



Atelier MB
Urban Architects

Full Planning & Listed Building Consent Application

Design and Access Statement

Restoration of a Grade II* listed bus garage and the
erection of a multi-storey car park

Client: APH Ltd

Date: May 2023

Revision: _





Aerial view of site

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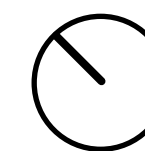
11.0 CONCLUSION

1.0 INTRODUCTION

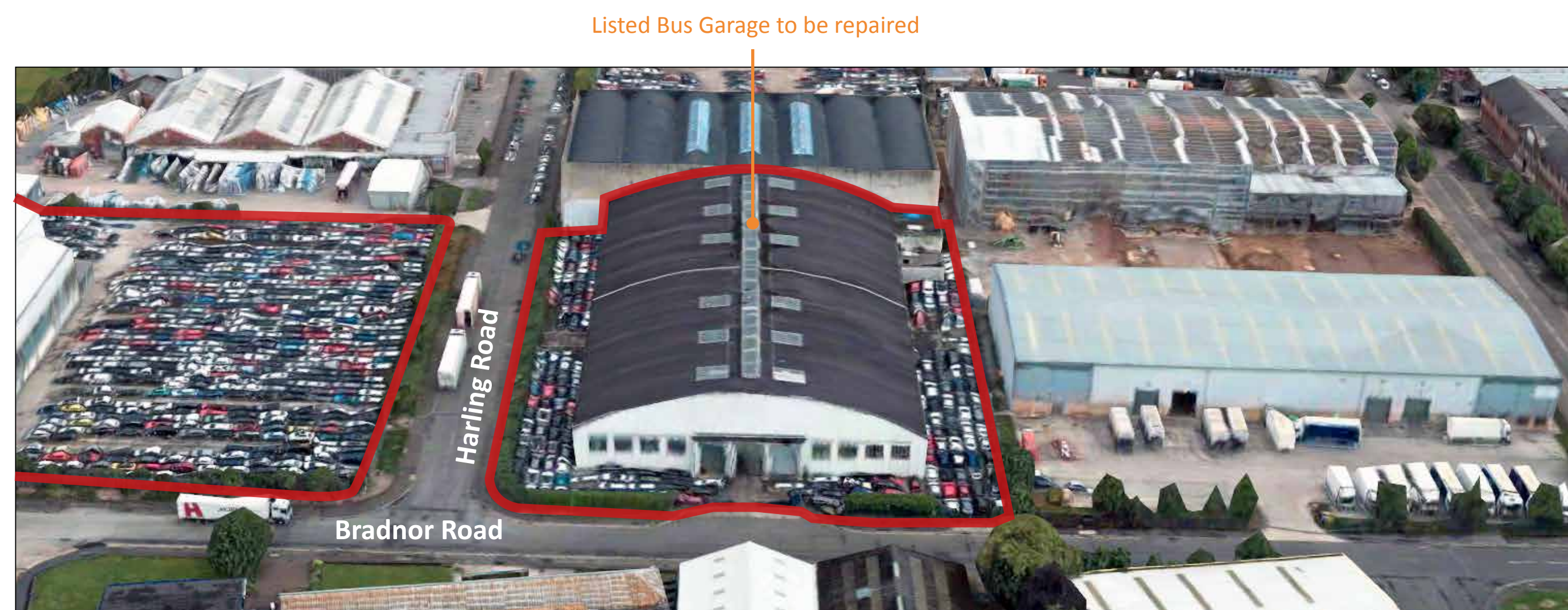
Atelier MB Architects have been commissioned by APH Ltd to submit both planning and Listed Building Consent applications to improve both of the company's sites on either side of Harling Road, at the junction of Bradnor Road, in Sharston industrial area.

Atelier MB are experienced, award-winning, architects who specialise in works to historic buildings and, together with Atelier Heritage, our specialist Heritage division, we have proposed an appropriate response to the client brief as defined within this application.

This Design and Access statement accompanies the Planning application and the Listed Building Consent application, and should be read in conjunction with the accompanying drawings and reports which include a Heritage Statement by Atelier Heritage.



Warehouse site



Bus Garage site

BRIEF



2.0 BRIEF

The brief was to develop proposals to restore the Grade II* listed bus garage to as close as possible its original condition, albeit acknowledging the fact that the single-storey side buildings cannot, realistically, be reconstructed. APH requested that we investigate the possibility and costs of restoring as many features as possible, subject to financial viability.

We were also asked to consider works to the open car park site to the north-west side of Harling Road increasing capacity by removing the large, former warehouse building and erecting a multi-storey car park, with enhanced facilities, in its place. The reception and office building was also to be upgraded and this work is currently close to completion.

The finished project will retain, and slightly increase, car parking on both sites although, should air travel be impacted further by environmental concerns, the fully refurbished bus garage may be able to cater to other appropriate uses.

Following the economic downturn caused by Coronavirus, APH has turned its attention to improving the quality of its offering and, in the process, has resolved to restore its assets, focussing on the Grade 2* listed former bus garage. This has been neglected since the deregulation of buses made it redundant in the late 1970s and numerous original features, including windows, doors and rooflights, have been lost or compromised.



Internal photo of the Bus Garage



Internal photo of the warehouse, to be removed



3.0 SITE ANALYSIS AND BUILDINGS

The sites are located on Bradnor Road and are separated by Harling Road. They sit within the Sharston Industrial Area, to the north 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. The parking operation currently occurs over both sites.

The site to the Northeast of Harling Road has two stand-alone buildings. Building 1 is a setback, existing, asbestos-clad warehouse building, part of a former factory which was previously owned by Manor Bakeries. This building predates the parking use, and is now largely redundant due to a combination of large numbers of structural columns in the space obstructing the parking, and the presence of asbestos. Building 2 is the reception, the meet and greet area, and offices for the parking operation. This is a brick-clad office block of modern construction with a conventional pitched roof. The interior of the building is currently being refurbished to improve the experience for the parking users and the members of the APH team, who are based there.

On the site to the southeast of Harling Road sits the imposing former Wythenshawe bus garage, originally known as Northenden bus garage. It was listed Grade II* in 2001. An extract from the Historic England listing description is included in the Heritage Statement. Currently this is being used as interior parking for the park and ride operation, with external parking to each side. A full history and heritage analysis of this important building can be found in the accompanying Heritage Statement. A full history of the parking operation on both sites can be found in section 4 of this document.



Wythenshawe Bus Depot: Grade II*
List Entry Number: 1389256



Wythenshaw Park: Grade II
List Entry Number: 1000857



Assembly Hall of Jehovah's Witnesses: Grade II
List Entry Number: 1385002



Rose Hill: Grade II*
List Entry Number: 1291365



Sharston Mount: Grade II
List Entry Number: 1283045



Northenden War Memorial: Grade II
List Entry Number: 1435101



Church of St Wilfred: Grade II*
List Entry Number: 1200834



Churchyard Wall and Gate: Grade II
List Entry Number: 1218115



Churchyard Sundial: Grade II
List Entry Number: 1282965



Cottage attached to west end of
Northenden House: Grade II
List Entry Number: 1200833



Northenden House: Grade II
List Entry Number: 1292139

Uses around the site include a cricket ground to the North and some residential units to the West, but as the site sits in the Sharston Industrial Estate, the surrounding buildings are predominantly functional and industrial in use and generally set well back from the back of pavement. The estate roads are wide to accommodate heavy-goods vehicles, as would be expected in this location and any noise generation from traffic is limited and largely contained within the industrial zone. There is no vehicular access from the residential area into the estate, although a public footpath does exist. Good access to the motorway network is afforded by route along Bradnor Road to the B5168 and then to the A560, connecting to the M56. This is the route that the park and ride buses and cars using the facility take. No residential units are passed on this route.

In terms of the buildings on the estate, the bus garage is the most architecturally noteworthy, although there are some good examples of 1930s and 1950s industrial aesthetic in the vicinity.



Site Analysis- Building use





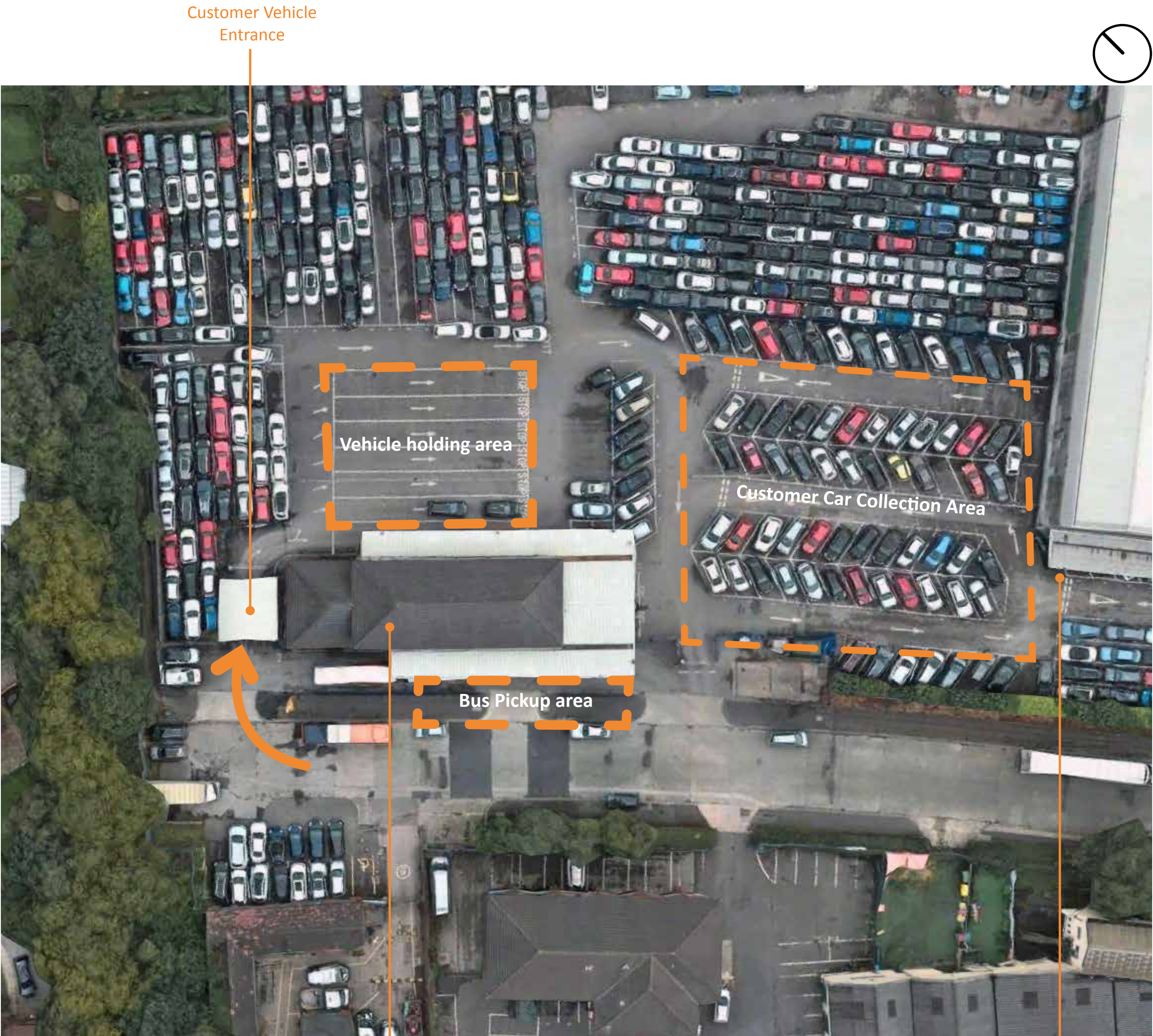
4.0 CLIENT AND CLIENT OPERATIONS

Airport Parking and Hotels Ltd (APH) was founded in 1980 (then, as Airport Parking Gatwick Ltd). It was, and remains, part of a small family-owned and run private company known as Crawley Down Holdings Ltd (previously Crawley Down Group Ltd (CDG)). This family business is now in its 4th generation with its roots in the motor trade dating back to the 1930s. Its main business now is APH. The company focuses on delivering exceptional customer service and has won the coveted Best Airport Parking Provider category in the British Travel Awards (consumer voted) for 11 consecutive years.

It operates its own car parks serving Gatwick and Manchester airports but offers car parking services on an agency basis across all major UK airports, including all of the Manchester Airport Group (MAG) airports. APH is a trusted trading partner of MAG.

4.1 GENERAL OPERATIONS OF APH

APH is an off-site park and ride operation for users of Manchester Airport. Pre-booked cars are directed to the site and to the rear of the reception building and left for parking by APH operatives. Customers are directed to building 2 which houses the reception where cars are registered, and keys left before boarding buses which are waiting on the Bradnor Road side of the building. These buses are currently diesel, but it is the intention to replace them with electric vehicles. Customers are transported to the airport via the buses which call at every terminal. As a trusted trading partner of MAG, the drop-off and pick up points are pre-agreed with the airport. Back at the site, cars are parked by operatives securely and tightly in locations relating to return dates so that whilst access to cars is restricted, it has the advantage of allowing more cars to be parked on a smaller footprint.



Aerial view of APH reception building

APH Reception Building
(building 2)

EV Charging
Points

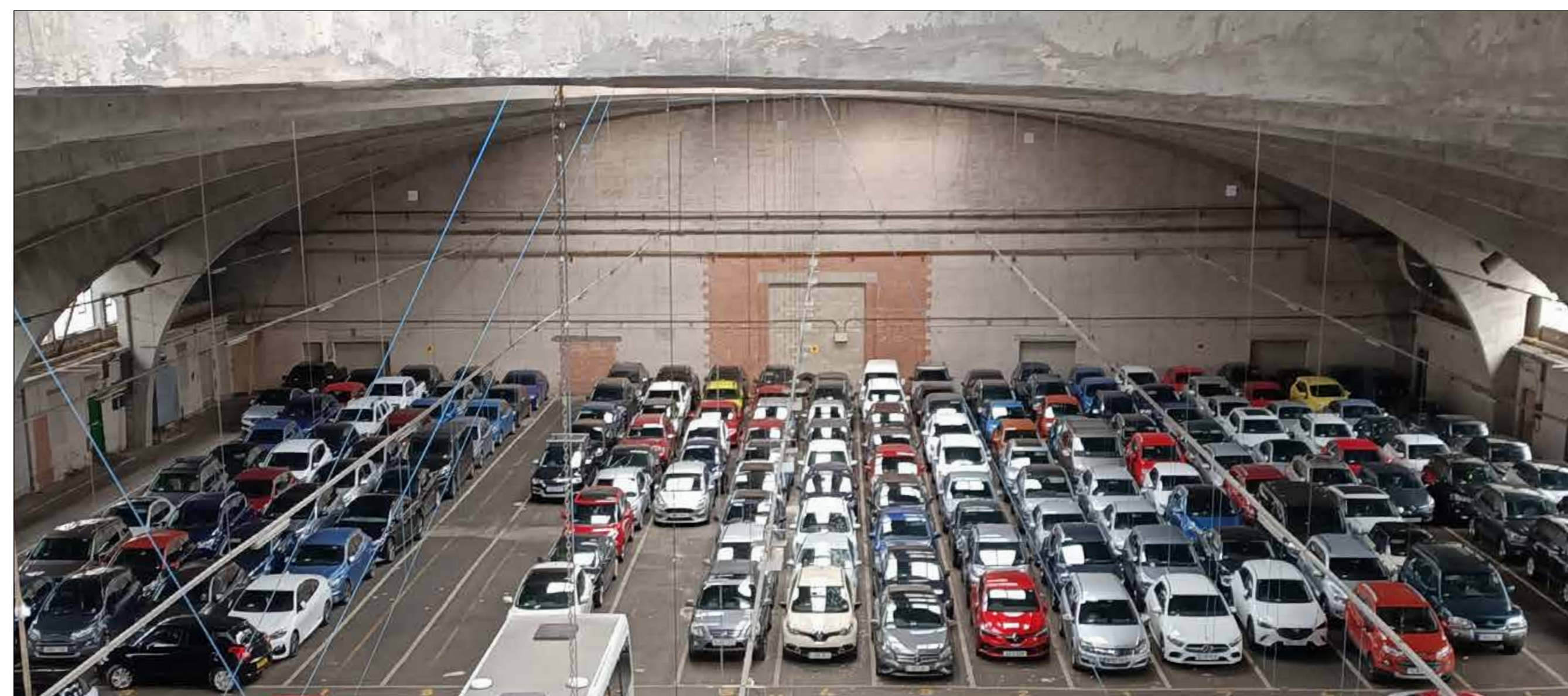
Electric vehicle charging facilities and options for charging exist on site, which will increase as electric car use grows. On customers' return to the airport, they are picked up by APH buses and transported back to the site. At that point their car will have been released from the intensive parking area ready for collection. Currently the operation is working at 100% capacity in the summer months and 85% capacity overall. Cars are stored on site for an average of 9 days.

