



Replacement chiller plant
1 Balloon Street, Manchester | Design and Access Statement

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1.0 | Introduction

1.1 Introduction to the Design and Access Statement

This Design and Access Statement has been prepared by Bridge Architects on behalf of Wittington Investments (properties) Limited in accordance with CABE’s ‘Design and Access Statements – How to Write, Read and Use Them’ document. The document accompanies a Planning Application for:

Installation of new, replacement chiller plant within existing plant compound at 1 Balloon Street, Manchester.

The statement serves to describe the design development process and demonstrates that the proposals have emerged from a full assessment of the site’s unique circumstances and characteristics. The statement should be read in conjunction with the application drawings and all other information submitted in support of the application.

The proposals relate to an existing office building located at 1 Balloon Street, Manchester.

1.2 Executive summary

The Design and Access Statement has been prepared on behalf of Wittington Investments (properties) Limited and provides a holistic view of the design proposals.

- The proposals are summarised as follows:
- Installation of 2no. Chiller plant units within the existing plant compound associated with the building off Balloon Street
 - Enabling works to facilitate the above, including: new structural plinths, local builders works to form new openings in existing external walls for pipework routing.

In developing the proposals, the Applicant has engaged specialist consultants experienced in developing and delivering schemes of a similar scale and level of complexity in urban contexts.

The site is complicated by existing topography and the adjacent tram infrastructure, which needs to be considered in terms of logistics and buildability.

The proposals have been subject to pre-application consultation with TFGM, Metrolink. This dialogue and process has informed the proposed scheme.

The proposals serve to replace existing chiller plant that has failed or nearing the end of its lifespan.

1.3 Project Team

Client



Wittington Investments (Properties) Limited

Wittington Investments (Properties) Limited owns various investment properties in Manchester including The Express Building, 40-46 Princess Street and the subject property 1 Balloon Street.

Wittington Investments (Properties) Limited is a privately owned British investment company. It is 79.2% owned by the Garfield Weston Foundation, which is one of the UK’s largest grant-making trusts, with the remainder owned by the Weston family. Wittington Investments Limited manages investments in a wide range of asset classes. Its main investment is a majority holding in Associated British Foods plc (ABF). Other holdings include commercial investment and development real estate portfolio, strategic land holdings and 100% holdings in retailers Fortnum & Mason and Heal’s.

Design Team

Project Management	Colliers
Architect	Bridge Architects
Structural & Civils Engineer	Clancy
M&E Consultant	Colliers

2.0 | Site Analysis, Context and Infrastructure

2.1 Site location

No.1 Balloon Street is located on Corporation Street within Manchester City Centre, close to Victoria Station. The application proposals relate to the existing external plant compound located at ground level within the site boundary off Balloon Street.

The site is bounded by Corporation Street to the north-west and Balloon Street to the north-east. Two access routes to The Printworks entertainment complex bound the southern edges of the site, the first, a private vehicular entrance and the second, a public-pedestrian route. The National Football Museum faces the site across Corporation Street. Victoria Station is located further along Corporation Street to the north.

The office accommodation is accessed via a main entrance off Corporation Street. There is a service access on Balloon Street, and a roof terrace at second floor level.

2.2 Site context

The site sits within the Shudehill Conservation Area, and immediately borders the Cathedral Conservation Area and the Noma masterplan. The masterplan covers the majority of the historic Co-op estate of buildings which are in various stages of conversion and refurbishment.

The building is freestanding, but located directly adjacent to the rear of The Printworks leisure complex.

The application site lies within the site boundary of 1 Balloon Street, and relates to an existing plant compound situated at ground floor level, adjacent to Balloon Street and the service access/ means of escape route associated with The Printworks on the adjacent site.

Both Balloon Street and Corporation Street are existing tram routes which connect into Victoria Station, Shudehill and Exchange square.

Please refer to the previously submitted Planning and Heritage Appraisals (prepared on behalf of our Client) for the 2021 building façade and refurbishment works for further context.

2.3 Existing building and historic context

No.1 Balloon Street was originally constructed in 1979 as the new headquarters of the Cooperative Bank. It is a seven-storey office building, originally comprising red brick and aluminium cladding to the three upper floors which are set inward in a mansard style.

