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HERITAGE STATEMENT

WYTHENSHAWE BUS GARAGE, ROOF WORKS

REVISION	
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PROJECT REF.	2096

ARCHITECTURE + HERITAGE

AMAZON HOUSE • BRAZIL STREET

MANCHESTER • M1 3PW

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Image: Aerial view of site, taken prior to re-roofing works.

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1.0 INTRODUCTION

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This Heritage Statement has been produced by Atelier MB in July 2026. It supports a Listed Building Consent application for Wythenshawe Bus Garage, Bradnor Road, Sharston. It follows a previous repair and refurbishment application, which was approved in 2024 (137428/LO/2023).

Historical research has been undertaken at Manchester Transport Museum Archives and historical images are reproduced here with their kind permission.

This Heritage statement relates to specific elements included in this application only, a more comprehensive version formed part of the 2023 application.



Image: Inspection of internal faces of roof during works, 2025.



Image: Archive photograph showing site shortly after completion.

2.0 LOCATION + DESCRIPTION

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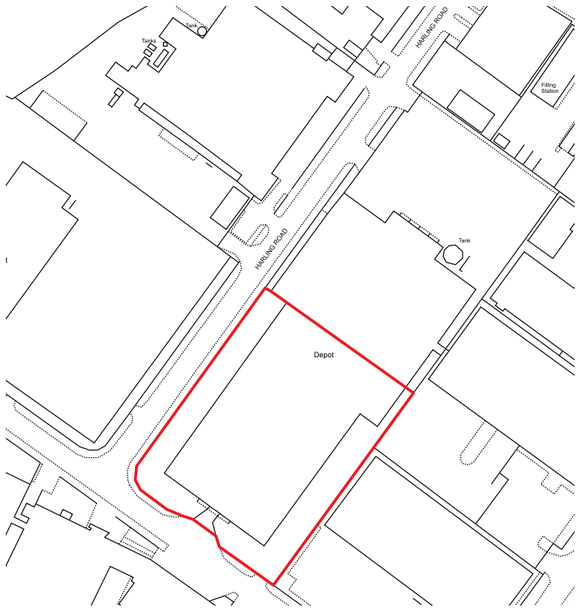


Image: Location plan with site edged red.

The site is on Bradnor Road and sits within the Sharston Industrial Area, to the east of Wythenshawe, which is itself to the south of Manchester city centre. The industrial area is roughly bounded by the Ring Road, Princess Parkway and the M56. Wythenshawe bus depot, originally known as Northenden bus garage, is a Grade II* listed building. An extract from the Historic England listing description is included here.

SJ88NW 698-1/11/11150 13-JUL-01
BRADNOR ROAD Wythenshawe (Northeast side)
Wythenshawe Bus Depot
II*
Former bus garage, now warehousing. 1939-42 by Manchester City Architect's Department, Chief Architect G Noel Hill; concrete structure devised by Messrs Chisarc and Shell D Ltd, consulting engineer H G Cousins. Reinforced concrete arched construction, with shell concrete barrel vaults incorporating central top lights of individual square prisms. The concrete arches in the garage have a span of 165 feet, a rise of approximately 42 feet, and are 42 feet apart; the thickness of the roof shell is 23/4 inches thick. Repair hall and washing bays to rear, now in separate occupation, are of rendered brick, with repair hall roof formed of seven longitudinal shell cylinders of 22'6" radius incorporating roof lights, with rigid end frames and deep edge beams, the central bay with expansion joints. Long strip glazing in side walls of main garage, with folding doors to front. The garage with accommodation for one hundred double- decker buses was planned to serve as a depot for the Manchester Corporation bus services to the Wythenshawe Housing Estate, but it was taken over by the Ministry of Aircraft Production immediately on completion in 1942 for the production of A V Roe's Lancaster aircraft.