4.2 APH'S INITIAL INVOLVEMENT WITH THE BUS GARAGE ('ASTRODOME')

As the early airport parking market evolved, tour operators such as Thomas Cook increasingly wanted a single supplier to offer parking to their customers at key airports. In response APH started to build agency relationships with other car park operators so that it could offer parking services at multiple airports. Security Park Manchester Ltd operated from the Bradnor Road site opposite the former bus garage and over many years a strong trading relationship with APH was developed. In 2000, Security Park looked at expanding its capacity and started discussions with the then owner of the "Astrodome" to lease the building. Planning consent for change of use from B8 to airport parking was sought and obtained early February 2001 by the then owner, along with consent to demolish the side wings of the building. APH (through its parent company, CDG) agreed terms to buy Security Park and at the same time agreed an option to buy the "Astrodome" subject to searches. The option was taken up and the sale completed in April 2001, by which time demolition of the single-storey buildings on the side elevations was nearing completion, thereby creating more parking capacity.



Photo of parking within Bus Garage



Elevated photo showing parking Inside the Bus Garage

4.3 THE LISTING OF THE BUILDING

Following the removal of the wings, APH received notice of the provisional listing of the building in mid-July 2001. No challenge was made and subsequently the Grade 2* Listing was confirmed.

APH sought to increase the capacity of its newly acquired operation in Manchester and to provide a reception for customers along with welfare and office facilities for its staff. To this end, in 2002/3, it acquired the derelict former Manor Bakeries site, on the opposite side of the Harling Road to the garage site. It was later granted permission to add this capacity and create parking facilities on the site. Customer vehicle capacity at this time was around 1850: above the bare minimum 1500 spaces which is considered the lower limit to operate a viable 24/7/365 airport park and ride facility but still below the ideal 2500-3000 space car park which maximises economies of scale, productivity and transfer bus capacity.

4.4 CONSIDERATION FOR EXTRA CAPACITY

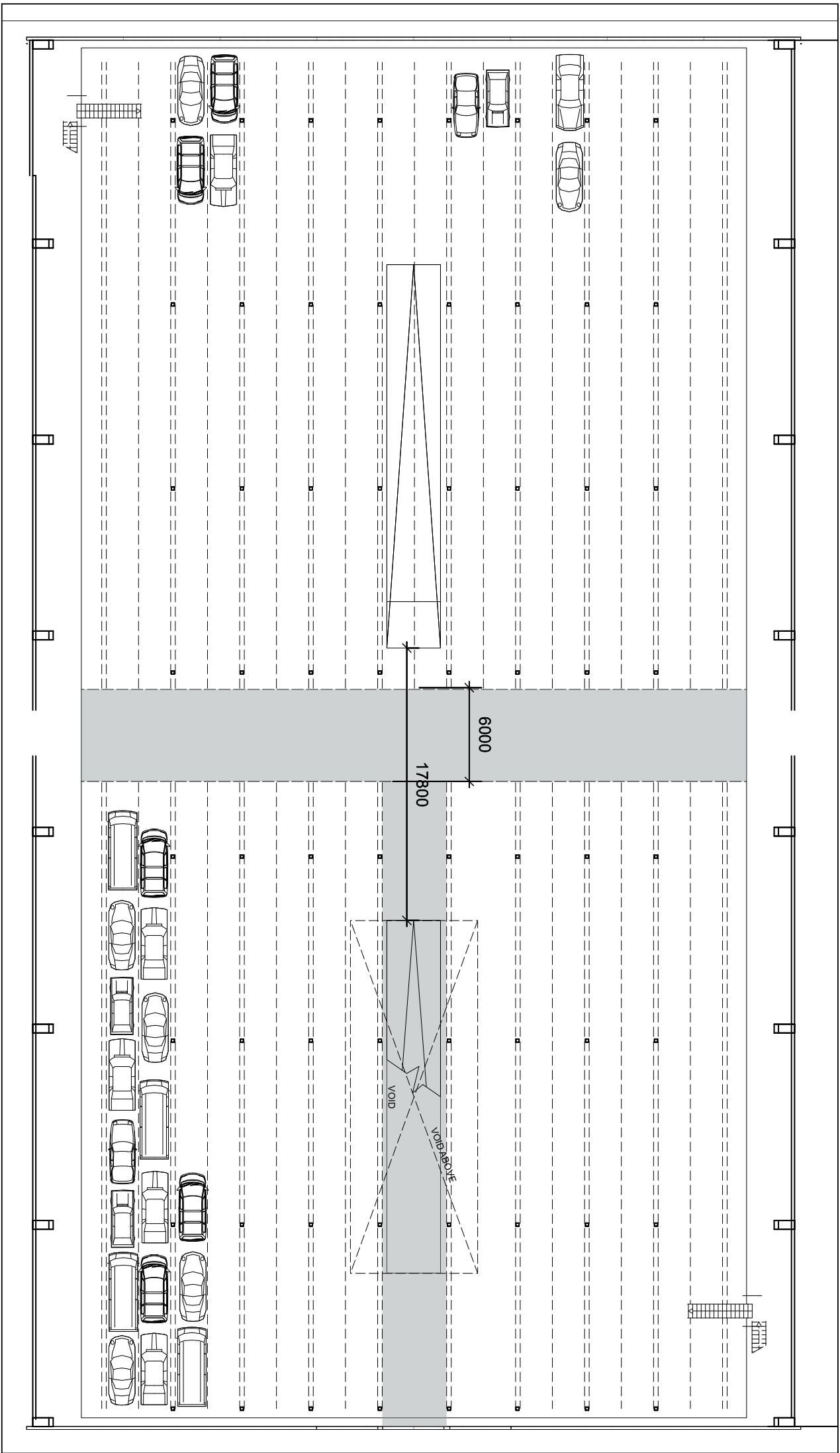
Conscious that the capacity of the combined site was sub-optimal at 1850 spaces, over several years, APH has considered various plans to increase the number of vehicles it could accommodate. This included consideration of schemes such as free-standing decking inside the 'Astrodome'; multi-storey decking on the main site in place of the old factory building ;and acquiring suitable adjacent land.



APH Reception Building front



APH Reception Building rear



Preliminary decked parking plan

4.5 APH and WYTHENSHAWE CRICKET AND LAWN TENNIS CLUB

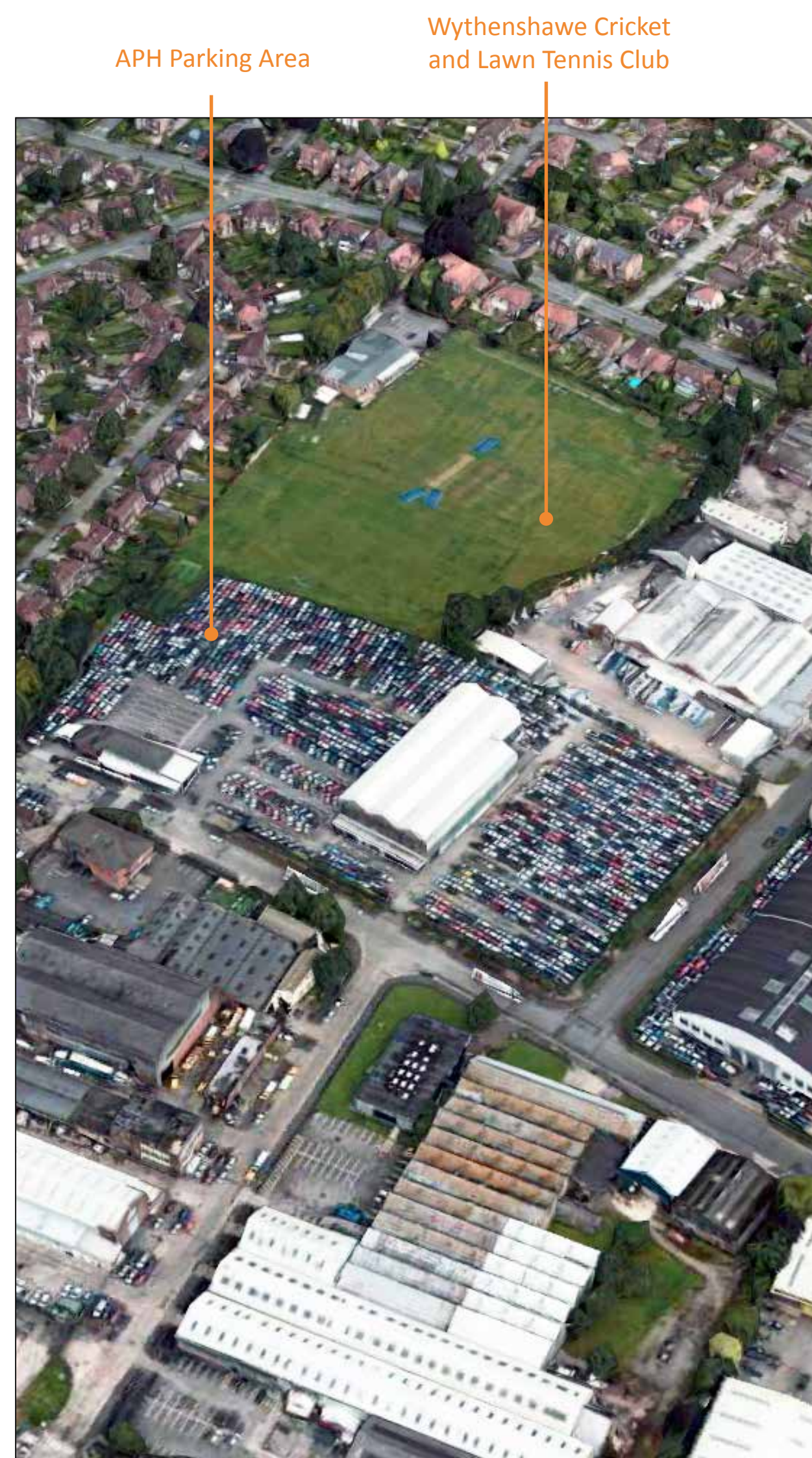
In 2009, APH was approached by the Wythenshawe Cricket and Lawn Tennis Club (the Club) which was looking for development and equipment funding. Protracted discussions followed and with APH's guidance the club sought planning consent for a small area of their unused land adjacent to the APH site. Planning consent for airport parking was granted and APH entered into a lease for this parcel of land in 2013. This brought the vehicle capacity up to 2050 and provided very healthy funding, vital to the success of the Club.

Terms have recently been agreed to renew for a further 10 years from 2023.

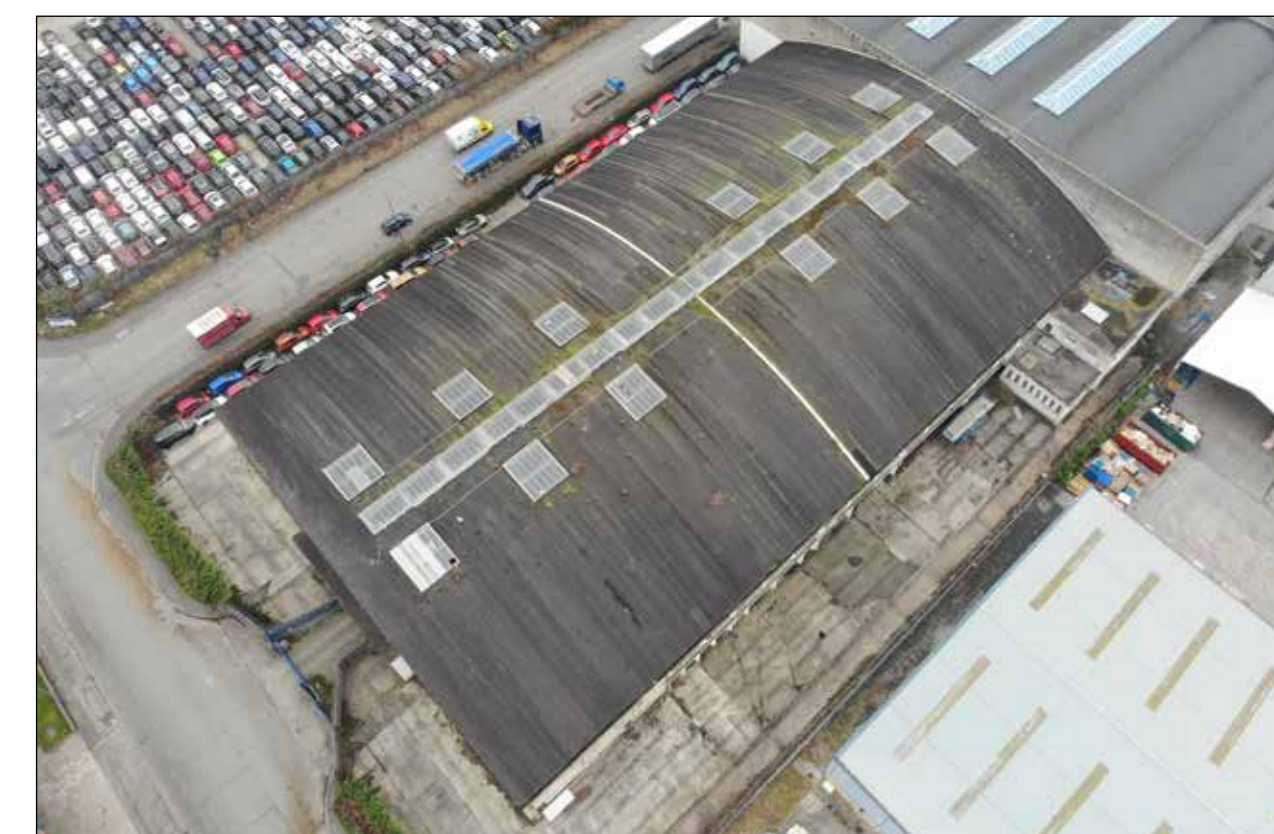
4.6 COVID-19

Just before the COVID crisis crippled UK aviation and its related industries, APH had noted that pigeons, which were ever-present on the Astrodome, were being joined by an increasing number of seagulls. It has been suggested that this was due to a change of operation at a nearby tip/recycling site. This increased number of large birds appeared to promote more vigorous vegetation growth and hasten the deterioration of the roof and guttering. APH understood that remedial work would be required. The issue was further complicated by severely limited access to the roof but views from a cherry picker confirmed that aside from vegetation, the roof covering was in a poor condition.

When COVID-19 restrictions took hold, the car park was effectively closed-down, and all staff furloughed. Revenues dropped by as much as 99% from prior, normal trading years and consequently repairs to the roof had to be put on hold as the company battled to survive. This situation remained until mid-2022, when APH sought architectural input to investigate the necessary repairs to the garage.



Aerial view of site and cricket club



Aerial photo of the Bus Garage (Astrodome) roof



Photo showing vegetation growing on the Bus Garage roof

4.7 POST COVID

The CAA estimates that by summer 2022, Manchester Airport was running at around 80% of pre COVID levels in terms of passengers. APH at Manchester had recovered to approximately 90%. However, staff shortages and higher costs, especially in operation of its bus fleet, have driven overheads substantially higher, which is predicted to continue, if not rise further. The full recovery of outbound air-travel is probable, although the current cost of living crisis is likely to extend the bounce-back period.

Since COVID, online customer reviews for APH at Manchester sit at an average 4.7 out of 5. The same reviews score Manchester Airport owned car parks at best 4.6 out of 5 and Jetparks 3 (the most comparable MAG owned car park) at 4.06 out of 5.