The building is broadly rectangular on plan and occupies the majority of the plot. Servicing access is provided an opening off Balloon Street which gives access to the building basement. The upper floors are U-shaped on plan and set back from the southern perimeter to form a roof terrace and two plant areas at second floor level.

The building underwent refurbishment in 2022, following purchase of the building by Wittington Investments. The works included; external aluminium overcladding at ground floor level facing Corporation Street and Balloon Street, enhancements to the building's main entrance, adapting an existing fire escape to a secondary entrance, and the removal of a (non-original) conservatory building located at second floor level at the rear of the building, and its replacement with a single storey pavilion extension. The works also included upgrade of the building interior spaces.

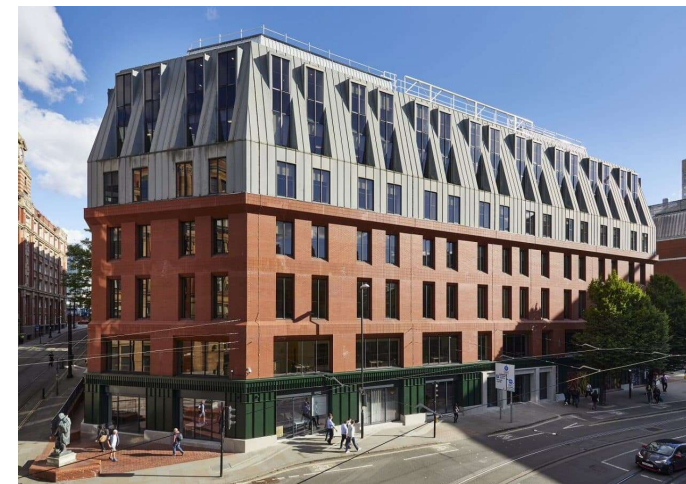
The existing building is one of the youngest parts of the Co-operative Group's historic building estate within Manchester city centre. The building is not Listed; however, it sits in close proximity to other listed structures including; Hanover House (Grade II), Old Bank (Grade II), New Century House & Hall (Grade II), Redfern (Grade II), Dantzig (Grade II), CIS Tower (Grade II) and Holyoake House (Grade II).

2.4 Existing building – current status

The building is currently in use; as office accommodation and a Cooperative Food convenience store at ground floor, opening out on to Corporation Street.

The 3rd and 4th floors are currently vacant.

All proposed works are to be undertaken with tenants in situ, with the building remaining fully operational.



No1 Balloon Street, following 2021 refurbishment.

2.5 Existing plant and equipment status and constraints

Mechanical Services Overview

The mechanical services supporting the property's HVAC systems comprise gas-fired heating, chilled water cooling, and mechanical ventilation via central air handling units.

Cooling is provided by three 'Industrial Frigo' dual-circuit, air-cooled chillers, each with a capacity of 482kW and utilising R290 refrigerant.

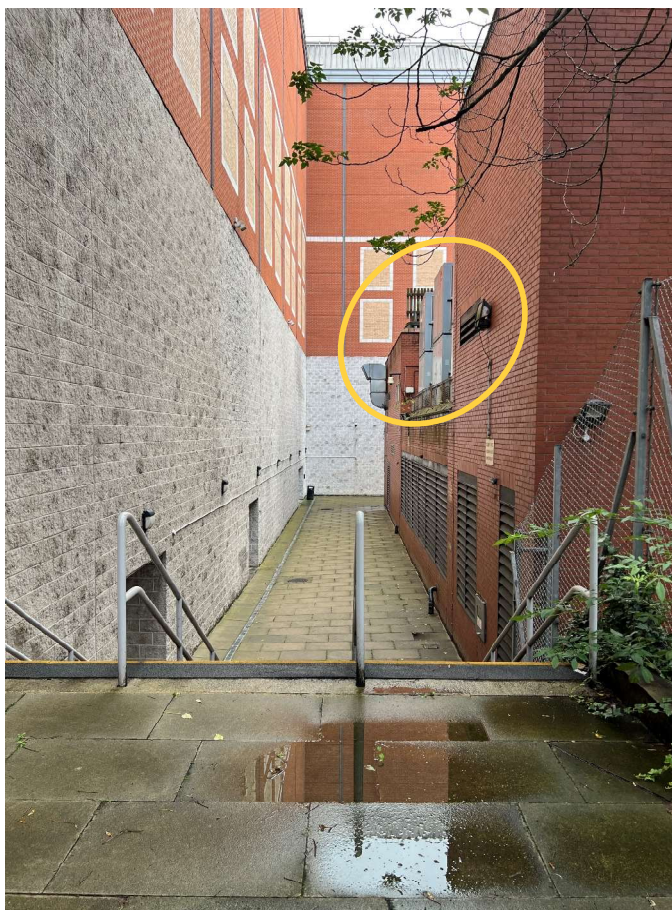
These units are located within a high-level external plant well situated between One Balloon Street and the emergency exit route of the adjacent Printworks building. The three chillers are mounted on secondary steelwork, with access facilitated by removable steel flooring panels.