It is one of the first reinforced concrete shell roof structures to be built in England. Chisarc and Shell D Ltd were the British patentees, but as the system was both innovatory and German they found few clients in the late 1930s. It is a smaller, but earlier and more daring shell roof than that at Bournemouth, and anticipates the better-known bus garage at Stockwell, LB Lambeth (II*). The late 1930s and early 1950s saw the building of very many bus garages as tram services gave way to buses, and shell construction was a very cheap way of achieving broad, uninterrupted spans. The general equations for shell domes and cylindrical shell roofs were first published in England in 1930, and again in August 1935. However, this was the pioneering example of the means of construction, and was widely influential in the years after the war when steel, timber and bricks were in short supply. Sources The Builder, 15 September 1939, p.437 Official Architecture, August 1939, pp.774-5 The Builder, 19 July 1946, pp.62-3 Architect and Building News, 26 July 1946, pp.54-5 Architects' Journal, 5 September 1946, pp.176-8 Concrete and Constructional Engineering, September 1946.
Listing NGR: SJ8303889374

3.0 HISTORY

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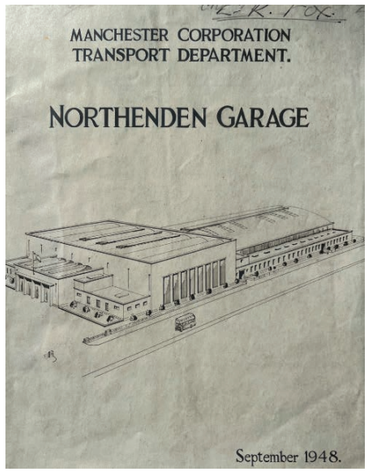


Image: Archive document showing artist impression of garage in 1948.

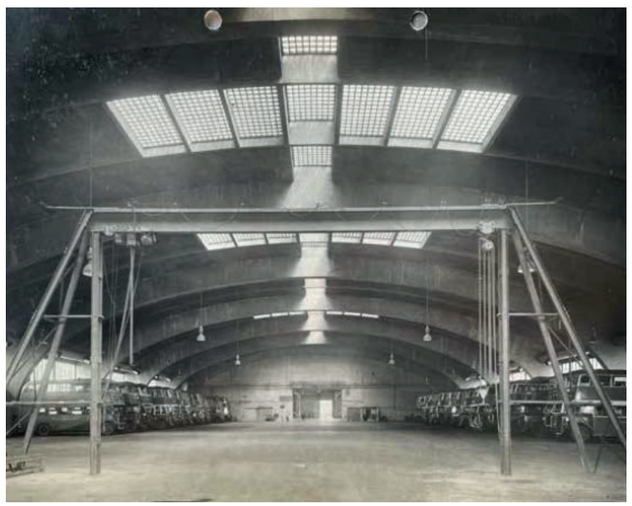


Image: Archive photograph, showing original glass blocks to rooflights, 1950s.

Approval to construct Northenden Motorbus Garage in Wythenshawe was given at the end of 1937 and construction began in early 1939. However, with the outbreak of war, some seven months later the garage was only partially built. Completion of construction was only made possible by its transfer of use in 1942 to A.V. Roe and Co. for the making of Lancaster bombers.

A portion of the front of the building was retained for buses with a garage workshop, mess room and offices. In January 1946, the building was handed back to the corporation and work continued to finish the offices and workshops.

Designed by the Manchester City Architects Department under G. Noel Hill, the building was originally to house 100 double decker buses. In reality, it held a significantly greater number and served as a main depot for South Manchester services and was known as the Northenden bus garage.

Northenden depot is widely acknowledged as a pioneering building of its type and an exemplar for many concrete shell structures to follow, including the Grade II* listed Stockwell Bus Garage (1952). Unlike the traditional use of metal or timber supports and brick construction, the design followed the new European influence for using concrete to cover massive areas, creating bespoke and large interior spaces.
The lack of supporting columns enabled large buses to move freely around the space and could contain a full range of services required to keep a busy fleet running. The buses running out of the Northenden depot covered 15,000 miles a day and carried 125,000 passengers.

