversify into peacetime business operations. A group of companies in the South West formed the Aircraft Industries Research Organisation for Housing, however, more successful were the BAC experiments in building schools, which as larger buildings, were more suited to factory production. In 1947 BAC's housing division retained Sheppard to design an aluminium system for school buildings, alongside Robson from the NAC. Sheppard had earlier displayed an interest in prefabrication, publishing 'Prefabrication in Building' during 1946. Together, they designed a primary school, and the prototype was constructed at Romney Avenue, Bristol (1948, demolished). Examples were shipped around the world, and a few survive in Britain, mainly in the West Country. In parallel, using its own architects, the Ministry of

Education developed a BAC based, single-storey school design, of which Limbrick Wood, Coventry (1951-2, listed Grade II) is an early example. In the 1950s the pressure to build moved to larger secondary schools. The challenge was to push the BAC system (through the introduction of a steel frame) to two, or even three storeys. To meet development plan targets and provide secondary school places, the Government signed a five-year contract with BAC in 1953. Lyng Hall Comprehensive School for Girls in Coventry (Ministry of Education Development Group, 1953-5, demolished) and Whitley Abbey (City of Coventry Architects Department, first phase 1953-5, demolished) were the prototypes for the BAC Mark II, which was a further evolution, enabling structures of up to four storeys. The structural steel frame was introduced to resolve the attendant issues of daylighting, wind-loading and fireproofing. Warblington was one of 14 new schools, built to serve the rapidly expanding urban district of Havant and Waterlooville, Hampshire. Land was bought at Warblington for a secondary school before the war, but the required population pressure only became acute when work started on Leigh Park, a large 'overspill' housing development for families displaced from Portsmouth. A four-form entry, secondary modern school for 510 pupils aged between 11 and 16, was announced in March 1951 and revised to 680 places a year later. In November 1952, the council decided that owing to a heavy school-building programme and shortages of bricklayers, it should consider introducing prefabricated construction techniques for schools in its 1953/54 programme. Along with Lyng Hall, and Whitley Abbey, Warblington was one of the first schools to be conceived using BAC II, as it was designed in early 1953. However, it was not erected until 1955-6.

By the end of the 1950s it became clear that secondary schools demanded more variation and bespoke design than primary schools. In parallel, traditional construction once again became economically viable. Furthermore, the Korean War had once again generated demand for aircraft production, prompting BAC to discontinue development of the BAC II system.

Sheppard and Robson (as Sheppard, Robson and Partners) went on to specialise in educational buildings a number of which are listed including halls of residence for Imperial College, London, 1957-68 (National Heritage List for England (NHLE) reference 1263062), and Churchill College, Cambridge, 1960-64 (NHLE reference 1227706), both listed at Grade II.

At Warblington School, the original layout comprised of a symmetrical, three-storey classroom block, joined by a single-storey reception hall to a T-shaped wing containing a dining room, sports hall and kitchens. To the south, there was a detached L-plan science block of two storeys, with an attached single-storey maths block. In 1973 the school was extended to seven-form entry (i.e. seven classes per form) with a square practical block and new sports hall added to the west of the original buildings. In the later C20 there were a number of alterations: a new science block was built, and the three-storey classroom range and original science and maths blocks were joined by a single-storey structure. The original dining and sports halls have been refurbished, removing any visibility of BAC system components.

Details:

Secondary school, 1955-6 by Richard Sheppard and Geoffrey Robson with the assistance of the Hampshire County Architects Department.

MATERIALS AND STRUCTURE: the two and three-storey blocks are steel-framed with shallow-pitched roofs, and are clad in corrugated-aluminium sheeting, with regular site assembled aluminium-framed window units, above corrugated-aluminium spandrel panels. Openable windows were originally a pair of casements, and many of these still remain, however many have been replaced with top hung aluminium single glazed windows. The single-storey sections also appear to be constructed using prefabricated aluminium-framed units with corrugated-aluminium cladding. All have a concrete plinth and internal floors. In general the spandrel panels are coloured blue.