Access Constraints

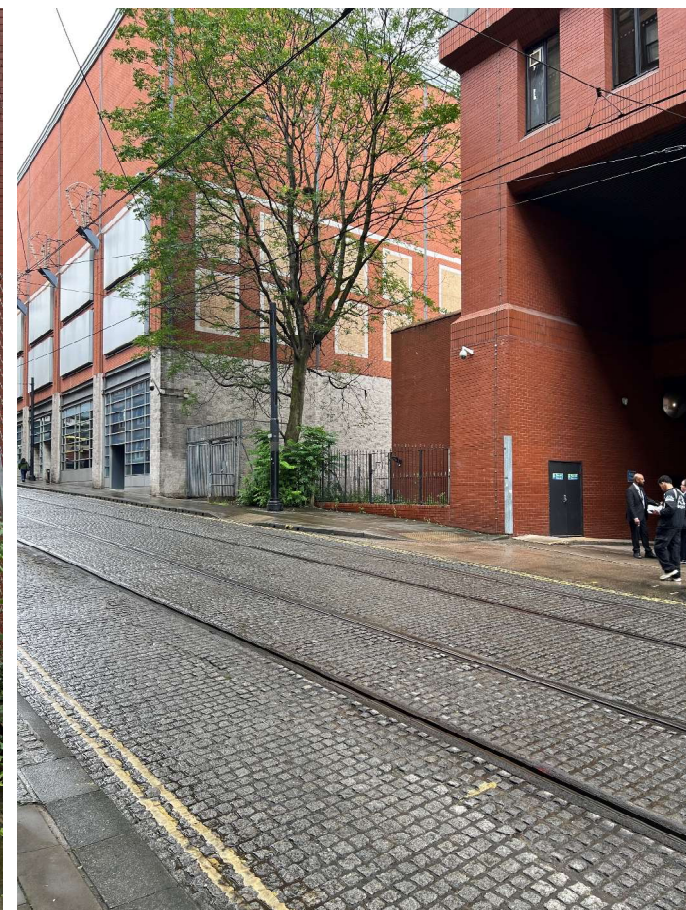
The location of the existing chillers at first floor level presents significant spatial limitations, restricting access and maintenance around the chillers. Pedestrian access to the chillers is only available via the service stairwell, which is entered from Balloon Street. Delivery of replacement parts and materials is also conducted manually through this pedestrian entrance.

The existing chiller plant is elevated and set between the rear façades of One Balloon Street and the Printworks development. The chillers are not directly accessible from Balloon Street, due to the existing building massing.

Since construction of No1 Balloon Street in 1979, Balloon Street has been modified to accommodate the Altrincham-Bury, Bury-Piccadilly and Manchester Airport-Victoria Metrolink lines, and the development of the adjacent Printworks site has taken place. The above has effectively 'landlocked' the existing chiller plant area.



Location of existing chillers; at first floor level, immediately adjacent to Printworks means of escape route on adjacent site.



Existing mature tree (outside site boundary) and overhead tramlines in close proximity to site

2.6 Existing plant and equipment requirement for renewal

Chiller Condition and Replacement Necessity

Originally, the chillers were installed using a tower crane during construction. The 2015/16 replacements were lifted into position via a crane located on Balloon Street. However, subsequent construction of Metro lines along Balloon and Corporation Streets has rendered crane access from these elevations unfeasible. Additionally, the Printworks development has further restricted access to the rear and side of the site.