As trade has increased APH has set aside some of the funds that will be required to undertake restoration of the Grade 2* listed building with the intention of generating the remainder of the funds by a programme of works to increase capacity and improve efficiency whilst continuing to offer a low-cost, popular airport parking option.

4.8 ENVIRONMENT

APH has been a long-term supporter of an environmental charity, The World Land Trust (WLT). It has raised funds for the charity to buy endangered land in tropical rain forests and has carbon balanced its own operations through WLT for many years, although this was suspended during COVID. Airport Park and Ride is one of the more sustainable ground transportation options open to travellers, when compared to taxi journeys or friends/family drop and collect so called 'Kiss & Fly'. APH offers an EV charging service at its car parks for its customers and is developing its strategy to convert to EV transfer buses in the future. APH are keen to incorporate sustainable features into the proposed building to maintain their environmental commitments.



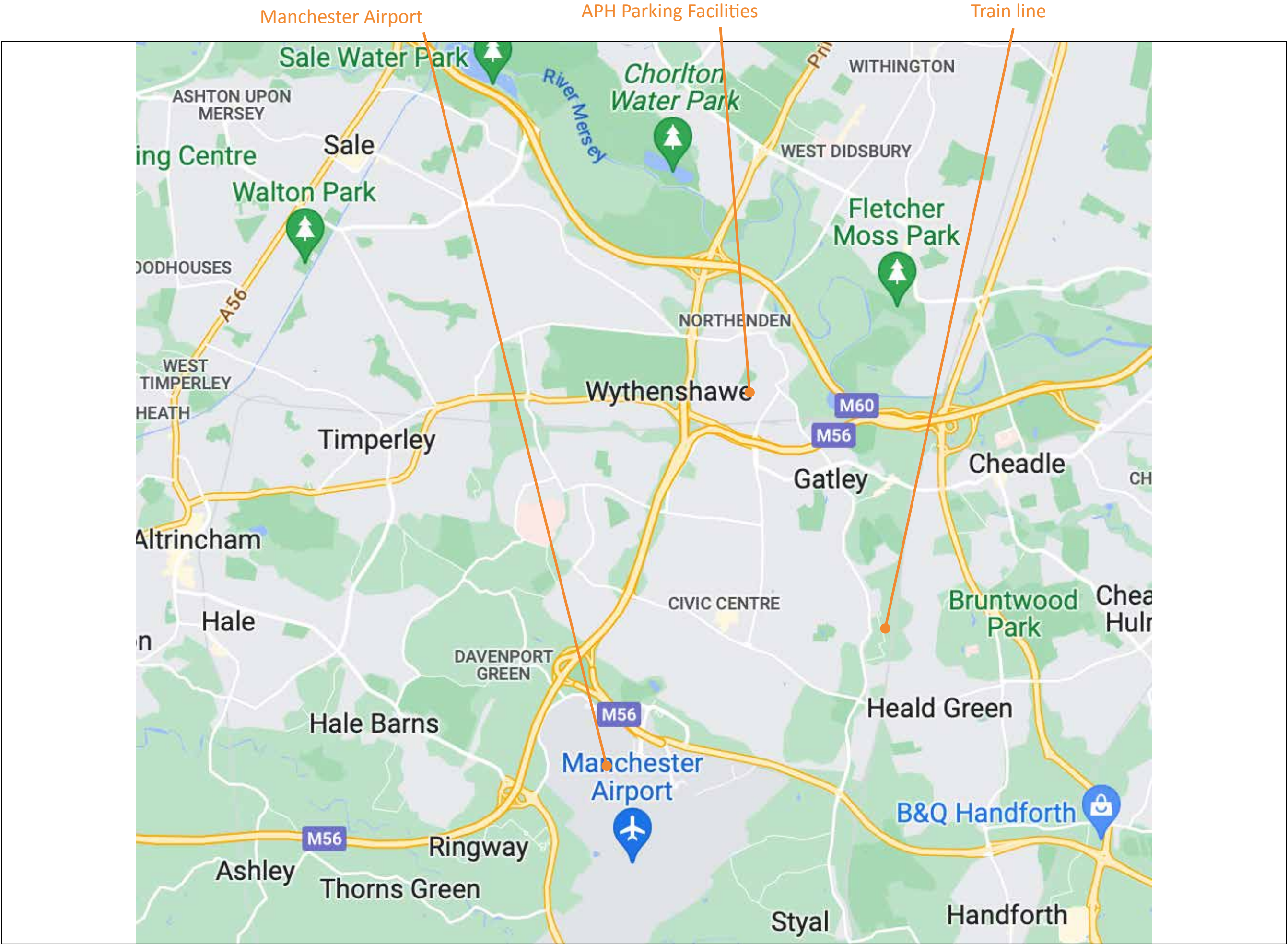
Internal photo of the APH Reception Building, currently being refurbished (Photo Taken 18/10/2022)



Internal photo of the APH Reception Building, currently being refurbished (Photo Taken 18/10/2022)

5.0 TRANSPORT

It is well documented that the airport has slowly been increasing in passenger capacity since the pandemic and that currently there is an under supply of car parking to meet need. Plans have recently been approved for a 2,700 long stay car park near the cargo and maintenance area off Wilmslow Road, and whilst the overriding aim is to increase the numbers of passengers using public transport, it is recognised by MAG that private transport options are still a major mode of arrival and that the existing public transport infrastructure alone could not cope with passenger numbers. With this in mind car parking is being approved and built close to the terminal buildings. As noted above, a significant number of private arrivals are by taxi drop offs and friends/family drop and collect. These options typically generate 4 car journeys: 2 on departure (there and back to home) and another 2 on arrival. Self-driving options, such as APH, generate half the number of car journeys: 1 on arrival, 1 on departure, which has clear environmental benefits and results in less traffic congestion. Off-site parking (Airport Park and Ride) substantially reduces congestion in the immediate vicinity of the airport motorway junctions and slip roads, making them safer and quicker to navigate, thus increasing the efficiency of the whole traffic operation in the area and beyond.



Map view of South Manchester showing Manchester Airport and Wythenshawe site

The road infrastructure around the site is generous with wide carriageways and junctions. The route to and from the garage via the motorway network is through the industrial estate and using A-roads with no routes through the nearby residential streets. Currently, average vehicle movements per day are recorded at 385, which will increase pro-rata with this application to a maximum of 467. These figures are over a 24-hour period and represent an average increase of 3.5 cars per hour. Presently there are no complaints about the traffic flows on the road network generated by this facility and it would be reasonable to assume that 3-4 extra cars per hour would make very little difference in this regard.

In terms of the bus movements, APH currently operate a service every 15 minutes, 24 hours a day. They have enough spare capacity to carry the extra passengers generated and so the numbers, sizes and frequency of buses will remain unaltered.



Photo of Harling Road looking south west



Photo of Bradnor Road looking south east



Photo of Bradnor Road looking north west



Photo of Bradnor Road looking north west



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NEW BUILD SUMMARY WORKS



6.0 NEW BUILD SUMMARY WORKS

The works concerning the new building on the west site are as follows:

1. • The demolition of the existing warehouse.
2. • Works to the boundary of the existing site to provide security.
3. • Works to construct the new car parking garage.
4. • Works to site surrounding the car park to resurface and effectively light and secure the surface parking area.



Aerial view of site



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LISTED BUILDING WORKS SUMMARY

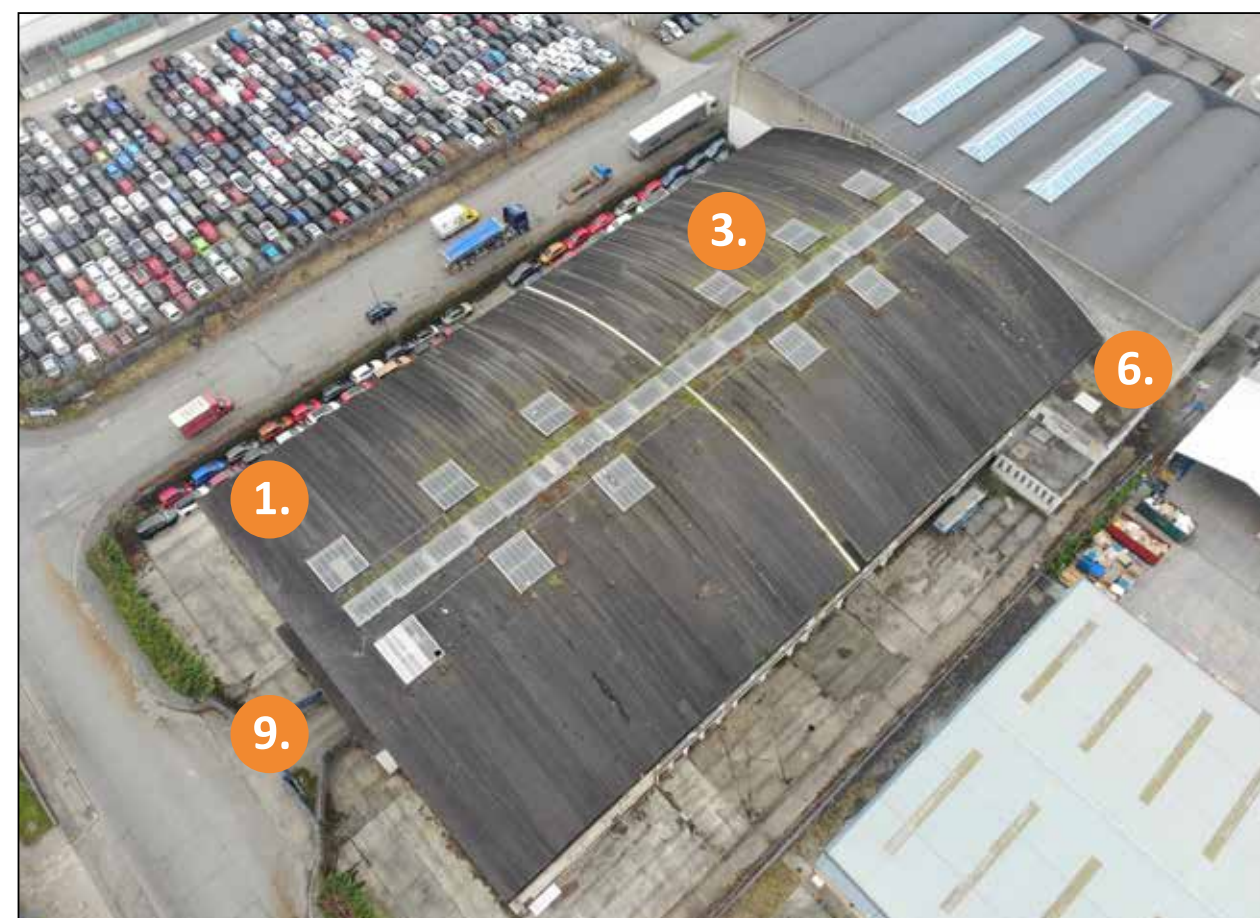


7.0 LISTED BUILDING WORKS SUMMARY

At the time of listing a number of changes had already been made to the building.

These include:

1. Overlaying of the original roof covering with mineral felt
2. Replacement of the original, steel, Crittall windows with aluminium framed windows, including louvred glass in lieu of the original centre pivot casements
3. Replacement of the original glass block rooflights with aluminium patent glazing. Some of the rooflights were infilled and felted over, presumably where the pitch became too shallow for patent glazing. In addition, the majority of the louvres in the sides of the central upstand running the length of the roof have been infilled.
4. The introduction of metal cladding to cover up the unsightly remnants of concrete structure following the removal of the side wings. In addition, most of the door and window openings from the main body of the building to side wings were infilled.
5. Replacement of hopper heads and rainwater downpipes in UPVC, when the metal cladding was installed. This would have been cheaper than modifying or extending the original cast-iron fittings.
6. Removal of various smaller isolated rooflights on what is left of the side wing on the East side.
7. Replacement of the original, folding, bus garage doors, on the Bradnor Road elevation, with roller shutters.
8. Installation of gas-powered warm air heaters resulted in flues being crudely passed through the windows above. (These are now redundant)
9. Curved boundary walls on the front elevation have been removed and replaced with security fencing, including a steel, sliding, gate to provide external security.
10. The separating of the Bus Garage building from the original Repair Hall and infilling of opening between the two sections of the building.



Aerial photo showing non-original roof felt and rooflights



Aerial image of site



Aerial photo of Bus Garage site facing north



Photo of south east elevation showing some of the non-original windows and metal cladding

It would be reasonable to observe that the listing of this building came rather later than the ideal and appears to have happened only once the demolition of the side buildings had taken place, attracting the attention of a third party.

7.1 MAINTENANCE

The current owners have undertaken a programme of maintenance which has kept the building in a stable condition. Following the opening of a nearby waste processing site, which has attracted increasing numbers of large seagulls, a more radical and urgent repair strategy is required. These larger and heavier birds are more destructive in nature and damage is evident to rooflights and the roof covering.

7.2 SUMMARY OF WORKS PROPOSED TO RESTORE THE GARAGE

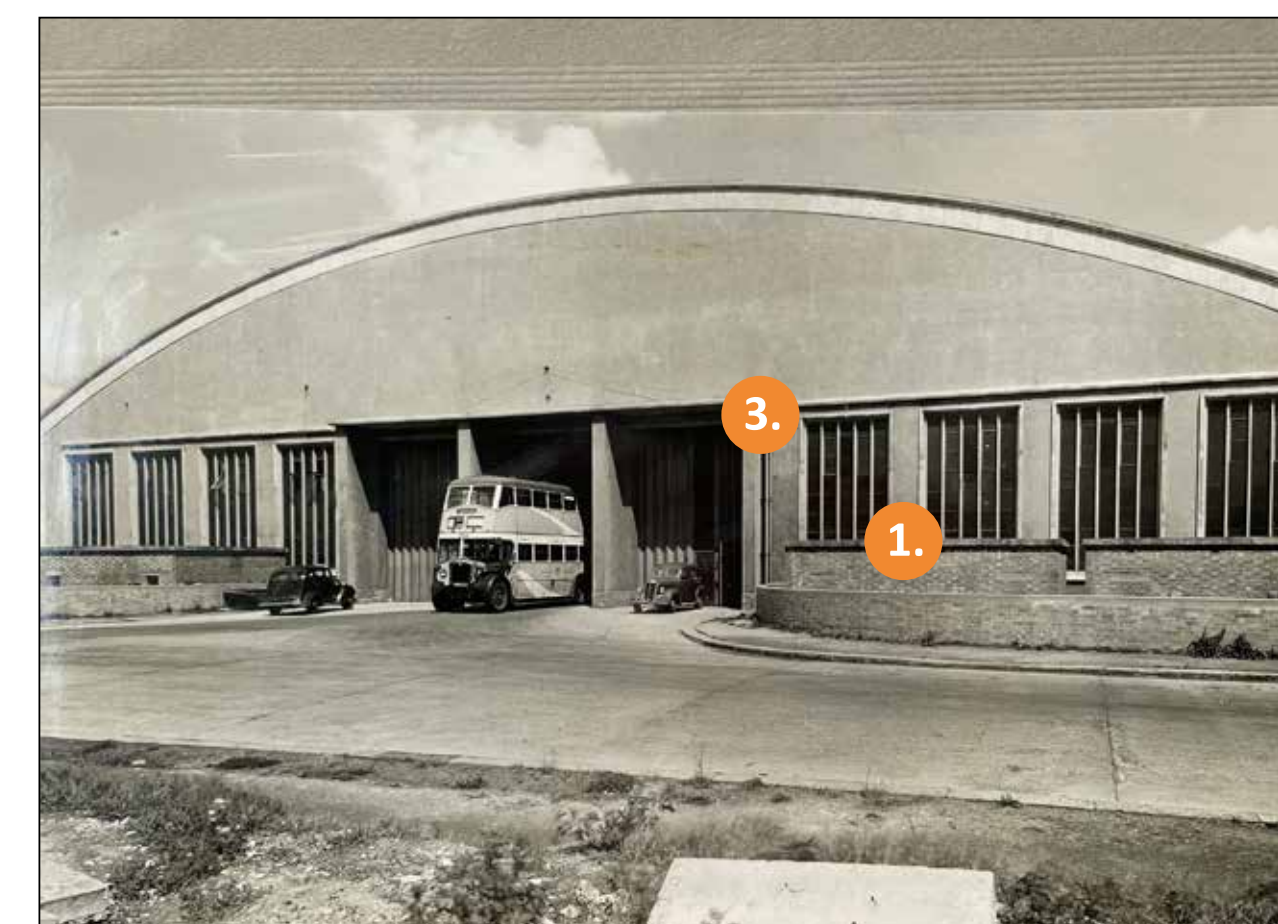
- 1. Repairs and reinstatement of the boundary of the site including the rebuilding of the original curved walls to the entrance forecourt.
- 2. Repairs to the concrete structure of the bus garage which is showing signs of deterioration. A survey, referred-to, above, has been conducted and this shows that concrete repairs are required to several parts of the structure. In particular, there has been spalling of the concrete forming the supporting side walls of the building. The building was not constructed to today's exacting standards meaning that the concrete cover to the reinforcing bars is very minimal. A full specification and method statement for carrying this out is included in this document.
- 3. Removal of non-original doors and reinstatement of more authentic doors (based on historic photographs) to the garage from Bradnor Road. A full specification and method statement for carrying this out is included in this document.
- Installation of new internal lighting. The original lighting was