Internally, the depot provided a garage and repair hall. A high-level ducting system provided heat and the natural light through the roof lights was supplemented by mercury vapour and tungsten lamps. The larger section of the building was used as the garage. Located along one side and behind internal kerbing, were rooms for fuel tanks, the boiler house, electric services room and a tyre store. To the opposite side were rooms for use by drivers and staff – billiards/ games room, dining room, kitchen, traffic office and ticket office (for bus staff not passengers). There were facilities for bus washing and radiator heating. The rear section functioned as a well-equipped repairs hall, with lit pits and sunken workshops. Storage and workshops for sheet metal workers, fitters and body makers were housed in rooms around the perimeter. When deregulation was brought in towards the end of the twentieth century, services were split between a number of private companies, each with their own garage or parking facilities and the vast depot at Sharston became obsolete. Now owned by Airport Parking and Hotels, the space is mainly used as long-stay car storage by passengers using Manchester Airport. The (now separated) rear of the depot is in use by freight company, Cardinal Maritime.

4.0 SIGNIFICANCE

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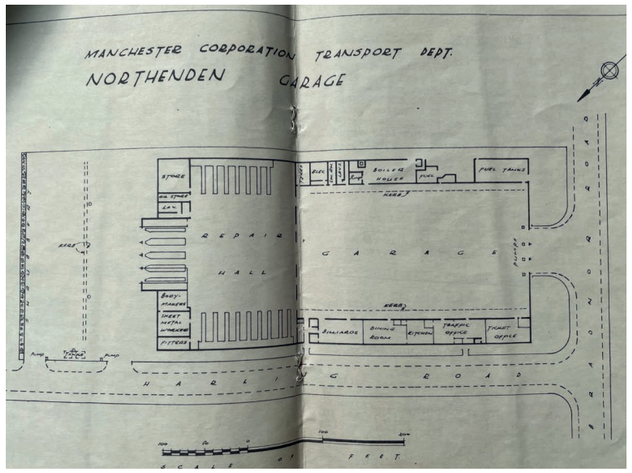


Image: Original plan.



Image: Detail of roof structure and rooflights.

The significance of the bus depot at Sharston is almost entirely due to its impressive concrete single-span roof and the cathedral like qualities of the internal space. At the time of its construction, the 165-foot roof span made it the largest of its type in the country. A contemporary pamphlet from the Greater Manchester Transport Museum archives states that, 'The garage is the only one of its kind in the world, the prototype, the Zehlendorf Garage in Berlin, having been destroyed in the war.' This rarity value, and the high-quality pioneering engineering give the bus depot a very high level of heritage significance, reflected in its Grade II* listed status. The space has undergone alteration and ad hoc repairs in places. The original single storey side wings have mostly been demolished – those to the Harling Road side were completely removed and only a small portion on the opposite side remains. Internally, the bus parking, or garage area, is much in its original form as a large, open-plan space, though fuel pumps are no longer in situ to the entrance. The rear section is now separated on a more permanent basis with the opening that linked the two sections bricked up. The changes and loss of original fabric has had a detrimental impact upon significance, but much of the main structure remains unaltered.

The volume of internal space is a highly significant feature of the building, being unusually vast in scale and a major contributor to its individual architectural character.

The concrete arches, spaced along the length of the garage have high significance as part of the unique design and as original fabric.

The concrete shell roof is of very high significance- in its innovative and influential design and structure, and as an original feature.

The roof lights were replaced in the 1970s, the original form being smaller glass blocks set in concrete. The replacements lack the detail and aesthetic qualities of the original, being patent glass on raised frames, though the presence of natural light through the glazed panels in the original opening dimensions remains a key characteristic of the space. Originally there were seven window panels across the centre of the roof. Two of these were later changed to incorporate metal louvres, probably when the windows were replaced in the 1970s. These retain original concrete framing but are of lower heritage significance.

5.0 PROPOSALS + IMPACT

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Background

At the time of the original application, the intention was to reinstate rooflights as closely as possible to their original design. Historic photographs, architectural drawings and contemporary accounts indicate that the roof originally incorporated glass blocks set within concrete along the upper slopes, and central spine. Although these panels were likely prefabricated, no direct evidence survives to confirm their construction or fixing method.