The existing chillers, installed in 2015/16, were manufactured by a company with limited UK presence. Two units have failed, and no spare or replacement parts are available. To maintain internal environmental conditions, full replacement of the failed chillers with new units is the only option.

Temporary Measures and Operational Impact

1 Balloon Street, has historically struggled with the maintenance of the existing chillers. After multiple failures, the building is currently reliant on only one of the three the existing chillers, located on the high-level external plant well. In order for the building to remain operational and maintain cooling during the summer months, temporary chillers have been installed in the loading bay. These are connected to the existing chilled water pipework at the first-floor compound. Continued use of these temporary units poses overheating risks and disrupts goods vehicle operations, potentially impacting Balloon Street traffic flow.

The temporary chillers are a short term stop gap fix, and a permanent solution needs to be incorporated into the building to ensure business security for the building tenants.

Wittington Investments are looking to fill the vacant floorplates and increase the tenant numbers. Potential lettings for the 4th and 3rd floors are in negotiation. Occupancy of these floors, will put a further strain on the building cooling infrastructure, which the temporary chiller installations cannot support.

The proposed new chillers are essential to attracting and securing the existing tenants. The current arrangements also place Wittington Investments are at risk of incurring business disruption claims as they will not be able to provide the required temperature range for office use, during the summer months. The building's main tenant CoOp, have already referred to the issues in correspondence, and this will only increase if the issue cannot be solved permanently.



Existing compound and 1 Balloon Street loading bay adjacent (location of temporary chillers)

3.0 | Design Development

3.1 Design constraints and opportunities

Design Constraints

- Location of existing mechanical and electrical infrastructure within the existing building.
- Requirement for building to remain fully operational during the course of the works.
- Site location and proximity of existing transport infrastructure including tram tracks and overhead cables.
- Proximity of site to Printworks complex for access to southern boundary of site
- Proximity of existing large mature tree immediately outside site boundary on Balloon Street

Design opportunities

- Improved sustainability and energy efficiency through provision of new equipment
- Rationalisation of existing plant to central location
- Futureproofing and simplification of ongoing access and maintenance requirements to plant installation.