Photo Showing example damage to the north east facade



Photo Showing example of concrete damage

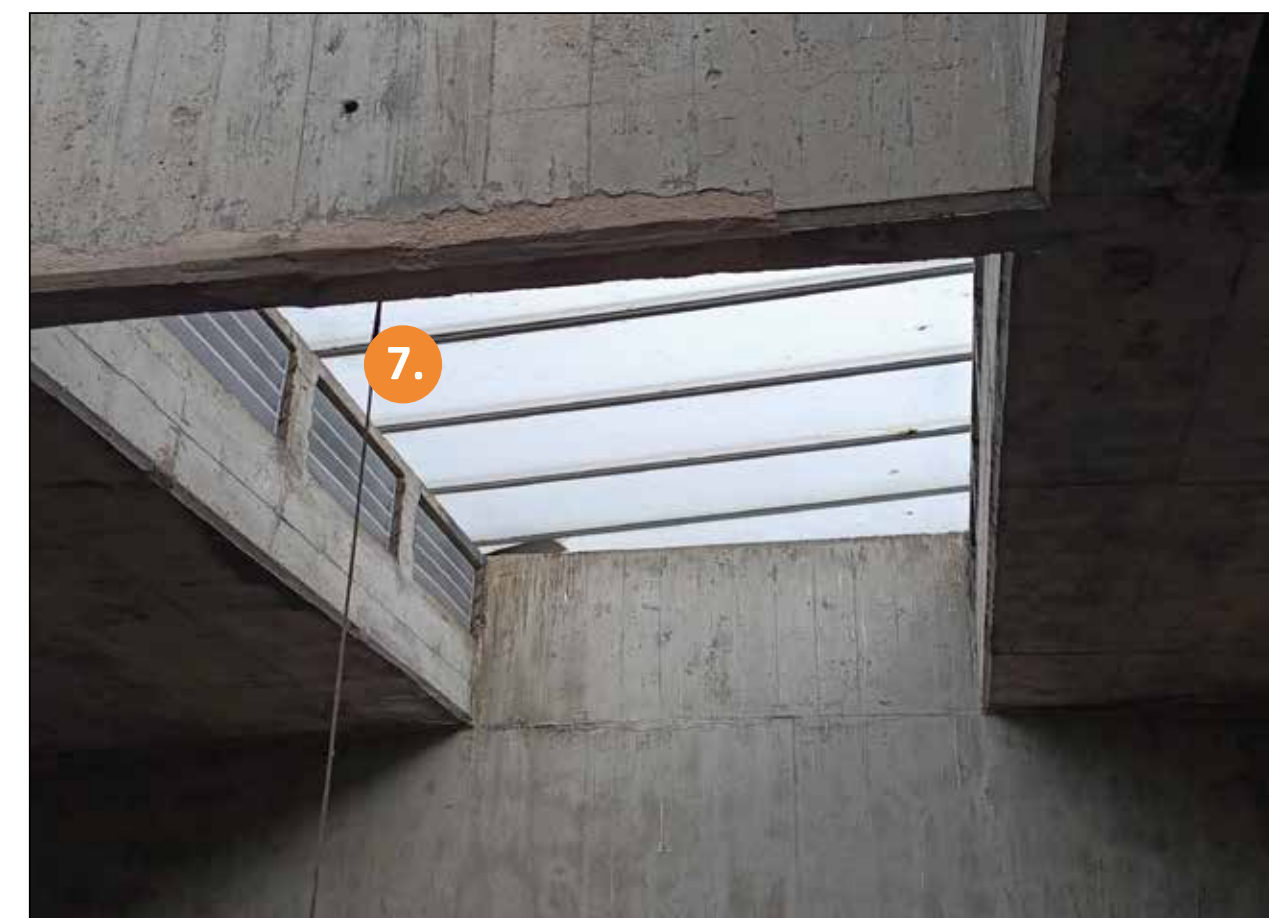


Historic photo showing original doors, windows and boundary wall

4. lost before listing took place and that which was in place at the time of listing has not been operational for a long period of time. A full specification and method statement for carrying this work out is included in this document.
5. Removal of non-original aluminium framed windows and reinstatement of steel windows based on patterns shown on historic photographs and drawings. A full specification and method statement for carrying this out is included in this document.
6. Removal and replacement of the non-original felt roof covering. This been researched and discussed in some detail with the planning department and the Sika Decathane with grit finish is the material agreed for this item. A current quote for the replacement of the roof covering is allowed for in the repairs budget. This now also includes the covering of the flat roofs on the remaining part of the side wings.
7. Removal on non-historic roof lights and replacement with reinforced concrete glass block panels to replicate those originally installed. A full specification and method statement for carrying this out is included in this document.
8. The reinstatement of lime rich render to the areas where non original and non-compliant render has been installed or-is missing. The full specification is part of this documentation.
9. General external repairs to gutters and downpipes as noted in the drawings and specifications. The downpipes had been replaced with UPVC, which is not considered to be an acceptable solution for the listed building, and replacements are proposed in cast iron. The existing steel gutters will be cleaned and lined with Decathane.



Photo of non-original felt roof covering



Internal photo of non-original roof lights



Photo showing non-original strip lights, to be removed



Photo of existing gutters, downpipes and aluminium framed windows

A vertical collage of images related to the 'New Spaces' project, set against a dark blue background. The collage features several diamond-shaped frames containing different scenes: a street view with modern and historic buildings; a white diamond shape; a wooden interior space; a red brick building with a curved facade; a modern interior with a staircase and orange seating; a patterned orange diamond shape; a long, modern interior space with a wooden floor and black pillars; a street view with a historic building; and a street view with a historic building and a modern building.

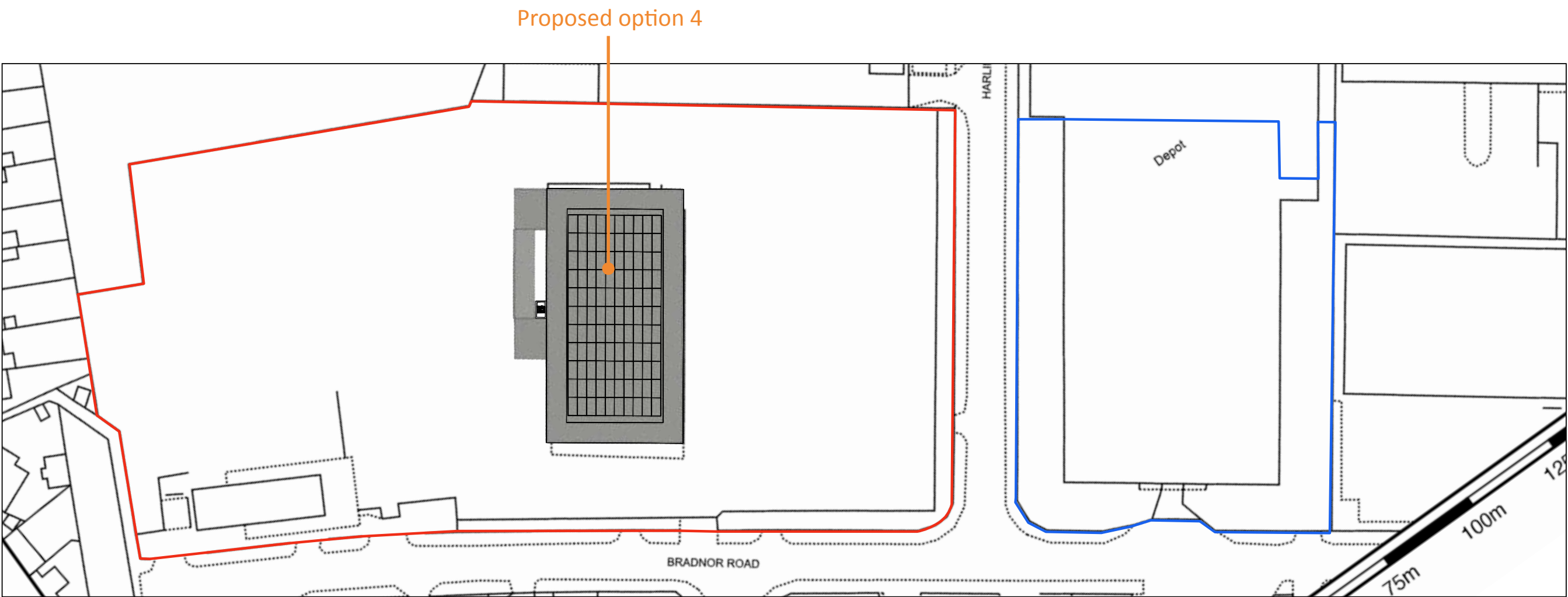
8.0 NEW BUILD OPTIONS CONSIDERED

Various options for the new-build proposal were considered as part of the design process and explored within the context of advice provided by Atelier Heritage.

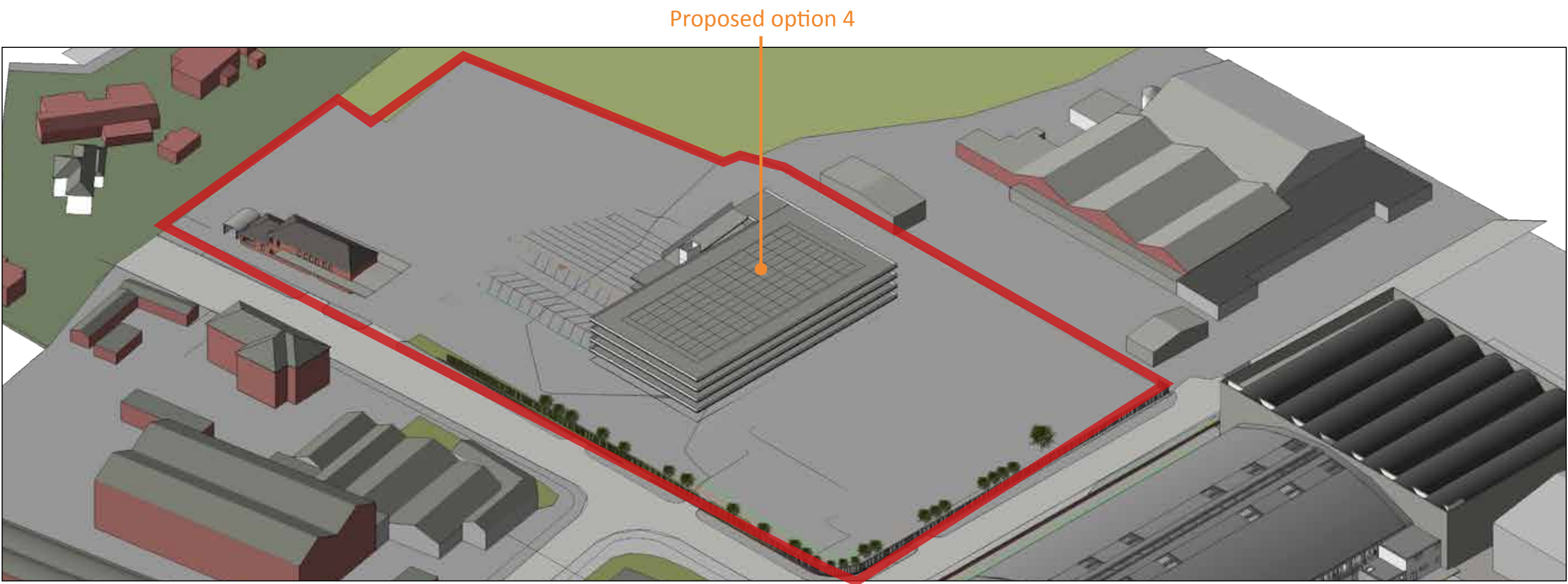
It was considered important to respect the line of the listed building along both Bradnor Road and Harling Road and to site the new building no further forward towards the footpath in each instance, to avoid over dominance and adverse impact upon views. The setting of the proposal was modelled in 3D to ensure that the long and short views of the listed building were not compromised, and that the scale of the new build element remained sympathetic to the listed garage.

The preferred option looked at the possibility of mirroring the mass of the existing, asbestos-clad, warehouse. It was felt that a wider, lower, building was less impactful than the existing warehouse massing which has vertical emphasis in contrast to the horizontal design of the garage. A restricted height has the advantage of meeting the requirements of the client more efficiently and in considered more in-keeping with other buildings and development on the wider estate.

It is acknowledged that in order to preserve character and significance values, the new building needs to be subservient to the existing bus garage. This philosophy generated the split-level solution, which is higher, further away from the bus garage, and lower when in closer proximity. The lower height, setting back from the site edge and the wide carriageway separating the two sites result in a building which provides an efficient and sympathetic solution, with no greater impact upon the setting of the listed asset than the current warehouses.



Plan view of preferred option



3D Massing model of preferred option

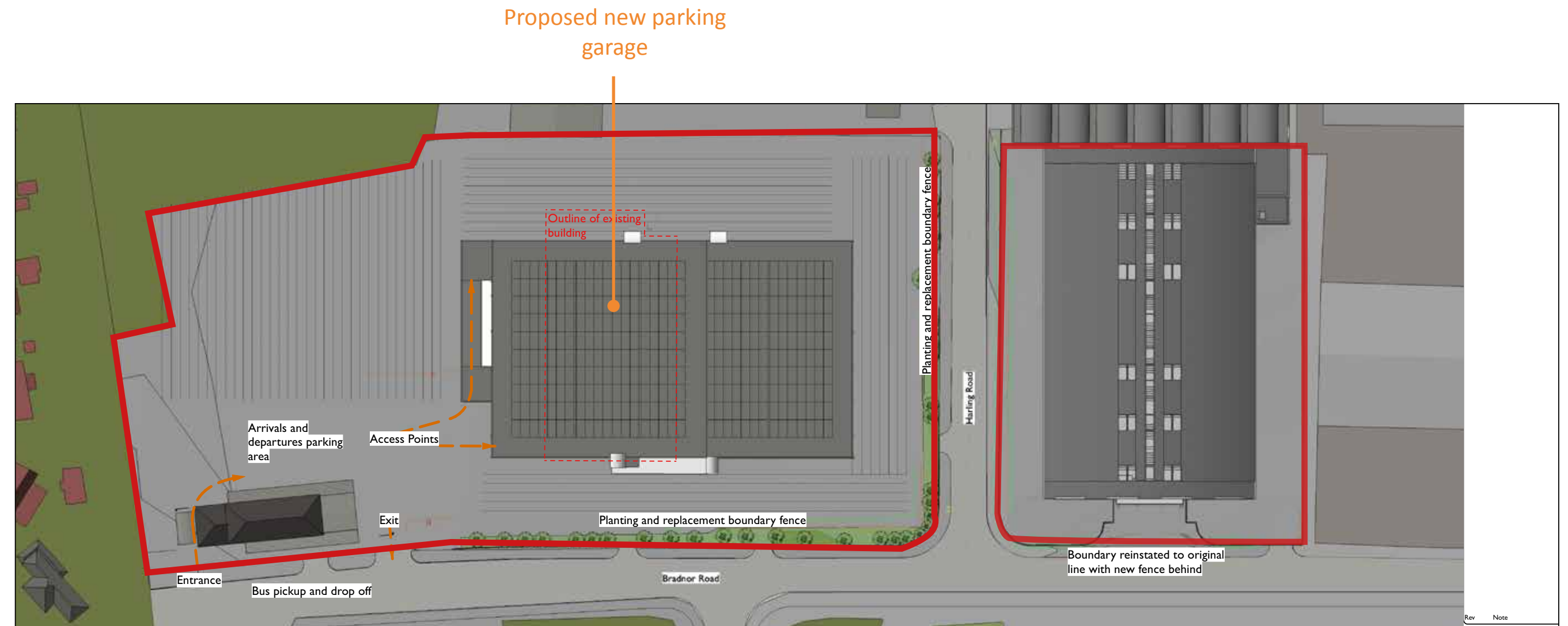
8.1 FINAL NEW BUILD SOLUTION

The final new build solution has a total capacity of 1738 spaces. The existing bus garage will be refurbished and will continue to be used for undercover parking. Combined with the new parking garage and the land surrounding, the new total capacity of the sites will be 2488. The existing total capacity is 2050 units.