Prior to the Listed Building Consent application, access to the roof was restricted due to the condemned fall arrest system. Subsequent inspections have confirmed all original blocks have been removed and replaced with a patent glazing system comprising aluminium-framed Georgian wired glass, with some areas of polycarbonate sheeting. The openings which are closest to the central spine have a very shallow roof pitch and have been infilled with metal sheeting.

A 1970s newspaper article suggests the glass blocks were replaced to improve natural light levels. Whilst the accumulation of dirt/pollution and limited maintenance may have contributed to this decision, the scale and costs of replacement indicate other factors were involved- possibly deterioration leading to water ingress. Whatever the reason, it is clear that the original rooflights had been entirely removed and replaced with the current arrangement before the building was listed in 2001.

The condition of the replacement rooflights is now critical. Failures within the glazing system have resulted in panes falling from the roof, causing significant damage and exposing the building, its operations and its users to an unacceptable level of risk. The need for a comprehensive and lasting solution is now urgent.

Suppliers

There are very few specialist manufacturers with the expertise to replicate rooflights of this type. New Age Glass (Chichester) was engaged to assess the feasibility of reproducing the original glass block system and undertook a site visit during the concrete testing programme. Whilst their products initially appeared well suited to the project, concerns over access and structural loadings emerged after the inspection. Despite efforts to continue discussions, no further engagement was forthcoming, leaving the project without a specialist willing to pursue a solution.

Further approaches to specialist manufacturers in Europe have proved equally unsuccessful. No company has yet been found with the capability and willingness to reproduce and install a rooflight system matching the original design. As things stand, this option is not considered deliverable.

In the meantime, the existing patent glazing continues to deteriorate, posing an ongoing risk both to building users and the historic fabric. Failure of this system compromises the building's weatherproofing, accelerating deterioration of the highly significant concrete shell structure. Although the wider roof covering is being renewed, the rooflights remain a critical point of vulnerability and the most pressing conservation challenge facing the building.

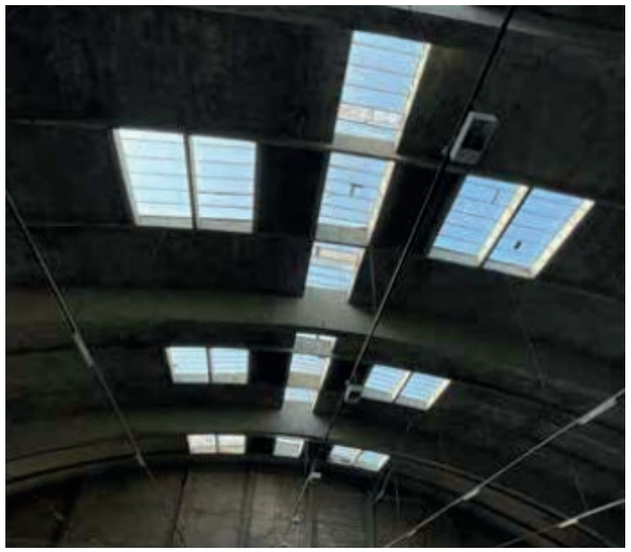


Image: Internal view of existing rooflights.

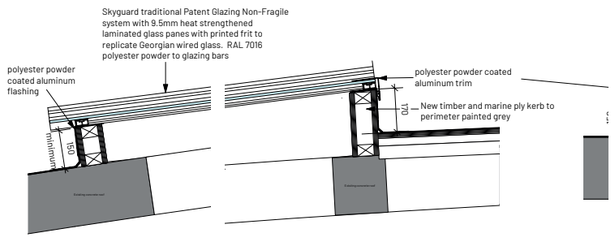


Image: Proposed detail of replacement rooflights.