PLAN: the buildings comprise a three-storey classroom block aligned roughly north-south, connected by an axial corridor, to a single-storey reception hall to the north. The originally separate (now connected), two-storey science block is aligned east-west, and to the eastern end and wrapping round it, there is a single-storey block, which is now the maths unit. Within the multi-storey blocks, classrooms and laboratories are stacked above each other, with the staff room currently located on the ground floor rear of the three-storey classroom block. The three-storey classroom block has two stairwells (between the fourth-fifth, and 10-11th bays), which link the playground at the rear, to an axial corridor on each floor. The science block has a roughly-central, primary stairwell, which leads to a laboratory on each floor.

EXTERIOR: the three-storey classroom block has an exposed frame of 15 by six bays with wider outer bays on the long elevations. The elevations are symmetrical, and aside from the outer bays, and wider inner bays on the east elevation, have continuous fenestration across each elevation. Predominantly the building has corrugated-aluminium cladding, used in the spandrel panels and in vertical panels in the outer half bays, contrasting with aluminium storey-bands and gable ends of a narrower corrugated gauge. The road-facing eastern elevation has a three-bay centerpiece which remains recessed on the ground floor but is in-filled on the first floor with timber window units and spandrel panels, and probably also on the upper floor, which has flush spandrel panels. On the rear western elevation, the wider sixth and 10th bays have shallower window units. Windows are two-light, aluminium-framed units with a mix of fixed lights, side-hung and pivot-hung casements, and have corrugated-aluminium spandrel panels. The door units to the rear have been previously replaced. The roof is clad in corrugated metal sheeting and has over-sailing eaves. The single-storey reception hall which is attached to the north end of the three-storey classroom block, has walls formed of prefabricated units with integrated aluminium-framed windows, below a continuous fascia of corrugated-aluminium. The east-facing main elevation has clerestory windows off the slightly taller corridor which rises behind the front range of offices. On the rear western elevation, there is a set-back entrance at the south-west angle, supported on a slender outer shaft and lined in vertical corrugated-aluminium sheeting with a shallow corrugated-aluminium fascia, coloured blue. A number of window units have been replaced in a different pattern, and also, replacement door unit. The two-storey science block is similar in form and construction, to the three-storey block. It has 12 by six bays, with a wider bay accommodating the stairwell, and wide, blind panels in each end bay. Projecting from its eastern gable and extending south, there is a

single-storey maths block. The walls are prefabricated units with integrated aluminium-framed, single windows. Above, there is a continuous fascia in the narrower grade corrugated-aluminium, and below, corrugated-aluminium spandrel panels.

INTERIOR: the interiors are functional. The stairs are of masonry with plain, steel balustrades. The doors are generally flush-panelled, some with rectangular windows.

1.3 Existing Building Photographs



Fig 2: West Elevation of 3 Storey Block



Fig 3: NE corner of 3 Storey Block



Fig 4: Modern replacement window, with problematic restrictor – 3 Storey Block



Fig 5: Aluminium Mullion / Transom / Cill detail – 3 Storey Block

Show simple construction technique using standard screw fixed components.

The adjoining window is the modern anodised aluminium replacement window



Fig 6: Original opening light ironmongery– 3 Storey Block



Fig 7: External eaves level bracket– 3 Storey Block



Fig 8: Window / cladding junction - 2 Storey Block

LH window is original, RH window is a modern replacement



Fig 9: External elevation - 2 Storey Block



Fig 10: External hinge detail– 2 Storey Block



Fig 11: Original casement window, with modern window restrictors - 3 Storey Block



Fig 12: Elevation showing the quantity of modern top hung window replacement - 3 Storey Block



Fig 13: Closer image to show modern top hung window replacement - 3 Storey Block



Fig 14: Internal image to show modern top hung window replacement - 3 Storey Block

1.4 Development History

Plan extract from Historic England “Listing” website

Which indicates the listed retained original buildings.



1.4.1 Historical Evidence

Refer to the supporting document which includes the original drawings from the 1955 build, and subsequent developments on the site.

1.5 Summary Statement of Significance

- Evidential Value

Whilst many of the original side hung casement windows on the 3 storey building have been replaced with modern top hung windows the main elements of the BACS framing system remain intact. Overall therefore the evidential value externally is therefore considered to be high. Internally there are many areas of modern partitioning, new doors, ceiling and finishes and internally therefore the evidential value is considered to be low.