8.2 MASSING AND DESIGN

As described, the height of the new building is lower than the existing warehouse on the site and the open sided car park design is less imposing in terms of massing than the tall, solid cladding that forms the sides of the existing warehouse. The introduction of a living wall and photo-voltaic panels on the façades breaks down the visual impact of the new elevations, avoiding large areas of solid fabric. The two buildings are seen together in a limited number of views at street level and the wide space between them minimises the impact on the listed building's setting. Various views of the new car park have been generated to illustrate this point and they are included in this report.

Externally, the design seeks to provide an attractive and contemporary new building, whilst respecting and enhancing the character of the existing garage. The building is intended to be subservient to the listed asset, echoing its restrained style and avoiding over-dominance, both in aesthetic terms and in massing. This is in accordance with quoted heritage policy, national planning policy and local policy (see section 10). The use of concrete references the existing garage and the living green walls and PV panels will contribute to the energy requirements of the site and help reduce the carbon impact of the development. The façade is broken up with the more solid concrete stair towers which have rounded tops referencing the curved roof design of the Grade 2* bus garage.



Plan view of preferred option



3D Massing model of preferred option

A collage of images related to the 'New Spaces' project, arranged in a diamond pattern on a dark blue background. The images include: a street view with modern and historic buildings; a white diamond shape; a wooden interior space; a red brick building with a curved facade; a modern interior with a staircase and orange seating; a patterned orange diamond shape; a long, empty corridor with wooden floors and black pillars; a street view with historic buildings; and a street view with historic buildings and a modern building.

9.0 FINANCIAL INFORMATION

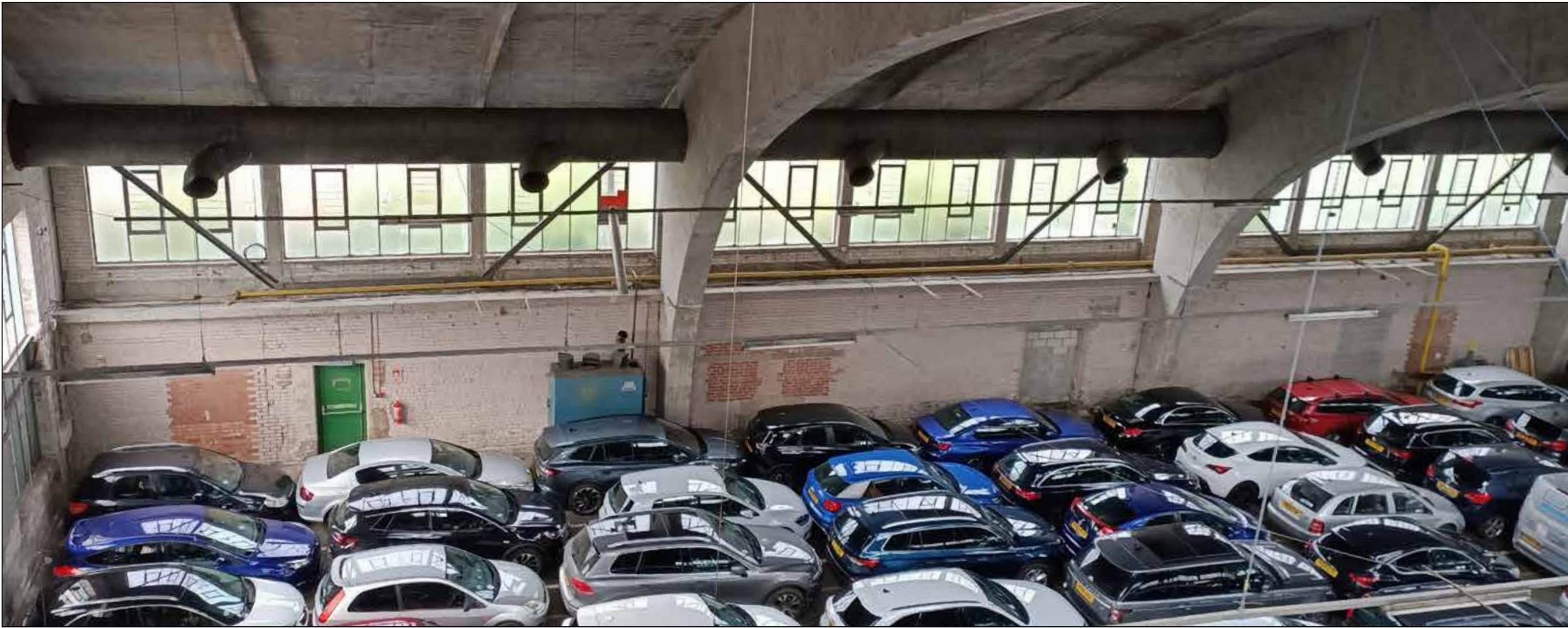
Budget costs for refurbishment and reinstatement of the former bus garage.

1	Concrete repairs	£435,748
2	Rooflights	£460,000
3	Windows	£370,000
4	Roof covering	£945,000
5	Replacement Entrance Doors	£48,669
6	External Works	£25,000
7	Rendering	£15,000
7	Sundry Items Allowance	£120,000
	Sub-total	237,4418
	Professional fees at 15% allowance	£356,162
	Total	£2,775,579

9.1 SUNDRY ITEMS

There are a number of items that are not yet costed. These include the replacement fall arrest system, removal of the redundant heaters and associated pipework, lantern rooflights for the side wing, gutter lining and rainwater pipes, render repairs and external redecoration.

It should be noted that these budget costs are subject to significant variation as the extent of structural repair work is clarified and negotiation takes place with Manchester City Council Planning Department and Historic England.



Internal photo of the Bus Garage



Internal Photo of the Bus Garage

10.0 PLANNING STATEMENT

10.1 MANCHESTER LOCAL DEVELOPMENT FRAMEWORK EMPLOYMENT POLICIES

Policies EC1, EC10 and EC11 of the Manchester Core strategy relate to employment and economic growth in Wythenshawe, the driving focus of which is the airport. Currently the site operation employs 34 operatives, but with the proposed enhancements, 48 people will be employed, an increase of 40%. The scheme therefore accords with these policies.

10.2 USE POLICIES

It is noted that the proposal does not require any land to change use from an already approved park and ride use.

10.3 MANCHESTER LOCAL DEVELOPMENT FRAMEWORK POLICY EN3

Policy EN3 relates to the preservation of the historic environment. The direct result of this scheme will be the repair, reinstatement and restoration of historic fabric at the bus garage, ensuring its long-term use. The removal of the warehouse is considered to be an enhancement to the setting, as is the provision of a high-quality new-build facility. The heritage aspects of the scheme are explored further within the Heritage Statement by Atelier Heritage.

10.4 MANCHESTER LOCAL DEVELOPMENT FRAMEWORK POLICY EN15

Policy EN15 relates to biodiversity. There will be living green walls incorporated into the car park and the borders will be landscaped in accordance with the enclosed plans. This scheme will enhance biodiversity on this site.



View of proposed parking garage from Bradnor Road, with listed garage in foreground.

10.5 MANCHESTER LOCAL DEVELOPMENT FRAMEWORK POLICY DM1

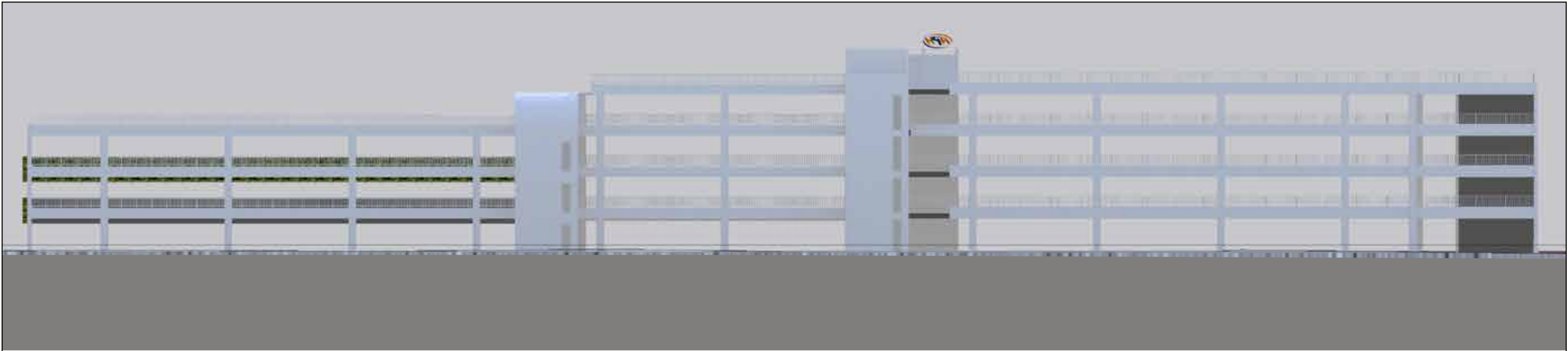
Relates to development management with regard to appropriate siting, layout, scale, form, massing, materials and detail. Design matters have been set out within this document and the proposed new-build element is considered to have suitable regard for the existing character of the area and to enhance the setting of the listed asset, avoiding any level of harm to significance.

10.6 NATIONAL PLANNING POLICY FRAMEWORK

NPPF is based on a presumption in favour of sustainable development. The proposal offers environmental benefits in terms of car use reduction, green wall installation, electric charging points, bus transport and PV panels. The repair and refurbishment of the existing garage contributes to the sustainable and viable future of the listed building, ensuring it can remain in use and having the public benefit of retaining an asset of historical and architectural importance for the future.



South elevation of proposed car park



South elevation of proposed car park



Atelier MB
Urban Architects

CONCLUSION

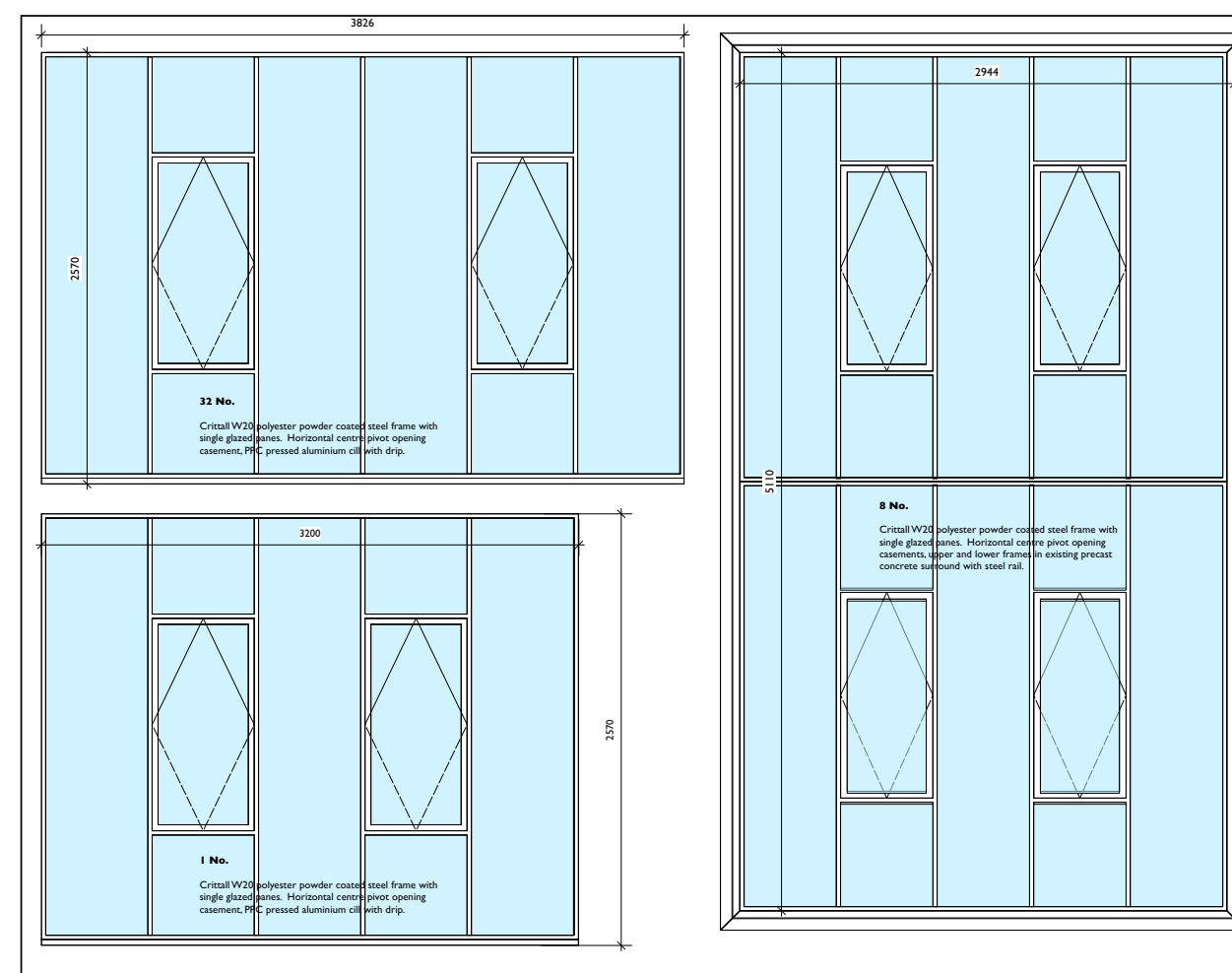


11. Conclusion

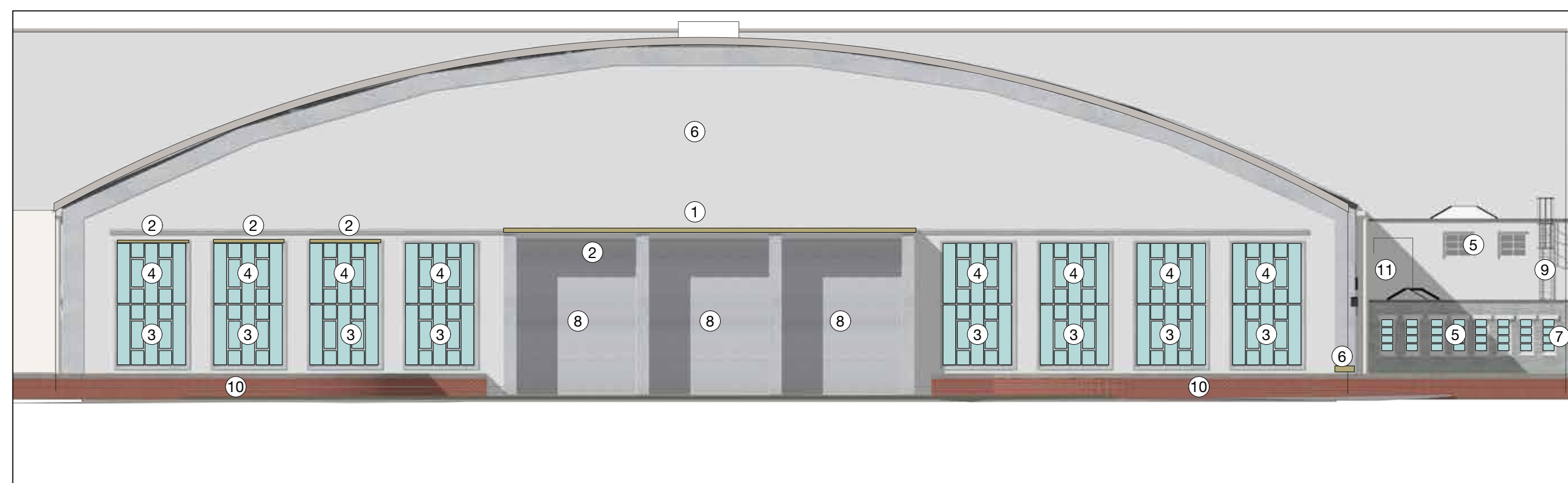
This proposal seeks to restore the former Wythenshawe Bus Garage to a condition that would reflect its historic significance in so far as it is achievable. Re-covering the roof, replacing the windows and reinstating front entrance doors, undertaking essential repairs to the concrete frame and general repairs to the rainwater goods, render, and boundary treatment are all positive enhancements. This scheme of repair has a significant cost, and the intention is to undertake the works as soon as approval is achieved, seeking to recover an element of the costs by the subsequent removal of the asbestos-clad, former warehouse, and constructing a new multi-storey car park on a part of the current car park.