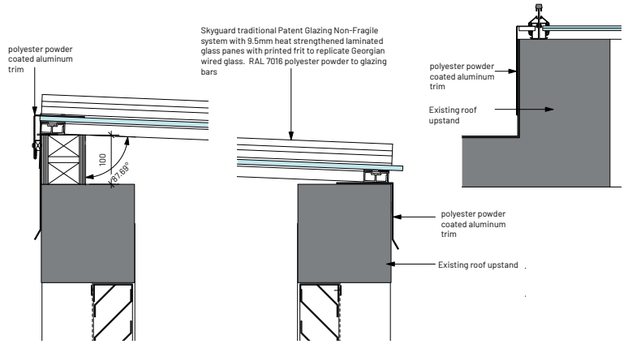


Image: Proposed detail of replacement rooflights.

Options

Given these constraints, the most appropriate course of action is replacement of the defective rooflights with a new patent glazing system. This is a pragmatic intervention, intended to secure weather-tightness and allow for continued safe operation of the building. It does not preclude the future reinstatement of a glass block solution should a technically feasible and conservation-appropriate design become achievable.

The option of reglazing within the existing framework has been carefully assessed and discounted. The existing system is outdated with untested components that do not meet current regulatory standards. Any attempt to reuse the structure would introduce unacceptable risks in relation to structural performance, safe installation, and long-term durability. Such an approach would be contrary to current health and safety requirements and would expose contractors and the building owner to significant legal and professional liability.

A replacement patent glazing system is considered to represent the most deliverable and least harmful option. It provides a practical means of protecting the significance of the Grade II* listed structure whilst ensuring its continued use, maintenance, and protection from further deterioration, in accordance with the overarching principles of sustainable conservation.

The following options have been considered:

1) A like-for-like fragile solution. Traditional patent glazing bars with similar sight lines to existing, supporting either Georgian wired glass or wired effect polycarbonate.
- A high-risk solution when considering ongoing access for maintenance/cleaning.

2) Non-fragile solution. Box bar patent glazing with polycarbonate panels.
- Will alter the appearance of the roof profile.

3) Like-for-like non-fragile solution. Traditional patent glazing bars with laminated glass panels with possibility to print a wired effect on glass.

Reproduces the visual appearance of historic glass and existing profile, with the benefit of long-term durability and damage resistance. In effect the roof will appear almost the same as it does now. Lower risk for maintenance and cleaning. Offers protection against future risk of damage and deterioration resulting from poor fabric.

Proposal: Careful removal of existing, non-original rooflights, including frames, to spine and upper slope of the roof. Replacement with Skyguard traditional patent glazing, non-fragile system, with 9.5mm heat strengthened laminated glass panes with printed frit to replicate Georgian wired glass. Anthracite polyester powder finish to glazing bars, grey painted internal face of timber/marine ply kerb which separates the new glazing system from the existing concrete roof.
Impact on significance: The proposals represent an enhancement to the existing situation, removing deteriorating and potentially unsafe fabric, substantially lowering the risk of further harm to significance. There will be limited and minor changes to appearance and profile, retaining much the same aesthetic as was present at the time of listing.
It is acknowledged that the ideal solution is historic re-instatement, but this is not a viable option at this point. The proposal is considered the only sensitive and viable alternative. The use of laminated glass is considered inkeeping and consideration has been given to appropriate finishes on both internal and external sides. The proposal is an enhancement to the current situation and does not represent harm to the significance. Should an alternative glass block system be identified in the future, these changes are reversible. There is a substantial benefit to the long term protection of the building without drastic alteration to its existing appearance.

Flat roofs
Proposal: To improve thermal properties and facilitate long-term reuse of the flat roofed areas, a bitumous vapour control layer and tapered insulation will be added to the existing roof, covered with replacement sika felt. To accommodate the resulting increase in height, a new timber upstand will be fixed to the top of the parapet, finished with a powder coated aluminium fascia in anthracite.
Impact on significance: Minor. There is a small increase to the height of the roof and parapet as a result of this proposal. The change is limited and considered minor in the context of the whole. The addition of the fascia is considered an appropriate solution, its impact on the visual appearance of the listed building being limited.