- Historical Value

As one of the very few remaining examples of the BAC type secondary school, and an illustration of the post-war drive to “build new secondary schools for an uprooted and rapidly expanding population, using innovative materials and skills originally developed for military purposes” the historic value of the Warblington Buildings is considered to be high.

- Aesthetic Value

The buildings retains a strong presence on the site, and the three storey building is the primary public elevation of the school. The highly-glazed elevations and extremely slender aluminium framing of the façade result in a delicate aesthetic. However in many areas modern alterations to the buildings have impacted on the clarity of the architecture, such as the addition of solid spandrel ventilation panels, ad-hoc service alterations and infill sections of elevation to the East side on first and second floors. The setting of the buildings has also been heavily impacted through surrounding developments on the school site. The aesthetic value is therefore considered to be moderate.

- Communal Value

The School buildings have played a key role in the local community since their construction and today form a large proportion of the teaching accommodation on the site. The school is also an important amenity for the local area, and provides a location for community leisure, sport and learning. The Communal Value of the School is therefore considered to be high.

- Summary of significance

The architectural style of the remaining BACS buildings at Warblington is unique to the area, which ensures it remains prominent in this area of Havant. The building plays a pivotal role through its provision of secondary education in Havant, and coupled with its status as one of the few remaining examples of its type, the building is of considerable local significance.

2.0 Summary of Brief

The identified listed buildings at Warblington have several key environmental performance issues which impact on their ability to function adequately as teaching accommodation.

- Leaking façade system – Resulting in cold air ingress, rain ingress, and heating performance issues due to lack of general air tightness.
- Overheating (solar gain through windows)
- Overheating (solar gain through roof)
- Inadequate ventilation – Existing windows have minimal openable areas due to size and number of opening lights and opening restrictors.
- Underheating (lack of thermal performance to walls, glazing and roof and lack of airtightness generally)

The overall strategy behind the project is therefore to create enhancements to the buildings which will enable them to achieve compliance with overheating regulatory guidelines.

2.1 The Proposals

The buildings suffer from extremely low levels of thermal insulation. The façade system is formed of aluminium vertical box sections, with a very slender aluminium framed window component system.

Replacement glazing proposal:- Generally removal of the single glazing, by a process first removing the screw fixed beading, removal of the glass including the glazing compound, then fit replacement double glazed units in new compound and new internal matching glazing bead. Refer to drawing C09314-601 for details. The details show why it is necessary to replace the internal bead, which will have a similar appearance, but will have one shorter leg. It maybe possible to adapt the original bead, but this application seeks approval to either replace or adapt.

There are many top hung windows which are a previous modification. These windows are causing the most problems. They are poorly fitted, the hinges are twisted and the weather seals have perished. The approach to these windows will be a mix of repair and replacement, again refer to drawing C09314-601.

Other eye level openable windows are the original side hung casements fitted as a pair. These windows are arranged as a slave casement with top and bottom shoot bolts and a master casement with a cockspur. They also have friction restrictors. The proposal is to refurbish the windows so that the operators all function, which will include some replacement of the failed furniture with new equivalents.

The high level bottom hung windows are part of the original system and generally in good working order. The proposal is to clean and lubricate the hinges and the catches, with some replacement of any failed components.

2.2 Statement of Impact

Description of proposed works:

Removal of single glazing and replacement with double glazing.

Impact on Historic Fabric:

High. It is assumed that the majority of the single glazing is original.

Impact on setting of heritage asset

Negligible. The visual impact of the proposals will be minimal.

Overall impact on significance

Low. The glazing does not form a major factor in the significance of the façade, as it is standard 4mm float glass of a type in common use during the 1950's. As the key part of the significance of the building, the BAC's framing system will mostly remain as existing. Potentially albeit costly, this double-glazing proposal is reversible.

Extent of impact

High. There is a very high proportion of glazing to all elevations of both buildings, therefore the extent of the impact is high.

3.0 Justification and Mitigation

Improvements to the internal environment of the building will enable it to remain in use as a functional part of the school teaching accommodation. This will in turn, ensure it receives appropriate longer term maintenance funding, safeguarding its future condition. Mitigatory measures will include general repair works to the windows throughout. Running costs will also reduce by this proposal with an estimated 25% carbon saving.