3.2 Design development and pre-application context

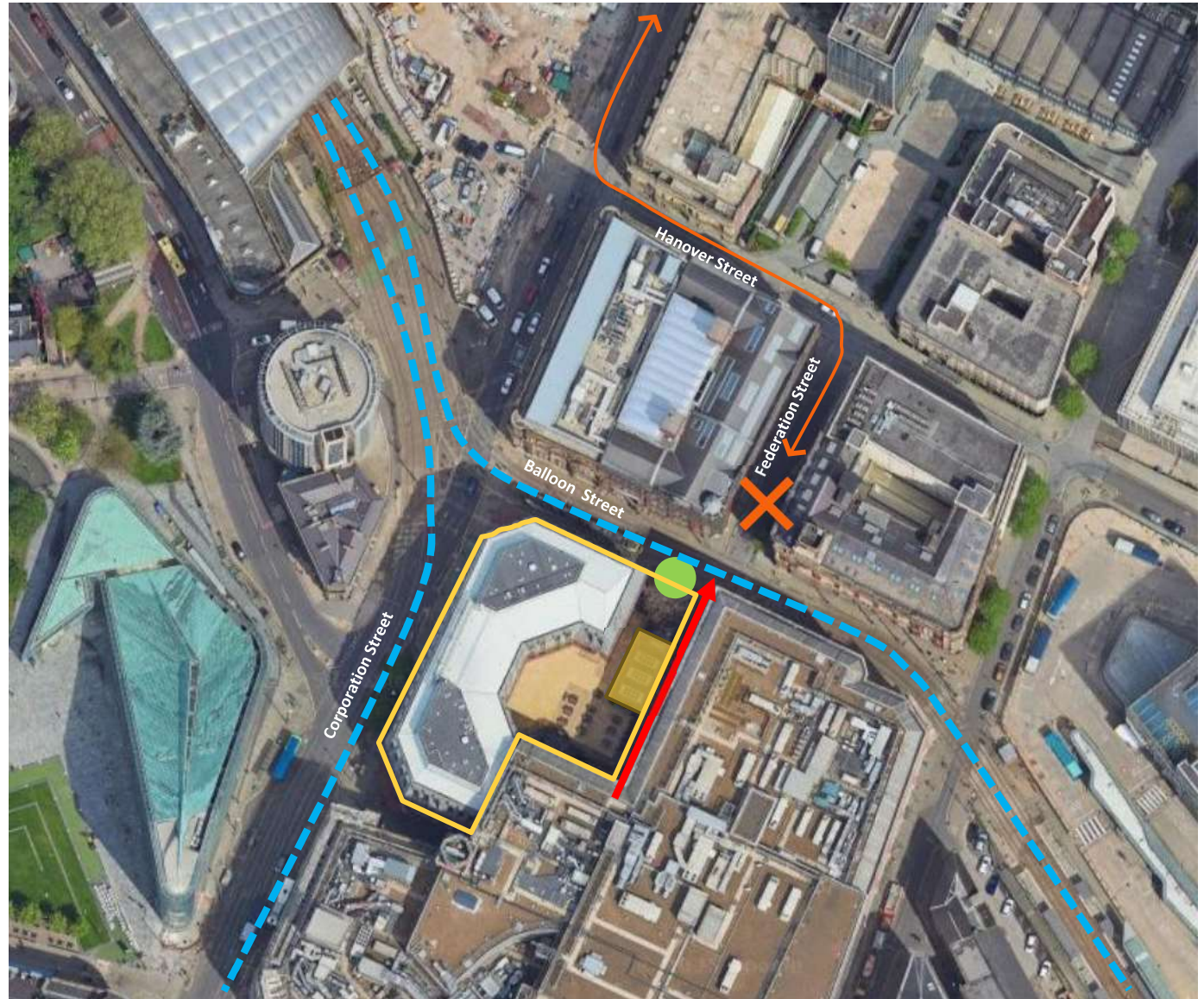
Access to the site is severely restricted by the surrounding context; including an existing mature tree (outside the site boundary on Balloon Street), Metrolink tram lines and adjacent buildings.

Initial design proposals intended to replace the chillers in their original locations, and designs were developed on this basis. However, several contractors withdrew during tender interviews, citing health and safety concerns—particularly the risks associated with working at height due to the elevation difference between the chiller compound and the Printworks emergency exit route, which needs to be kept clear, and available for use at all times.

Crane-based removal and installation were also considered, but existing trees and Metro line infrastructure on Balloon Street and Corporation Street impose significant restrictions. Specialist Contractor consultations have confirmed that no crane (and its associated outriggers), of sufficient capacity could access the site via Federation Street, through Hanover Street from Corporation Street.

Further discussions with Manchester Metrolink and TfGM indicated that lifting operations across the Metro lines on Balloon Street would be highly problematic and are not recommended. Tree management, under the jurisdiction of Manchester City Council, has been requested but remains unresolved.

-  Existing mature tree (outside site boundary)
-  Tramlines
-  Printworks means of escape route
-  Potential crane route (assessed but not feasible)
-  Existing chiller plant location (first floor level)
-  No1 Balloon Street site