Mansafe System
A new fall arrest system is required to provide safe roof access for routine maintenance and cleaning. The system will comprise an 8mm steel cable installed around the perimeter of the spine rooflight and along the back wall, supported by a number of stainless-steel posts/cable guides. Fixing details are set out in the manufacturer's literature and plan. Securing the plates requires limited instances of drilling into the concrete roof.

Impact on significance: The cable is thin and will have a minimal visual impact when seen from ground level. Securing posts are modest in scale and will have limited visibility from ground level. Fixings have been kept as small as practicable and limited to the minimum number necessary. The resulting impact on historic fabric is considered minimal. Should the system be removed in the future, fixing holes can be made good with appropriate repairs. The need for safe maintenance access is considered to be of far greater benefit than any minor level of adverse harm resulting from this aspect of the proposal.

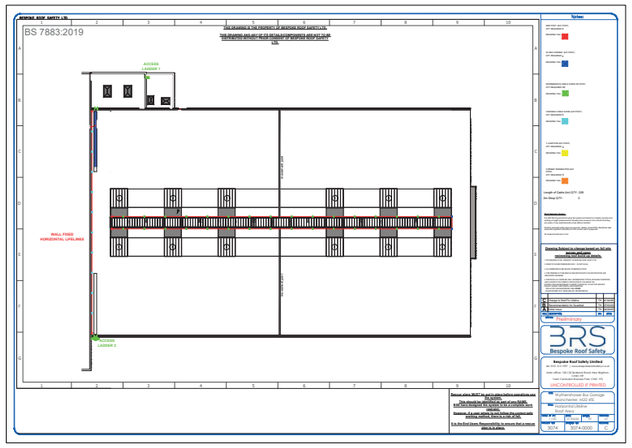


Image: Proposed layout of fall arrest system to roof (see accompanying application drawings for large scale).

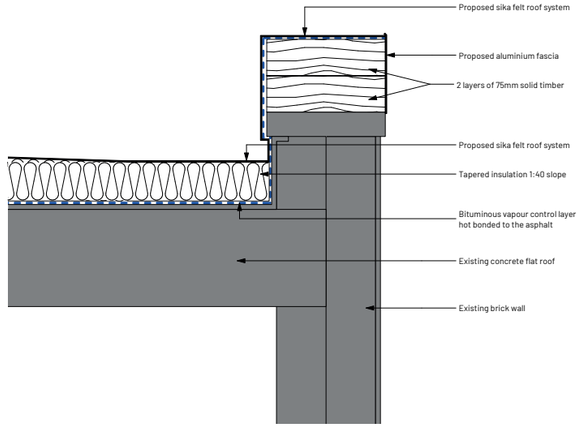


Image: Proposed build up of insulation, parapet extension and covering to flat roof.

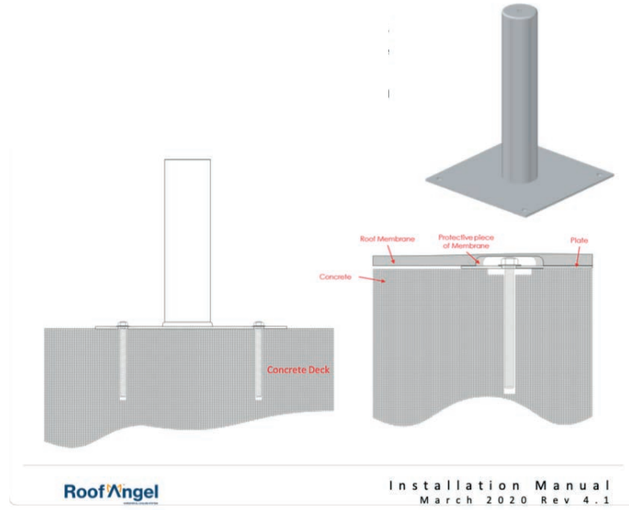


Image: Detail of typical fixings to secure cables for fall arrest system.