The existing surface car park will be more secure and the proposed new car park will be more attractive than the existing redundant warehouse building which is currently in situ. The car park will feature living green walls and PV panels which will benefit the local and wider environment whilst enhancing the setting of the listed building. The modest increase in capacity of the site is essential to help fund restoration of features to the listed building and it is felt that this public benefit will more than compensate for the slight increase in site activity as a result of the larger capacity for car parking.

The proposals have been considered in the context of the identified significance discussed in the accompanying heritage report. The design aims to create a sensitive, efficient and high quality addition to the site with no harm to the listed asset or its setting.

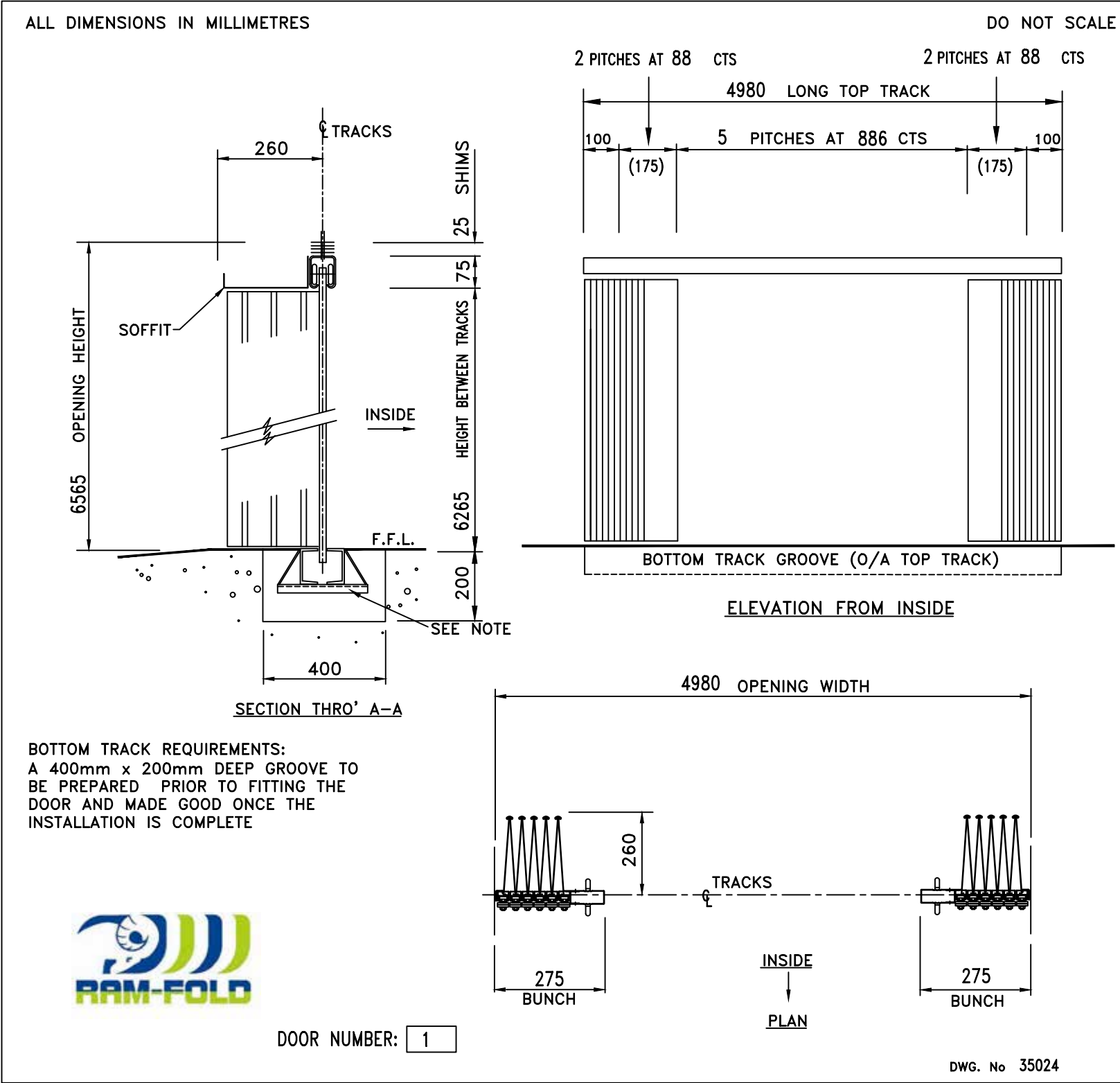


Proposed windows, bus garage

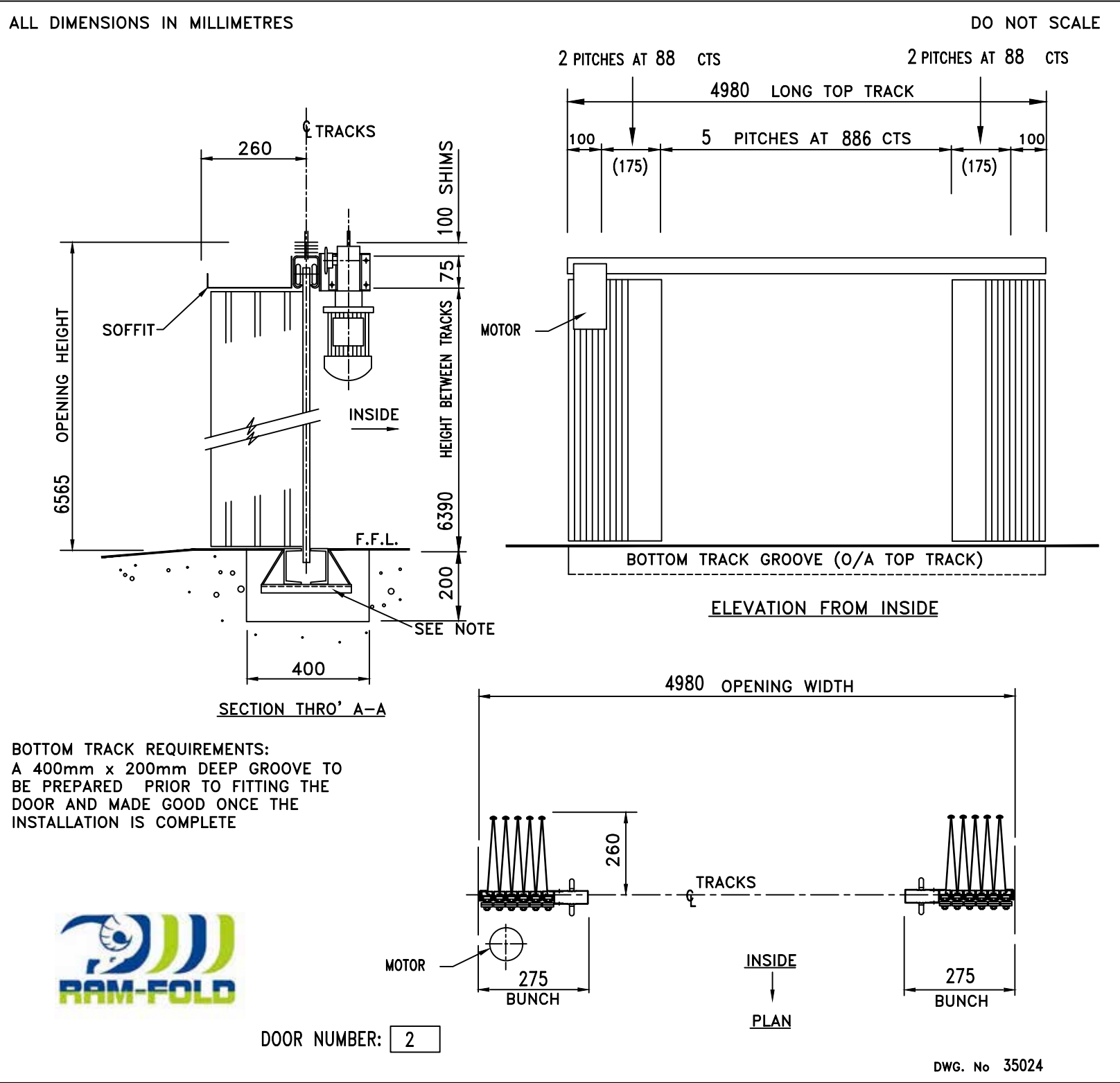


Bus Garage front elevation

Appendix A – Upgrades and Specifications to Listed Garage
1. New Doors



SERIES 80 – RAM FOLD	
MANUALLY OPERATED FOLDING SHUTTER, PAIR, BUNCH WITHIN	
SHEET METAL:	
25 230 75	1 No SOFFIT 4980 LONG
60 50	1 No SHIM COVER 4980 LONG
DOOR DATA: FSD	
PAIR (2 No. REQD.)	
CHUBB 3M50	
EXTENDED PICKETS	
POWDER COAT – RALTB	
HEAVY DUTY BOTTOM TRACK	
CLIENT: Atelier MB Ltd	
ORDER NO:	
JOB NO: 35024	
SITE: Old Bus Station	



SERIES 80 – RAM FOLD	
ELECTRICALLY OPERATED FOLDING SHUTTER, PAIR, BUNCH WITHIN	
SHEET METAL:	
25 230 75	1 No SOFFIT 4980 LONG
115 10 55 75 60	CHAIN TRAY
DOOR DATA: FSD	
PAIR (1 No. REQD.)	
CHUBB 3M50	
SPROCKET & DRIVE CHAIN	
EXTENDED PICKETS	
GALVANISED	
5M LAZERS – x2	
WU PANEL – x1	
REMOTE	
HEAVY DUTY BOTTOM TRACK	
Plus 1 more item(s)	
CLIENT: Atelier MB Ltd	
ORDER NO:	
JOB NO: 35024	
SITE: Old Bus Station	



ALL DIMENSIONS IN MILLIMETRES

DO NOT SCALE

123

CLEAR WIDTH

4980

123

50x20 MS BAR

90mm GUIDE

100x50x5 GALV ANGLES

FI 55/40

DIRECT DRIVE MOTOR 3 PH

BEARING

BEARING

SPRINGLESS BARREL SHAFTS & DISCS WELDED IN

OVERALL WIDTH

5226

PLAN VIEW

600

600

75

6265

CLEAR HEIGHT

6940

ANGLE CUT LENGTH

SECTIONAL VIEW

PLASTISOL CURTAIN: TBC

POWDER COAT REF: BS/RAL RAL: TBC

STEELWORK ONLY

REF D4

QUANTITY 1 DOOR NO. 3

Unit 1, Stephens Way
Warrington Road Industrial Estate
Wigan, WN3 6PH

Alliance

DOOR ENGINEERING

Tel: 01942 683601
Email: info@allancedoors.co.uk

SERIES 35: HIGH SPEED (INSULATED)

LEFT HAND

Bottom seal
Side brush
4" top brush
Photocell x1
Motor cable: 7m
Safety edge kit and w. transmitter
Powder coated steelwork
Plastisol lath
Inverter
Panel: TS971 (3PH)
Additional haul chain: 5m
H/H trans. x2

CLIENT: Atelier MB Ltd
ORDER NO: ---
QUOTE NO: 35024
SITE: Old Bus Station

DWG No: 35024

Alliance Door Engineering Ltd.
Unit 1, Stephens Way,
Warrington Road Industrial Estate, Wigan,
Greater Manchester, WN3 6PH

Quote

Quote Ref: Q35024
Apr 12, 2023 16:37
tel: 01942 683 601
fax: 01942 683 607
info@allancedoors.co.uk

**** Please note that the below quotation is valid for 15 WORKING DAYS ****

CUSTOMER REFERENCE:- Old Bus Station

INVOICE TO:	DELIVERY ADDRESS or EX WORKS:
Atelier MB Ltd Suite 1A Amazon House, Brazil Street Manchester	Wythenshaw Manchester
M1 3PJ	Unloading is the sole responsibility of the client and the delivery vehicle must be met by suitable personnel and lifting equipment. Industrial doors are not palletised or crated unless by request at the quotation stage.

Product Details	Qty	List Price	Total
Single/Pair Manual Galvanised Steel Folding Shutter Doors. Series 80 Manual	2	£ 11,867.00	£ 23,734.00
Ref: D1 & D2, 4980mm W x 6565mm H, Included in the price - Bunching between,Bunching size: 275mm (pair), Chubb 3M50 hook bolt lock, Heavy Duty Bottom Track, Shutter weight: 1046.1984kg, Powder coated (RAL: TBC), Fixing to masonry, Take down existing doors and dispose			
Single/Pair 3 phase Galvanised Steel Folding Shutter Doors. Series 80 3 Phase	1	£ 14,628.00	£ 14,628.00
Ref: D3, 4980mm W x 6565mm H, Included in the price - Bunching between,Bunching size: 275mm (pair), Chubb 3M50 hook bolt lock, Heavy Duty Bottom Track, Shutter weight: 1046.1984kg, 3 phase motor, Motor on right side, Full automation, Fixing to masonry, Remote to set up lasers, Actuation: Remote, Take down existing doors and dispose			
Arctic Hare, Power Operated, 3 Phase Insulated Fast Acting Roller Shutter, Speed 0.5 metres per second. Series 35 Arctic Hare	1	£ 10,307.43	£ 10,307.43
Ref: D4, 4980mm W x 6265mm H, Included in the price - 3 Phase GFA Inverter motor + starter,FI 55/40 - TS 971, Emergency Override Facility - (In the event Power failure), Plastisol 95mm One-piece industrial curved insulated lath c/w compressed foam injected infill, High density glass filled nylon end locks, Wireless - Safety Edge System Sealed for life bearings, 6-8mm thick mild steel endplates (BS 1449), Powder coated fixing angles 100mm x 75mm x 5mm, Powder coated 90mm deep shutter guides (BS 729:1971), 'U' value 1.1 W/M²K Lath Core, 'U' value 3.3W/M²K Total Shutter, Side and top brushes, Safety edge + wireless transmitter, Panel: TS 971, Handheld transmitter x 2			

361950- WYTHENSHAW BUS GARAGE

2. Roof Covering Replacement

Ray Makin
Chairman
Atelier MB Urban Architects
Suite 1a Amazon House
Brazil Street
Manchester
M1 3PJ

Ref: PP230322RM-2

Tuesday 13th December 2022

Dear Ray Makin,

RE: Refurbishment to the barrel roof @ Wythenshawe Bus Garage

Following our site meetings regarding the above mentioned project I have submitted the details and information collated at our site visit too Sika Liquid Plastics who may need to return to site to produce the working specification that will form part of the 20year single point guarantee upon completion.
I have also spoke with Sika regarding the detail work around the expansion joint which will need to be included.