Site context and constraints

4.0 | Design Proposals

4.1 Design proposals and justification

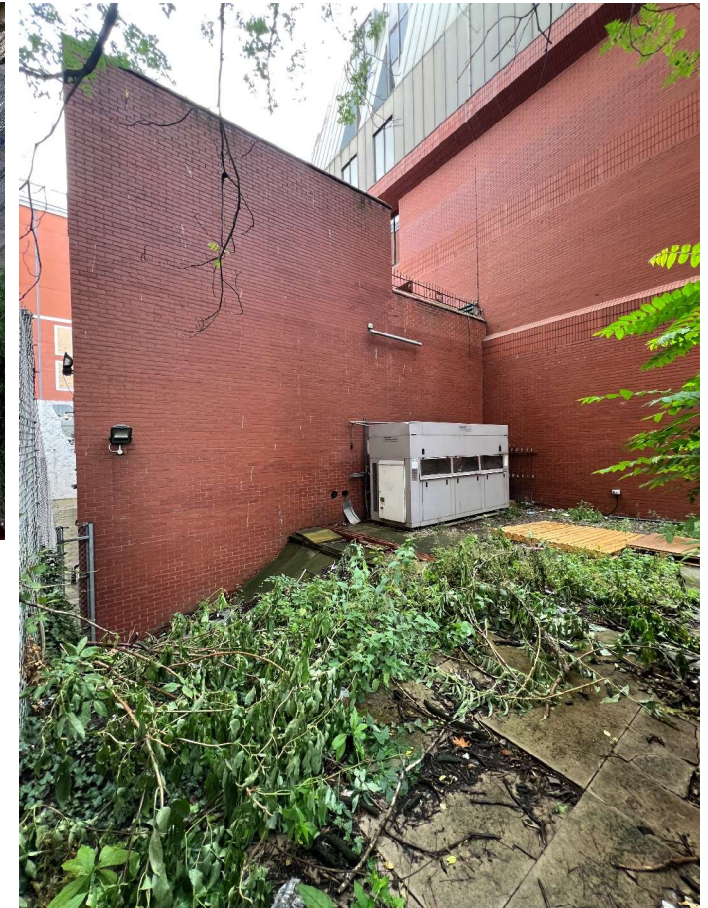
The existing chiller plant area is no longer a practical siting for the new chillers due to the trams and existing tree, which remove the possibility of a crane lift. After analysis of all available options, and exploration of alternative lift and shift options, the only practical and safe solution is to use the existing plant enclosure, adjacent the building loading bay, off Balloon Street.

This location will enable delivery of the packaged chillers from the pavement., and provides an adequately sized and ventilated area to locate the new chillers, that is more easily accessible for future on-going access and maintenance requirements.

This existing external chiller compound currently houses a single chiller serving the Co-op retail unit. The compound is secured by a metal fence with gated access.



Existing plant compound , showing Co-Op retail unit chiller



Existing plant compound , showing Co-Op retail unit chiller and falls to existing site topography

4.1 Design proposals and justification

It is proposed to isolate and abandon the two failed chillers and install two new units within the existing external plant compound accessed directly from street level. These chillers will match the existing capacity and be mounted on newly constructed structural bases. They will connect to the existing chilled water pipework, which will enter the building through small newly formed openings for pipework and then routed internally.

Due to existing site gradients and level differences in the topographical landscape across the compound for the proposed new chiller plant; one chiller will be positioned on a concrete plinth; the other will be positioned on a new galvanised steel support frame. The chillers are sited to provide adequate ventilation space between them; this is to ensure performance and enable maintenance access.

Maintenance access is provided in accordance with manufacturer guidelines, with any limitations addressed.

The existing compound metal railings to Balloon Street will be retained, and access will continue through the secured gate.

TfGM/Metrolink have provided guidance for phased Metro line shutdowns to facilitate delivery and installation of the chillers and associated materials.

Delivery and installation of the chillers directly from street level also avoids potential harm to the existing tree canopy that overhangs a large portion of the application site.

The proposals are considered to have a neutral impact on the Conservation Area, and will not impact on neighbouring properties. The new chillers will secure the mechanical performance requirements of the building, with modern more energy efficient units, that are more safely, and easily accessed for maintenance in the future. The new provisions will serve to facilitate lettings on vacant floors, encouraging employment in this key location within Manchester City Centre.



Existing Balloon Street elevation



Proposed Balloon Street elevation

4.2 Biodiversity Net Gain

The application site is subject to the de minimis exemption.

The proposals do not negatively impact or alter any habitat. Whilst the total site exceeds 25sqm, the existing site does not contain any existing trees, hedgerows or formal planting. The existing site is covered with gravel and concrete paving flags. These materials have a zero biodiversity score, meaning that the application site is exempted from any net gain requirements.

The proposed development does not impact a priority habitat and does not include any on-site linear habitats, and as such the proposals have no impact on pre-development biodiversity.

4.3 Access

The existing access arrangements are unchanged by the proposals.

The existing plant compound is accessed via a pedestrian gate in the railings directly off Balloon Street; this will be retained.

4.4 Acoustic matters

Please refer to Sandy Brown Balloon Street, Manchester Noise Planning Report ref 026813-R01-A submitted with this application.

Based on noise surveys and calculations undertaken, the proposed chiller units are predicted to comply with plant noise egress criteria.