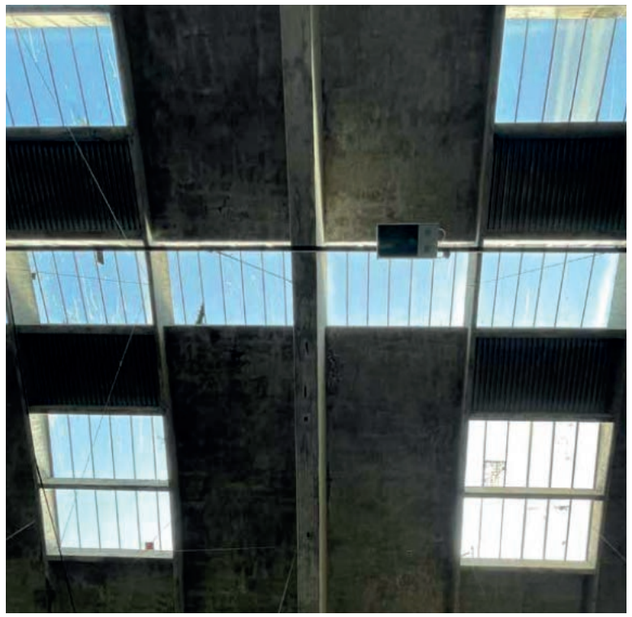


Image: Existing rooflights, interior view.



Image: Existed rooflights, external view.



Image: Existing rooflights, external view.

6.0 PLANNING CONTEXT

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National Policy

National policy regarding built heritage is contained within the National Planning Policy Framework (NPPF).

Paragraph 207 states,
'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance.'
This Heritage Statement meets that requirement.

Paragraph 210 states,
'In determining applications, local planning authorities should take account of:
a) The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation.

Overall the proposals are considered to sustain the significance of the building, improving the existing situation and providing long term benefit.

Local Policy

Local policy reflects principles established in the NPPF and is contained within the Local Development Framework Core Strategy, 2012. Of particular relevance are CC9, which states that development should preserve or enhance listed assets; and EN3 which states the Council will encourage development that complements and takes advantage of historic and heritage features of neighbourhoods.

Places for Everyone is Greater Manchester's joint development plan. Policy JP-P2 relates to heritage and states that particular consideration will be given to ensuring 'the significance of key elements of the historic environment which contribute to Greater Manchester's distinct identity and sense of place are protected from harm' and that positive management and integration of heritage should be informed by 'delivering positive benefits that sustain and enhance the historic environment as well as contributing to the economic vitality, accessibility and environmental quality of a place.'

The proposals are considered to accord with local and national policy.

7.0 CONCLUSION

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Wythenshawe Bus Garage is an historic asset of high significance, as demonstrated by its Grade II* listing,

The recent re-roofing works have significantly enhanced the building and now the most pressing issue is replacement of the rooflights to the central spine and upper slope area of the main roof.

The original intention to replace the historic form of glass block set in concrete has proved to be unfeasible despite consultations and visits from several contractors and suppliers. Given the ongoing deterioration of the non-original existing rooflights, which were added in the 1970s, and instances of falling panes, the situation is now critical.

The proposal to replace with a new system with a similar profile to the existing, using laminated Georgian wired glass has been identified as the most appropriate option. There will, in effect, be little identifiable change to the view of the rooflights, but with the added benefit of new, high quality fabric to safeguard the building and allow for continued safe operation.

Additional works include the insulating and resurfacing of the flat roof areas and a new fall arrest system in the same area. These proposals are not considered to result in any level harm to the significance of the whole.

The submitted scheme is considered necessary to prevent deterioration and risk of further harm to the condition of the asset. Changes have been proposed in the context of viable alternatives and are considered to be the most appropriate options with the lowest impact upon significance.

In balance, the proposals will have the greater benefit of retaining the building in weatherproof and safe condition, enabling viable ongoing use and safeguarding its future.

Proposals are considered to accord with national and local heritage policy.

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