Our costs include for all works for the complete strip off to the existing felt and fibre board insulation at which point the concrete deck will be examined and any necessary minor repairs that need completing prior to power washing the substrate to remove any loose debris.
Once this has been completed Primer 600 can be applied followed by S-Vap 5000 E SA VCL and the 20year Sikalastic 625N fully reinforced glass fibre waterproofing system. Upon completion of these works I have allowed for an additional coat of the Sikalastic 625N waterproofing membrane to which a black grit will be broadcasted to produce a look similar to that of a mineral felt.

Roof Identification



Continued...



Tel/Fax: (+44) 01772 930796
Email: Info@permicoat.co.uk
Web: www.permicoat.co.uk
Company No: 08793226



Permicoat Limited
Unit 37, St Mary's Street
Ribbleton, Preston,
Lancashire,
PR1 5LN



Within our revised cost of **£944,119.00+Vat** I have allowed for all materials cost increases that have been implemented over the time period since we priced the project (Dated:24th March - Ref:PP230322RM-1).
Additionally within our cost we have allowed for the additional labour and materials necessary to apply the black gritted top coat and the application of the Sikalastic 625N waterproofing system to the additional lower level roof which was not originally included within our costs.

The above costs include for all labour and materials necessary to complete the works and I have also allowed for a full independent access scaffold and handrail scaffold to the gable end, Site welfare, Site Storage, Mechanical Hoists and waste skips.

Within our costs I have also presumed that a mains water supply will be made available free of charge and there will be a designated area made available for us to utilize as a site compound/parking for the duration of the works.

On behalf of Permicoat Ltd I would like to take this opportunity to thank you for allowing us this opportunity of preparing the above and should you have any queries on any of the points contained herein then please do not hesitate to contact me.

Kind Regards,

James Mattison
Managing Director
For and on behalf of PLC



Permicoat Limited
Unit 37, St Mary's Street
Ribbleton, Preston,
Lancashire,
PR1 5LN

Tel/Fax: (+44) 01772 930796
Email: Info@permicoat.co.uk
Web: www.permicoat.co.uk
Company No: 08793226



PROJECT PROPOSAL



Atelier Architecture - Manchester

PROJECT: Wythenshawe Bus Garage
PROJECT REF: JC-00007166
DATE: 20 March 2023



CONTACT SHEET

Prepared for:	Atelier Architecture 1st floor Amazon House, Brazil street Manchester M1 3PW
Telephone:	0161 236 0051
For the attention of: Email:	Ray Makin ray.makin@ateliermb.co.uk
Site:	Wythenshawe Bus Garage Bradnor Rd, Sharston Industrial Area Wythenshawe M22 4TS
Prepared by:	James Collett - Area Specification Manager
Telephone:	+44 7970 940 076
Email:	collett.james@uk.sika.com
Technical Services Contact:	Jamie Squires - Product Engineer
Telephone:	+44 (0) 1707 394444
Email:	squires.jamie@uk.sika.com
Date:	20 March 2023



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1 WYTHENSHAWE BUS GARAGE

1.1 GENERAL INFORMATION

Guarantee Process

Our product specification is based on a remedial solution that will provide a guarantee in accordance with the system schedule(s). For the guarantee process to be triggered the contractor must e-mail the following to scs.technical@uk.sika.com before work commences:

1. Sika Specification Reference
2. Expected start date
3. Expected completion date
4. A contact name, email address and phone number

To attain the guarantee, the contractor must complete the Daily Materials Site Record and Specification Guarantee documents, which will be sent on receipt of the above email. Sika Limited retain the right to amend or remove any guarantee offering if the correct information is not provided.

Repair and Protective Material Selection & Compliance

In all cases the Contractor shall provide manufacturers' evidence to verify that they meet the requirements set out in BS EN 1504 and as such all materials where relevant should be CE or UKCA marked.

The materials must be supplied from a ISO 9001:2015 approved manufacturing plant and supplied from a single manufacturer to ensure compatibility and ensure long term durability.

For individual product application requirements please refer to current Product Data Sheets and Method Statements, which can be obtained via e-mailing scs.technical@uk.sika.com.

Concrete Substrate Quality and Preparation

Concrete Removal

After removal of defective concrete, the prepared repair area shall be free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials.

Delaminated, weak, damaged, and deteriorated concrete; and where necessary sound concrete shall be removed along with tying wire fragments, nails and other metal debris embedded in the concrete where possible.

Uncoated Concrete Surfaces and Removal of Existing Coatings

The concrete shall be cleaned, and all blowholes and honeycombed areas exposed. Where applicable all existing coatings should be removed.



The surface shall be free from dust, loose material, surface contamination, existing renders, laitance, coatings, oil, and any other materials which could reduce surface adhesion.

Surfaces shall be prepared to an open texture, suitable for the coating system specified.

Coated Concrete Surfaces with Coatings Remaining

If it is deemed that existing coatings are to be overcoated rather than removed, then compatibility testing between the existing coating and the new Sika® specified Sika coating system together with a dry cross-cut test and adhesion test should be undertaken prior to proceeding with the works.

However, it should be borne in mind that failure to remove existing coatings may lead to an increased risk of technical compromise. Sika Limited is not responsible for failures related to the underlying coating or its bond to either the substrate or newly applied Sika coating.

Preparation of Steel Reinforcement

Using media blasting techniques, rust, scale, mortar, concrete, dust, and other loose and deleterious material which reduces bond or contributes to corrosion shall be removed to a minimum standard of SA2 or SA2.5 (see the relevant Product Data Sheet and/or Method Statement for details).

The whole circumference of the exposed reinforcement shall be uniformly cleaned, except where structural considerations prevent it.

If environmental constraints preclude the use of abrasive or water blasting preparation techniques, where corrosion has been induced by carbonation and where ingressed chlorides are not present, mechanical preparation techniques may be used in combination with Sika® Galvashield XP galvanic anodes. Please consult the Sika technical team for further details.

Curing Treatment

It is essential to cure repair mortars immediately after application for a minimum of 3-7 days depending on site exposure and weather conditions, to ensure full cement hydration and to minimise cracking. Curing compounds shall not be used if subsequent smoothing coats/pore filling or protective coatings are to be used.

For rapid setting products No special curing is required at temperatures between 5°C and 35°C. For placing at temperatures outside this range contact the Technical Service Department. At early ages do not allow placed concrete to rapidly dry and protect from rain and frost.

For more information, please refer to the relevant Product Data Sheet and/or Method Statement

2 EXTERNAL CONCRETE REPAIRS

2.1 SYSTEM SCHEDULE

AREA	MATERIAL
Classification	Concrete Repair & Protection
Main Degradation Cause Carbonation	Carbonation
Guarantee required	10 years
Remediation System Reference	
Total Corrosion Management?	
Total Corrosion Management Options	
Placement Method Options	Hand Placed
Reinforcement Corrosion Protection Coating	Sika MonoTop®-1010
Repair Mortars	Sika MonoTop®-4012
Corrosion Management Systems	Sika® Margel VPI-580
Pore filler/Sealer	Sikagard®-545 W Elastofill
Protective Coating Primer System	Sikagard®-552 W Aquaprimer
Protective Coating System	Sikagard®-675 W GB ElastoColor



2.2 REINFORCEMENT CORROSION PROTECTION COATING

Sika® MonoTop-1010

Immediately after preparation to SA2, apply two coats of Sika® MonoTop-1010 to the whole exposed circumference of the reinforcement. Wait until the first layer has dried before applying second layer. Allow to harden before applying repair mortars.

Sika MonoTop®-1010 is a 1-part, cementitious, polymer modified coating material used as bonding primer and reinforcement corrosion protection. It contains recycled waste materials which leads to a reduced carbon footprint compared to an equivalent performing mortar. For more information, please refer to the relevant Product Data Sheet and/or Method Statement.

2.3 REPAIR MORTAR APPLICATION

Sika® MonoTop-4012

Sika® MonoTop-4012 can be applied either by hand or by the wet spray method.

Apply pre-mixed Sika® MonoTop-4012 “wet on wet” onto the bonding primer between the minimum and maximum layer thicknesses as stated on the Product Data Sheet.

Sika MonoTop®-4012 is a 1-part, cementitious, fibre reinforced, low shrinkage repair mortar. It contains recycled waste materials and can reduce the carbon footprint application activity calculations, meeting the requirements of Class R4 of EN 1504-3.

For more information, please refer to the relevant Product Data Sheet and/or Method Statement.

2.4 TOTAL CORROSION MANAGEMENT

Sika Margel VPI 580s (Uncoated & Coated)

Sika® Margel VPI 580 shall be installed in all unrepaired concrete areas. They are typically installed by drilling 20 mm diameter holes, 55 mm deep.

Sika® Margel VPI 580 is a patented vapour phase corrosion inhibitor which is inserted inside concrete structural elements close to the reinforcing steel.

For spacing and installation guidance please refer to the relevant Product Data Sheet and/or Method Statement.



2.5 PORE FILLER APPLICATION

Sikagard 545W Elastofill

Tightly trowel a pore filler/sealer layer of Sikagard® -545W Elastofill over the concrete surface to ensure that all blowholes and other surface imperfections are filled to provide a pore (holiday) free surface in preparation for protective coatings.

Sikagard®-545 W Elastofill is a 1-part, acrylic, water-based, crack-bridging, intermediate surface protection coating for concrete.

For more information, please refer to the relevant Product Data Sheet and/or Method Statement.

2.6 PROTECTIVE COATINGS AND PRIMERS

Sikagard®-552 W Aquaprimer

Following application of either the specified pore filler OR smoothing coat apply one coat of Sikagard®-552 W Aquaprimer at a consumption rate of not less than 0.2 kg /m². If neither pore filler or smoothing coat are required sufficient surface preparation must be achieved prior to application.

Sikagard®-552 W Aquaprimer is a one-component water dispersed adhesion promoting primer for water dispersed polymer paint coatings. Sikagard®-552 W Aquaprimer is part of a system that complies with the requirements of EN 1504-2 as a protective coating.

For more information, please refer to the relevant Product Data Sheet and/or Method Statement.

Sikagard®-675 W GB ElastoColor

Following application of the specified primer, apply 2 coats of Sikagard®-675 W GB ElastoColor to achieve a minimum total dry film thickness of 180 microns.

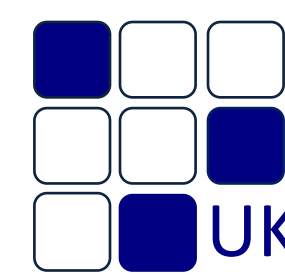
Sikagard®-675 W GB ElastoColor is a one-part, plastoelastic water dispersed coating based on styrene acrylate dispersion for the protection and enhancement of fair-faced concrete. Sikagard®-675 W GB ElastoColor complies with the requirements of EN 1504-2 as a protective coating.

For more information, please refer to the relevant Product Data Sheet and/or Method Statement.





3. Rooflights replacement



UK Pavement Light
Manufacturing Ltd

22 Ryecroft Way, Luton , Bedfordshire,
LU2 7TU
Telephone: 08451 706706
Fax: 08451 706708
Email: info@ukpavementlight.co.uk

Tender No: 2202

11th November 2022

Re: Wythenshawe bus garage

Thanks for your recent enquiry please see below as requested.

THIS IS JUST BUDGET COSTING.

Please not this is subject to site survey and remeasure.

Cast in situ roof light construction with 190x190x100 clear glass blocks

Cast in situ roof lights to existing bearings (type to be designed for a load of 10kN/m2 and point load of 5.0kN) with 190x190x100mm clear glass block, set in a nominal 100mm deep adequately concrete slab flat on underside with 50 mm ribs at 240mm cross centres . The concrete to achieve Grade C40, colour: Natural Grey concrete with the top face having a trowelled finish and the soffit to be 'as cast'. The panel perimeter edges detailed to accommodate the adjacent finishes. Sealed at perimeter edge with hot applied bitumastic sealer,

36no @4280x2380mm overall Total 366.7sqm

1no @8300x2700 split into 3-4 sections. Total 22.41 sqm

Total £447,476.50+vat

TOTAL COST OF FOUR HUNDRED AND FORTY SEVEN THOUSAND FOUR HUNDRED AND SEVENTY SIX-POUNDS FIFTY PENCE.....+VAT

Payment terms.

pro forma required 12-14 week prior to our start on site.

Registered Office: 26 Leagrave Road, Luton, LU4 8HZ
Registered No. 07162552

(As there is a very large number of lenses we have been given a 12-14 weeks lead time on the glass)

Final invoice due on completion.
(other terms can be arranged)

We trust this tender meets with your approval and look forward with working with you in the near future, Clear access will be required for this works to be carried out. Our price allows for the work to be carried out in one continuous and uninterrupted visit to site including striking out and where appropriate the application of a bitumastic sealant. Any additional visits made necessary for reasons for which we have no responsibility may result in additional charges and extensions to any programme which might have been previously been agreed. All making good works to underside to be carry out by another contractor unless specified

If you have any questions please don't hesitate to contact me.

Yours sincerely

Nathan Dommett
Director
UK Pavement Light Manufacturing Limited.
E&OE

Registered Office: 26 Leagrave Road, Luton, LU4 8HZ
Registered No. 07162552



4. Windows replacement

WYTHENSHAW
BUS GARAGE



Itemised Price Schedule (IPS)

Item No	No Off	Description	Price Each	Total
1	32	Corporate W20 Windows with clear 6.4 mm Laminate glazing Each opening light is a Horizontal Pivot 3826 642 1285 643 638 637 638 638 637 638 2570	7,955.08	254,562.56
2	1	3200 642 1285 643 534 532 534 532 534 2570	6,608.86	6,608.86
3	8	2944 635 1285 635 590 587 590 587 590 2555 5110 M Denotes Mullion Section T Denotes Transom Section DC Denotes Direct Coupling of Frames ----- Denotes Pressed Aluminium Projection Sill	13,471.25	107,770.00
Total				368,941.42



CRITTALL WINDOWS NBS SPECIFICATION
CORPORATE® W20 RANGE
WYTHENSHAWE
BUS GARAGE



L10 - WINDOWS

316 STEEL WINDOWS AND DOORS:

- Manufacturer and reference: Crittall Windows Ltd, **Corporate® W20 range**
- Generally manufactured in accordance with BS 6510 W20 section.
- Weathertightness: To BS 6375: Part 1.
Exposure category (Design wind pressure): 1200 (Pa) see Table A on page 2 of this document
- For air permeability, water-tightness and wind resistance data see Table A on page 2
- Operation and strength characteristics: To BS 6375: Part 2
- Construction: -
 - All frames have welded corners and are flat and square within normal manufacturing dimensional tolerances of ± 1.5 mm
 - Intermediate bars are hot tenon riveted
- Galvanising: All components including steel attachments, coupling members and ancillaries are hot-dipped after manufacture to BS EN ISO 1461:2009
- Glazing details: All items site-glazed with clear 6.4 mm laminate single glass
Glazing beads present no horizontal ledges on which dust and dirt can gather.
- Weatherstripping: Gaskets complying with BS 4255: Part 1 manufactured from EPDM, secured into grooves of opening frame with adhesive
- Ironmongery | accessories: See clause 328 overleaf
- Finish as delivered: Galvanised and then Duralife® polyester powder coated in a range of colours (see clause 331)

325 STEEL WINDOWS AND DOORS:

- Generally all the foregoing
- Manufacturing undertaken in the Crittall Windows factory by directly-employed personnel
- Design, testing, manufacture and installation carried out under Quality Management Systems certified to BS EN ISO 9001

328 IRONMONGERY | ACCESSORIES:

Horizontal Pivot opening light to be fitted with: -

A pair of friction cups, finished as the frames

A single 'B158' non-locking lever handle at sill, in satin chrome finish (nib of handle engaging on a natural brass finish strike plate fixed to the frame)

A single 'B36' spring catch fitted at the head in satin chrome finish

Estimate No. B220196 Date: 21.11.22

Crittall Windows Limited, Francis House, Freebournes Road, Witham, Essex, CM8 3UN. Tel: +44(0)1376 530 800
Fax: +44(0)1376 530 801. E-mail: hq@crittall-windows.co.uk, website: <http://www.crittall-windows.com>
Crittall® is a registered trademark of Crittall Windows Limited

CRITTALL WINDOWS NBS SPECIFICATION
CORPORATE® W20 RANGE
WYTHENSHAWE
BUS GARAGE



331 FINISH COATING

- Type | reference: Epoxy free Duralife® polyester powder coating using Interpon D1036 powder
- To BS 6497
- Preparation: Following galvanising, windows are chemically cleaned and pre-treated to provide surface to which powder coating will adhere
- Covering: Minimum 60-microns on all significant surfaces
- Colour: A single specific standard matt RAL colour to be confirmed for windows and cills (A wide selection of standard matt RAL colours is available, please see the Crittall Duralife colour chart attached to this quotation)
- Process: Coating will be undertaken in the same manufacturing plant as the frame fabrication

470 SEALANTS

- Joint surfaces are to be clean, grease | dust free and prepared in accordance with the sealant manufacturer's recommendations
- Perimeter sealant to be '1096' or Arbosil '1090' compliant with BS 5889 Type A 1989 in one of the sealant manufacturer's standard colours

Table A

Type of Corporate® W20 Opening Light	Exposure Category (Pa)	Air Permeability Not More Than 16m³/h/m Joint at (Pa)	Water Tightness No Leakage at (Pa)	Wind Resistance No Damage and only Permissible Deflection at (Pa)
Fixed Light	2,000	300	300	2,000
Horizontal Pivot	1,200	300	100	1,200

- Notes:
1. Windows fitted with remote operating gear (electric or manual) may not achieve the performance listed
 2. Should greater project weather performance be required, please refer to Crittall Technical for advice

VISION | INNOVATION | SOLUTIONS www.crittall-windows.co.uk

Estimate No. B220196 Date: 21.11.22

Crittall Windows Limited, Francis House, Freebournes Road, Witham, Essex, CM8 3UN. Tel: +44(0)1376 530 800
Fax: +44(0)1376 530 801. E-mail: hq@crittall-windows.co.uk, website: <http://www.crittall-windows.com>
Crittall® is a registered trademark of Crittall Windows Limited



Estimate No.	AW B220196
Project Name	Wythenshawe Bus Garage
Prepared by	Andy Waddell
Date	21 November 2022



WYTHENSHAWE
BUS GARAGE

Technical Details

Trickle Ventilators

Please note that our quotation makes no allowance for trickle ventilators.

Window Restrictors

Please note that our quotation makes no allowance for window restrictors.

Toughened/Laminated Glass

Irrespective of the glass types included in this quotation, we would highlight the fact that the Code of Practice BS6262:Part 4:2018 states that toughened or laminated safety glass must be used for most doors, sidelights, partitions and panes which are within 800 mm of the finished floor level.

Construction – Wind Loading

Our quotation allows for elements to be constructed to withstand a 1200 N/m² wind load, based upon a three-second gust velocity that is not likely to be exceeded more than once in fifty years.

Exposure Conditions

As your enquiry is silent in respect of the exposure conditions to which the building will be subject, please ensure that the glass thicknesses allowed for in our quotation are suitable for the exposure conditions that the windows will be subjected to in service, by reference to the Code of Practice BS6262:1982.

Calculations – Wind Load onto Crittall Frames and Couplings

Please note that our offer makes no allowance for providing independently certified structural calculations for our frames.

If required, we can engage a qualified Structural Engineer to undertake calculations assessing the suitability of our products to transfer wind load to structure. The production of structural calculations would be at additional cost and will extend the lead time by several weeks.

Sizing for Manufacture

Please note that we rationalise dimensions for manufacture as far as possible, within tolerance limits of ± 10mm, to avoid large numbers of slightly different-sized windows. Experience has proven that this practice undoubtedly facilitates efficiency in both manufacture and installation.

Projection Sills

Our quotation allows for a folded projection sill to Items 1 & 2. Each will be manufactured from 2 mm thick galvanised steel sheet to BS EN 10327:2004, then Duralife polyester powder coated to match the window finish. We have allowed for each sill to have a maximum of four bends, and to project of 100 mm from the external face of the window.

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WYTHENSHAWE
BUS GARAGE

Barriers In and About Buildings

BS 6180:2011 sets out specific safety requirements where the glazing acts as a protective barrier, i.e. where there is a possibility of persons falling through the glass and the external floor to sill height is 600 mm or greater.

Our quotation assumes that the Architect/Designer has made provision within the building design to comply with the requirements of BS.6180:2011.

Site Survey - Exploratory Works

Our quotation allows for obtaining structural opening dimensions. However, it may be necessary to remove typical examples of the existing windows to ensure that accurate opening dimensions and structural details are obtained. Our quotation assumes that access to undertake such exploratory works will be afforded by the Main Contractor | client as necessary and that sufficient windows will be removed by others to validate the survey.

If this is not possible then assumptions will be made based on the dimensions and details that can be obtained together with any original architectural details provided to us. Such assumptions will be agreed between the parties prior to manufacture.

Installation

Construction Skills Certification Scheme

As responsible employer, Crittall Windows is committed to maintaining a safe and healthy working environment. As such, it is our policy that all Site Management and all Operatives are CSCS accredited.

Fixing Lugs and Screws

Our quotation allows for either standard 3 mm thick galvanised steel fixing straps approximately 100 mm long x 25 mm wide attached to the structure using stainless-steel screws and expanding plastic plugs or direct fixing using stainless steel screws and expanding plastic plugs.

Additional costs may be incurred if non-standard fixings prove necessary.

External Sealing

Our quotation allows for the windows to be sealed to the structure using a gun applied low modulus silicone sealant from the sealant manufacturer’s standard colour range.

Sealant will be applied with a polyethylene backing rod to a maximum joint size of 6 mm x 6 mm.

Please note that to Items 1 & 2, the void between the underside of each sill and the structure will be filled with polyurethane foam but the leading edge of the profile will not be sealed to the structure.

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Wythenshawe Bus Garage
Job 1950
September 2022

Heritage Commentary on Rooflights



Original design. Archive image.



Original design. Archive image.



Detail of vents and glass block panels. Original design.



1972 Article.



Existing replacement glazing.



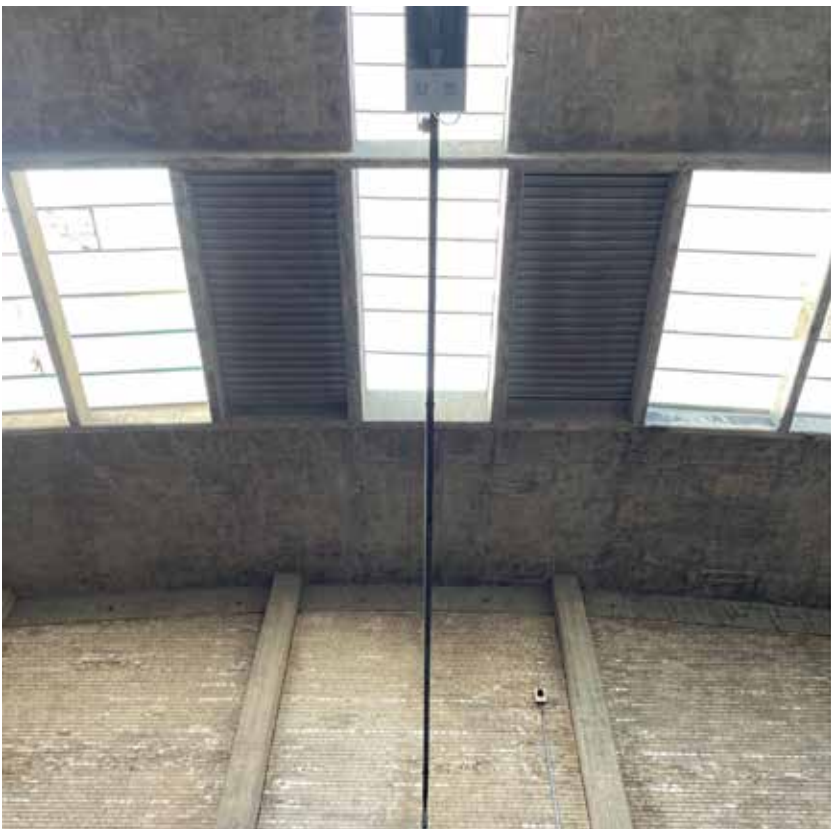
1971 image showing raised spine.



1970s replacement design.



Existing rooflights.



Existing louvres to 2 central panels.



Existing glazing.

Overview

Original rooflight configuration is clearly shown in historic photographs.

- One long central spine, raised above roof line, with ventilation panels to either side and glass blocks in grid pattern fitted within concrete framed panels.
- At six intervals, along length of roof, three panels to either side of centre. Concrete framed and same size as central panels, with same glass blocks in grid pattern.
- All glass is set at outer/top edge with concrete frame visible on the internal side.

News article from 1972 details works to replace rooflights undertaken to increase natural daylight and thus cut electricity bills. New configuration is that which exists in 2022.

- Central spine remains.
- Glass blocks removed from central area and replaced in entirety with larger rectangular panes. Note that the edges of the panes do not always line up with the remaining concrete frames below.
- Concrete framing remains to central area.
- Evidence of vents to central spine sides remaining.
- The six intersections featuring 3x2 grid form glass block panels have been removed and replaced with larger, rectangular panes, with concrete frames remaining.
- Two areas closest to central spine no longer have visible glass and instead feature louvres making panels opaque.
- Double panels feature glass at angle, presumably to improve water run-off.

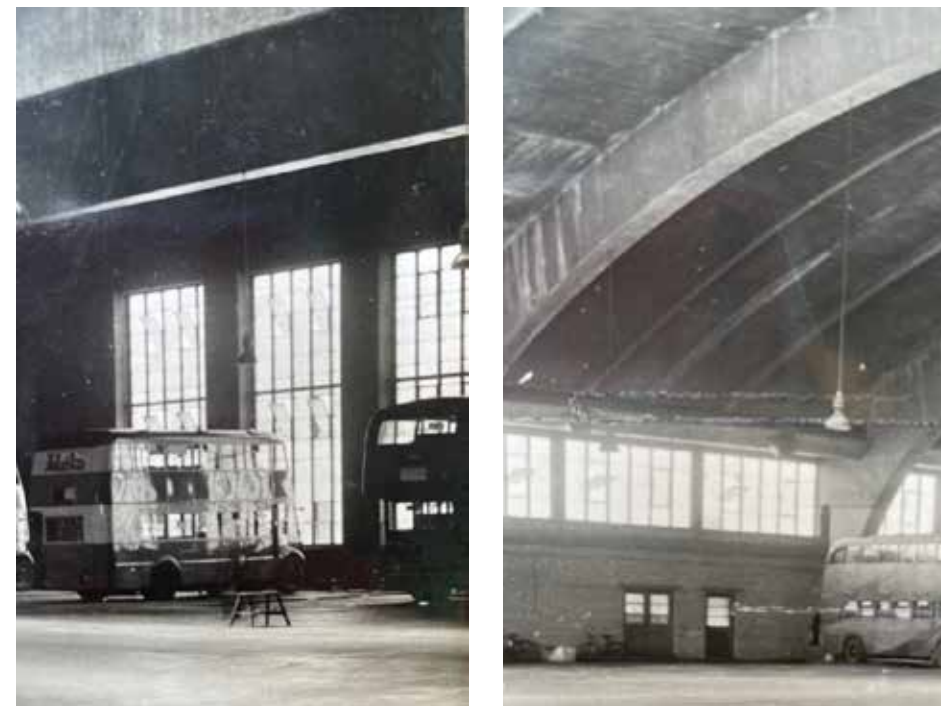
In deciding on future approach considerations are as follows:

It is preferable to replace the glass blocks in their original design. If there is good reason to instead replicate the existing 1970s fenestration, justification must be given. There is no indication that the original design failed, but if it is found that glass blocks would not provide adequate fall for rainwater, therefore risking water ingress and window failure, this could be a valid reason not to adopt the original block pattern.

In any option, the central spine and cross glazing must be retained, along with the form of the concrete frames, repaired if required. It is preferable to re-open the two central frames and re-glaze, unless there is a valid technical reason why this cannot be achieved.

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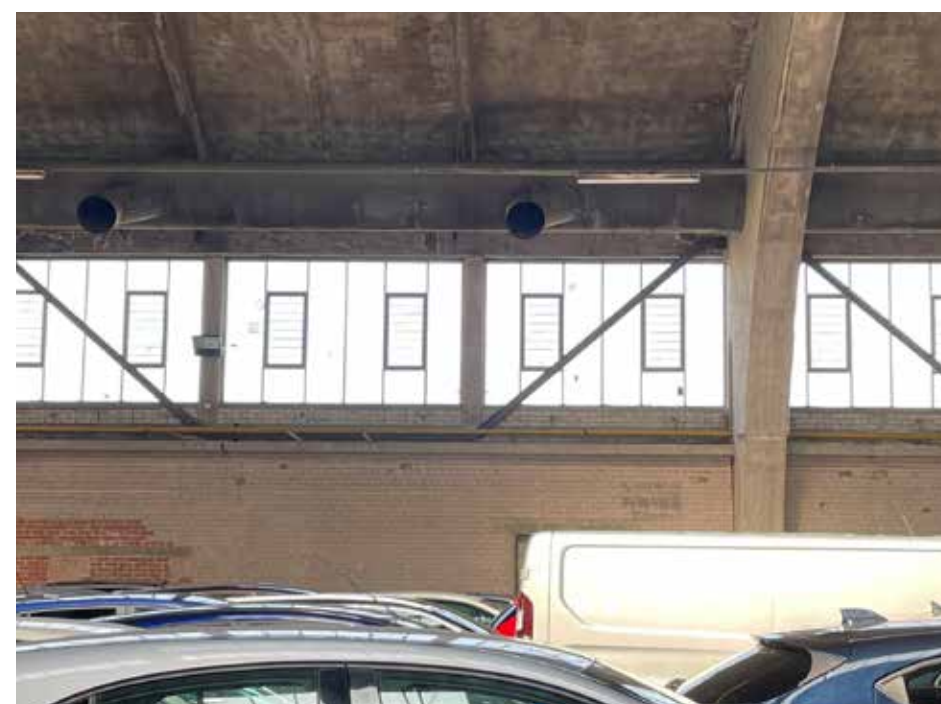
Heritage Commentary on Windows



Original front and side window arrangement from archive photos.



Current arrangement to front, with lower windows blocked.



Detail of existing side windows with opening sections (pivot).



Original front windows, almost full height.



Existing replacement plastic panel (right-hand side).



Existing side windows.



Existing louvred window panes to side elevation.



Original windows to side, with wing (now demolished).



Former entrance windows in original form.



Former windows to side elevations, internal view.



Existing glazing (wired).

Overview

Original windows are shown on historical archive images.

- Front windows are in four large bays to each side of entrance (eight in total). These are near full height, with five vertical split panes, further subdivided horizontally, as existing frames show.
- Frames were slim metal, as existing.
- Glass was single thickness throughout.
- Existing front windows are blocked off to bottom half, but frames appear to remain to full original height.
- Opening panes were positioned at regular intervals to top sections and lower sections, on pivot openings. There were four opening panels per window- two above and two below. Former entrance image shows spacing as openers to panels two and four and fixed to panels one, three and five.
- A number of glass panels have been replaced with perspex.
- Side windows ran above the former wings (now demolished). These high level windows are still in place.
- Each large rectangular window had six vertical divisions, with further horizontal division as shown on archive images.
- Pivot openings were placed at regular intervals in panes two and five.
- The glass has been replaced with louvred version to these pivot panels.
- In some cases perspex has been fitted in place of glass.
- In all cases, it is recommended that the windows are returned to their original form. The fenestration represents a significant part of the architectural and historical value and this is currently compromised through inappropriate use of plastic and the blocking up of the front windows.
- Louvres do not appear to be part of the original design and a return to pivot openings is preferable, unless there is sound justification otherwise.
- Glass should be used in all window openings, and later perspex replaced.
- It is not evident from the original images if glazing was clear or wired, but it is highly likely all glass was matching, which should be the approach employed for renovation.
- All original frames should be retained and repaired where necessary. Replacements are acceptable, but it is recommended they are replicas of the originals.



-  [@ateliermb](#)
-  0161 236 0051
-  [ateliermbarchitects](#)
-  [atelier mb architects](#)
-  info@ateliermb.co.uk
-  Atelier MB Ltd. Suite 2A, Amazon House, Brazil Street, Manchester, M1 3PJ